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Empirical Examination of the Impact of Environmental Responsible Tourism Practices on the Destination Sustainability

This paper endeavors to discover the local community's perceptions about the impact of Environmentally Responsible Tourism Practices on environmental sustainability. Self-administered questionnaires were distributed among the residents, and a sample of 147 valid questionnaires was collected from the tourist destination. AMOS 22 was used to validate the EFA findings. Structured Equation Modeling was applied to measure the impact of Environmentally Responsible Tourism Practices on environmental sustainability. The investigation results revealed that destination communities perceive environmentally responsible tourism practices as having a significant role in achieving environmental sustainability. Thus, the findings of the inquiry recommend implications for the successful implementation of environmentally responsible tourism practices.

Keywords: Environmentally Responsible Tourism Practices, Environmental Sustainability, Local Communities

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Introduction

In the ongoing era of globalization, the tourism industry is developing quickly and stimulating economic benefits throughout the world, but the unavoidable environmental impact of the travel industry cannot be overlooked. For a sustainable tourism industry, it is imperative to understand the interrelationship between the financial benefits of the travel industry and environmental quality. The growth in tourism is often considered a double-edged sword as expansion in tourism activities results in the generation of jobs, regional development, and upliftment of lower sections of society. It also creates adverse effects on the dimensions of the environment (e.g., water, air, and land pollution). Therefore, it is vital to evaluate and examine the impacts of tourism on the environment of a tourist destination (Zhong, Deng, Song & Ding, 2011).

Even though tourism development results either in the short- or medium-term economic benefits, but cannot be sustained at the optimal level if the environmental resource base is degraded beyond a threshold capacity. For the success of tourism projects and environmental policies, it is crucial to understand the complicated relationship between tourism development and the quality of the environment (Green & Hunter, 1992) and to know how to enhance the quality of the environment. Thus, the present study will explore the approach of maintaining environmental quality and thereby enhancing the sustainability of tourist destinations in general and environmental sustainability in particular. One such realizable approach has been environmentally responsible practices through which destinations can achieve sustainability. Subsequently, the study aims to explore the role of environmentally responsible practices in enhancing the sustainability of tourist destinations.

Tourism planners all across the globe have to give due consideration to the impacts of various tourism activities as the majority of activities at the destination are dependent on natural resources. The environment all across the globe is witnessing a change, and more drastic changes are being predicted, particularly climate changes because of the rise in temperatures



(Gossling & Hall, 2006). These results could have significant effects on the whole range of tourist destinations. These indications have forced to destination managers all across the world to think about issues and to incorporate them into tourism planning. While some of these measures are mere responses to confront climate change, others strive to accomplish environmental sustainability targets. The latter approach (i.e., concerns about environmental sustainability) favors keeping in view the long-term synergy between humans and the environment as most tourists are driven by the purpose of visiting virgin and unspoiled areas (Gossling, 2002a).

The preceding section has highlighted the linkage between tourism and the environment and its damage due to tourist activities. Thus need of the hour is to incorporate eco-friendly practices to achieve the sustainability of the tourist destinations. One realizable approach to integrating environmental responsibility in tourism planning is to implement environmentally responsible tourism practices to minimize the negative environmental impacts of tourism and achieve the sustainability of tourist destinations. Responsible tourism emphasizes the minimization of negative repercussions (social, economic & environmental) while at the same time improving the positive ones (Frey & George, 2010).

Environmentally Responsible Tourism Practices is the one dimension of Responsible tourism aimed at achieving the authenticity and integrity of the destinations, thereby enhancing and augmenting tourist destinations' sustainability. Research on tourism and the environment has been thoroughly examined in some developed countries (i.e., Australia, the USA, and the UK) (Pickering & Hill, 2007), and critical contributors are scattered across many fields (Buckley, 2011). However, the role of environmentally responsible tourism practices in achieving environmental sustainability has not been extensively researched. Thus the present study tries to bridge this gap by evaluating the role of Environmental Responsible Tourism Practices towards the sustainability of destinations through the local community's perception.



This understanding is essential because the implementation of these activities at the destination can intensify environmental conservation's probity and legitimacy (Spenceley, 2005). In particular, environmental sustainability through environmentally responsible tourism practices (ERTPs) is the focal point of this research study, which has not been present in the literature of tourism.

Theoretical Background

In the mid of 1960s and early 1970s, the resultant impacts of aggressive tourism growth on environments of the tourist destination were first scrutinized (Mishan, 1969; Young, 1973). Although tourism at the global level, tourism was in its infancy stage, dominated by concerns regarding population growth (Ehrlich, 1972) and school of 'Limits to Growth' (Meadows et al., 1972), there were specific calls to limit the growth in its development. Increasing concerns over the environmental impacts of tourism have emerged in tourism-related fields due to rapid tourism development since the 1980s (Zheng, Chen, & Hou, 2010; Zhong et al., 2011).

In recent decades, the investigation of environmental quality has been a significant concern in the field of ecological, financial aspects, and there has been much spotlight on endeavoring to recognize the components that may influence environmental quality. Though tourism acts as a tool to generate employment and expand economic activities, it can degrade the environment (Banday & Millia, 2017). Tourism activities directly or indirectly affect the quality of the environment (Katircioğlu, 2014; Raza, Sharif, Wong, & Karim, 2016). Local communities also recognize the ambivalence of the environmental impacts of tourism in their destinations: positive and negative (Liu & Var, 1986; Liu et al., 1987; Yoon et al., 2001; Day & Cai, 2012).

Researchers have categorized environmental impact studies into positive and negative ones (e.g., Speight, 1973; Duffey, 1975; Mathieson & Wall, 1982; Lui et al. 1987; Adams, 1990; Sun & Liddle, 1993; Knight & Gutzwiller, 1995; Burton, 1998; García, Vázquez, &



Macías, 2015). These studies try to generalize relationships between tourism-related activities and their impacts concerning particular ecosystems and disturbance characteristics (Knight & Cole, 1995). The studies related to environmental impact have gained prominence in tourism literature, and problems resulting from tourism activities have been reported. For instance, various investigations have concentrated on the negative impacts of the travel industry on the water condition (Wang & Miko, 1997; Lv, 2003), air-condition (Mathieson & Wall, 1982; Li, Zheng, and Zhang, 2003), sound health (Gong, Jin, Nan, &Lu, 2008), land-spread change (Dong, Yu, & Liu, 2008), increase in waste disposal areas (Speight, 1973), landscape degradation due to settlements (Sindiyo & Pertet, 1984), and vegetation and natural life (Pang, 2004; Zheng, Zhu, & Pan, 2008). These tourism-related environmental problems have influenced not only the images of tourist destinations but also impeded the sustainable development of the local tourism industry.

The rapid and continued growth in the tourism sector has led to the existing threats about its environmental sustainability (Allen, Long & Perdue, 1988; Mieczkowski, 1995; Faulkner & Tideswell, 1997; Neto, 2003; Jennings, 2004; Sharpley, 2009; Briassoulis & Straaten, 2013). In the study of Gamage et al. (2017), they revealed that tourism development aggravates environmental degradation in the long run because carbon emissions, income, tourism development, and energy consumption are cointegrated. Some tourists face anxieties about the environment at tourist destinations (Hsieh, Tsai, & Chen, 2017; Qiao & Gao, 2017); thus it is suggested that new way of sustainable development has to be adopted for achieving the more significant tourism economic, social and environmental benefits (Tang et al. 2011).

Environmental Responsible Tourism Practices is one such approach through which we can maintain the integrity of the environment at tourist destinations (Mihalic, 2016; Camilleri, 2016). As the growth of the industry tourism depends on the quality and characteristics of the environment, it is the need of the hour to preserve the integrity of the environment for sustained



tourism growth (Bramwell & Lane, 1993; WCED, 1987, Morelli, 2011, Saarinen, 2018). This environmental sustainability can be achieved through Environmentally Responsible Tourism Practices (Mathew & Sreejesh, 2017; Babu, Kaur, & Rajendran, 2018) as sustainability can be substantiated from the declared goals of the Responsible Tourism as a device to minimize the detrimental impacts of the tourism development (Frey & George, 2010). Thus we postulate that environmentally responsible tourism practices have a significant effect on the sustainability of destinations.

Conceptual framework

The present research intends to measure the effect of environmentally responsible tourism practices on the environmental sustainability of tourist destinations. In line with the study's aim, an exhaustive review of the existing literature related to environmental practices and its sustainability was carried out, and after that, the conceptual framework was developed (Figure 1).

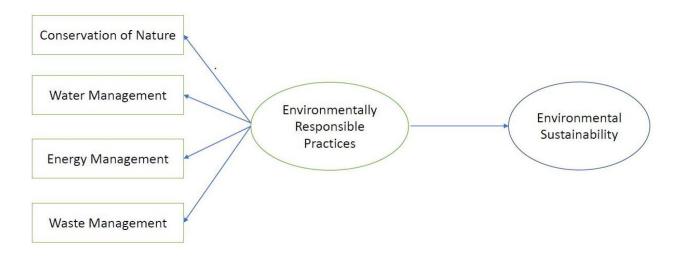


Figure 1. Conceptual framework



Methodology

For the present study, both the primary and secondary data have been used to measure environmentally responsible tourism practices in achieving the sustainability of destinations—the secondary data collected from various international as well as national journals and reports.

The primary data was collected through self – administered questionnaires and were disseminated among the residents of Gulmarg destination in Kashmir region (J&K), India.

Research Instrument

The role of environmentally responsible tourism practices from the perspective of destination communities was measured through an instrument developed by the researcher by considering the previous literature of (Spenceley, 2005; Holden, 2007; & Sharpley, 2009). The developed scale consisted of 24 items for 2nd order construct, measured on a five-point Likert scale where 1 = strongly disagree and 5 = strongly agree. The second construct, i.e., environmental sustainability (zero-order construct), was developed from the sustainability guidelines of UNEP and WTO (2005) and was measured on a five-point Likert type scale (1 = strongly disagree" to 5= "strongly agree).

Exploratory Factor Analysis (EFA) was executed to extract the factors related to Environmentally Responsible Tourism Practices and Environmental Sustainability. Further Confirmatory Factor Analysis (CFA) was applied to validate the EFA, and finally Structured Equation Model (SEM) was carried to test the proposed hypothesis, i.e., impact of environmentally responsible tourism practices on environmental sustainability.

Sampling Design

The study was conducted in Tourism Destination of Kashmir Valley (Gulmarg), Baramulla District, Kashmir Division of Jammu and Kashmir, India. The study sample was the residents whose age was 18 years or above residing in the selected village. The sample frame was obtained from the electoral rolls of Election Commission of India, 2017. The method of



collecting quantitative data from the respondent's sample of these identified and independent sampling units has been the systematic random sampling. The total number of households (collected from electoral rolls) was divided by the obtained sample size for obtaining the sampling interval. Using the random number table, the researcher selected a family between 1 and the corresponding periodic interval. To collect the data, these families were then contacted via direct door-to-door surveys. The data was collected between May and July 2018.

Sample Size

The selection of an optimum sample size is the core concern of a researcher to come up with a reliable study. Using a formula for a 95% confidence level (Yamane, 1973), we obtained the sample size for the present study as follows

$$n = \frac{N}{1 + N(e)2}$$

Where:

n= sample size required

N = number of people in the population

e = allowable error (%)

As per the Election Commission of India, the electoral roll of the destination in May 2018 was 364. So the sample size by using the Taro Yamane (1973) formula for the study was 161. However, only 147 responses (90%) were found to be appropriate for the analysis of the data.

Data Analysis and Results

Initially, the issues of missing values and outliers were examined from the collected data (Burke, 1998), and no outliers were found, and problems related to missing values were reported (Burke, 1998). Then, normality was checked through Cronbach Alpha (α) and measured separately for each construct and overall scale. The results of Cronbach Alpha (α), as shown in Table 1, are above the threshold value 0.60, thereby indicates the internal consistency. Thus the data generated through the questionnaires is reliable (Nunnally, 1978).



Besides Cronbach Alpha, statistical tools skewness and kurtosis (Mertler & Vannatta, 2004; Chemingui & Ben Lallouna, 2013) applied. All were in the range of ± 2.00 , which indirectly holds for the assumption of multivariate normality.

Table 1

Results of Reliability Test		
Dimensions	No. of items	Chronbach Alpha (α) Value
Conservation Of Nature	09	.919
Water Management	05	.836
Energy Management	05	.858
Waste Management	05	.876
Environmental Sustainability	07	.898

Note: Chronbach Alpha (a) for all the constructs are above threshold level **.60**

Table 2

Profile of respondents (Demographic)								
Age	18 to 32 years	32 – 46 years	46-60 years	60 above				
	(43%)	(38%)	(14%)	(5%)				
Gender	Male	Female						
	(66%)	(34%)						
Occupation	Local Business	Govt. Job	Professionals	Others				
	(59%)	(16%)	(19%)	(6%)				
Years of	1- 10 years	10-20 years	20 - 30 years	above 30 years				
Residency	(17%)	(25%)	(46%)	(12%)				
Household	Less than Rs.	Rs.50, 000 – Rs.	Above Rs. 1,					
income	50,000	1, 00,000 (38%)	00,00 (26%)					
(Annual)	(36%)							
Involvement	directly employed	indirectly	not employed	Employed in the				
in tourism	(40%)	employed (32%)	(23%)	tourism industry other than my village (5%)				

As indicated in Table 2, 66% (n=98) of respondents were male while as 34% (n=49) were females. Approximately 46% (n=68) of households are residing there for 20 – 30 years. The majority of the participants were associated with the local business (59%, n= 87), and only 16% (n=23) were involved in Govt. jobs. Most of the respondents were in the age of 18-32 years (43%, n=63). The majority of the respondents were directly involved (40%, n=59) in the tourism activities at the destination.e

Results of Factor Analysis



To examine the underlying dimensions of environmentally responsible tourism Practices and environmental sustainability, Principal Component Factor Analysis, with Varimax Rotation, was used to extract the factors from the data that were collected from the respondents. The measurement scale consisted of 24 items for Environmental Responsible Tourism Practices and 07 items for the sustainability of destinations.

EFA Results for Environmentally Responsible Tourism Practices (ERTPs) and Environmental Sustainability

First, the factor analysis was executed on the measures of ERTPs and ES to identify the underlying factors of ERTPs and environmental sustainability with latent root criterion (Eigenvalue) value of above 1.0 (Pett et al., 2003) and a factor loading of 0.50 was used as a threshold for including items into a factor. From EFA, five factors namely "Conservation of Nature, Water Management, Energy Management, Waste Management (Costanza, 1992; Newsome, Moore & Dowling, 2012) Environmental Sustainability" (Goodland, 1995) were extracted that counted for 64.55 percent of the total variance explained (Table 3). The results of the Kaiser-Meyer-Olkin (KMO) and Bartlett's test specify the adequacy of the data for factor analysis.

Table 3

Results of Exploratory Factor Analysis with descriptive statistics						
Attributes	Factor	Mean	SD	KMO	VE	
	loading					
Factor 1: CONSERVATION OF NATU	RE			.897		
Incorporation of local architectural styles	.815	4.22	1.45			
(CON5)						
Educating local communities (CON9)	.789	4.17	1.46			
Buying of sustainably produced crafts	.782	4.18	1.45			
(CON7)						
Providing funds or involving volunteers	.770	4.11	1.50			
(CON6)						
Planed landscaped areas (CON4)	.756	4.11	1.48		33.58%	
Conservation levy on tourist visits	.746	4.04	1.58			
(CON3)						
Code of conduct for guests for interaction	.729	4.16	1.46			
(CON8)						



Proper instructions to architects (CON2)	.722	4.13	1.42	
Experienced environmental consultants to	.690	4.16	1.49	
undertake the EIA (CON1)	•0>0		20.0	
		4.14	1.15	
Total				
Factor 2: WATER MANAGEMENT				
Installation of low-flow or dual-flush (WM2)	.833	4.07	1.09	
Use of biodegradable & phosphorous-free (WM5)	.755	4.33	0.89	
Use of mulching (WM4)	.733	4.16	1.05	5.20%
Designing of water systems (WM1)	.712	4.31	0.86	
Regular service of water pipes, valves,	.588	4.10	1.18	
etc. (WM3)				
		4.19	0.79	
Total				
Factor 3: ENERGY MANAGEMENT	044	4.20	1.02	
Installation of energy-efficient machines (EM1)	.812	4.20	1.03	
Use of compact fluorescent lights (EM4)	.809	4.16	1.09	
Investment in renewable energy systems	.774	4.35	0.93	5.43%
(EM5)				
Install automatically closing off lights (EM3)	.724	4.21	1.08	
Insulation of roofs (EM2)	.617	4.21	1.07	
modiation of roots (21/22)	•017	4.22	0.83	
Total		.,	0.00	
Factor 4: WASTE MANAGEMENT				
Use of recycled or chlorine-free paper	.816	4.57	0.79	
(WSM1)				
Knowledge of the nature of the wastes	.801	4.63	0.76	
(WSM5)				
Use of biodegradable products (WSM2)	.708	4.51	0.96	7.32%
Labelling of separate bins for wet waste (WSM3)	.663	4.54	0.91	
Store, collect and dispose of hazardous waste (WSM4)	.657	4.49	0.96	
Waste (VVDIVIT)		4.54	0.72	
Total			··· =	
Factor 5: ENVIRONMENTAL SUSTAIN	NABILIT	Y		
Wildlife & natural habitats are protected (ES4)	.775	4.20	0.73	
Loss of Water gets minimized (ES6)	.764	4.35	0.80	
The diversity of nature is getting	.760	4.36	0.72	
conserved (ES2)			<i>-</i>	
Regulatory, environmental standards are	.730	4.18	0.80	13.01%
followed (ES5)		-		- · · · ·
Unnecessary wastes are avoided (ES3)	.730	4.24	0.73	
Positive environmental ethics are	.665	4.10	0.82	
promoted (ES7)				
promoted (ES7)				



Energy consumption gets reduced (ES1)

.635

4.11 0.77

64.55

Total

4.21 0.60

0/0

Note SD = Standard Deviation, KMO = Kaiser-Meyer-Olkin, VE = Variance Extracted.

Conservation of Nature

The conservation of nature involves the sensible use of natural, social, and cultural resources in a planned manner (IUCN, 1980). The results from the factor analysis (Table 3) depict that the item CON5 (Incorporation of local architectural styles improves the aesthetic value of the destination) has the highest mean (mean = 4.22). This indicates that local architectural styles are being preferred while constructing any infrastructural facility at the destination. Thus while raising any new infrastructure or renovating the old, local architectural styles should be maintained to safeguard the nobility and integrity of the tourist destination. While as CON3 (Conservation levy on tourist visits) has the lowest mean (mean = 4.04), thereby suggesting that conservation taxes should be levied on the tourists to generate more revenues. Since the revenues are generated from tourist visitation, thus can play a vibrant part in the conservation and preservation of attractions (like wildlife conservation, landscape protection). Conservation of Nature should include an emphasis on long-term thinking in decision-making as it involves the consideration of actions that may harm the needs of future generations (Harding, 2006). Therefore, the tourism phenomenon needs to be developed and organized within limits of environmental carrying capacity and due concern for the utilization of natural resources.

Water Management

Since tourism activities result in a large quantity of wastewater that comes from showers, kitchens, baths, and toilets, etc. (Gössling, Peeters, Hall, Ceron, Dubois, Lehmann & Scott. 2012). At times these wastes get discharged directly into the environment and consequently results in water pollution. Such contamination occurs in the degradation of water quality and leads to significant health hazards to animals (Mathieson & Wall, 1982). Thus,



Table 3, the item WM5 (*Use of biodegradable*) has the highest mean with mean value 4.33 reflects the importance of biodegradable products. Increasing visitation to tourist destinations results in growth related to tourism activities such as hotels, restaurants, resorts, golf courses, spas, and water-related recreation facilities, each of which demands water (Gössling, Scott & Hall, 2015). Such activities require a proactive approach to such a water crisis through proper water management. Thereby demanding mitigating measures by concerned authorities through sustainable water management practices, ignoring them could lead to catastrophic situations.

Energy Management

As the consciousness of tourism's energy impacts on global environments spreads, and awareness of the effects of consumption on the sustainability of tourist destination grows, so does the need for DMO's to develop and adopt the proactive energy management strategies (Kelly & Williams, 2007). It is evident from table 5 that EM5 (*Investment in renewable energy systems*) has the highest mean (mean = 4.35) which means that energy resources can be conserved and used efficiently by using renewable energy resources like solar energy, insulation of roofs (EM2, mean = 4.21) to reduce pollution and minimize adverse environmental impacts.

Waste Management

Waste management includes the procedures and measures that are required to manage waste from its inception to its final disposal (LaGrega, Buckingham & Evans, 2010) since tourism operations produce large quantities of solid wastes and are collected in poorly designed dumps, or discharged into rivers, oceans or discharged in areas not visible to guests.

This not only results in environmental degradation but also land pollution through the leaching of contaminants from waste dumps. The study revealed that WSM5 (*Knowledge of the nature*



of the wastes) with the highest mean valve (mean = 4.63) has a significant role in managing waste in an appropriate way besides minimizing the negative impacts to waste handlers (Agamuthu, 2001). Through responsible waste management (Total mean = 4.54), we can not only plan the disposal of waste carefully but also reduce, reuse and recycle these wastes, thereby contributing to the enhancement of destination sustainability.

Environmental Sustainability

Environmental sustainability (ES) is about viable, sustainable and equitable use of resources, biodiversity conservation (including protection of vulnerable and threatened species), and the safeguarding of ecosystem processes and functions that support the different ecosystem services (i.e., the benefits from nature) which humans rely upon (Goodland, 1995). Responsible tourism can help minimize trade-offs between economic growth and environmental protection, and help create synergies in which tourism development can contribute to nature conservation. From the above table, it is clear that environmental sustainability ranges from *Protection of Wildlife & natural habitats* (mean = 4.20), *energy efficiency* (mean = 4.11), *handling wastes properly* (mean = 4.24) to the minimization of water loss (mean = 4.35). Thus environmental sustainability demands a proactive approach to the protection, conservation, and maintenance of the environment through incorporating these environmentally friendly activities.

Confirmatory Factor Analysis (CFA)

After confirming the necessary assumptions of Structural Equation Modeling (SEM), Confirmatory Factor Analysis (CFA) was executed to endorse the constructs and approve the measurement properties. In addition to Chi-square, other goodness of fit indices such as *CFI*, *IFI*, *GFI*, *AGFI*, and *RMSEA* were used to examine the goodness of fit.

With the dimensions of $(X^2 = 485.9, df = 417; CFI = 0.973; IFI = 0.973; GFI = 0.836; AGFI = 0.805$ and RMSEA = 0.034), exhibited that data for the model fit and hence a



measurement model on environmental Responsible Practices was developed. Besides, the validity and reliability of the dimensions of Environmentally Responsible Tourism Practices and sustainability of destinations were also assessed by following Netemeyer et al. (2003) guidelines. Table 4 shows that the Composite Reliability (CR) values for all the measured constructs of the developed model were above the recommended threshold of 0.60 (Koufteros, 1999). Furthermore, the Average Variance Extracted (AVE) values in all the cases were above the threshold of 0.50 (Fornell & Larcker, 1981). Thus the values obtained from CR and AVE favor the reliability and convergent validity of the measured constructs. While calculating the square roots of AVE and correlations between constructs, it was found that the values of AVE were higher than correlations between constructs (Fornell & Larcker, 1981), thereby confirming the discriminant validity of the studied constructs.

Table 4

Items Loadings AVE CR	Results of Confirmatory Factor Analysis				
CON9	Dimensions		Loadings	AVE	CR
CON7 .79 CON6 .77 CON6 .77 CON6 .77 CON6 .77 CON4 .70 0.747 0.919 CON3 .69 CON8 .75 CON2 .67 CON1 .72 WM2 .75 WM5 .80 WM5 .80 WM4 .76 0.725 0.846 WM1 .70 WM3 .60 EM1 .79 EM4 .75 Energy Management EM5 .85 0.749 0.863 EM2 .62 WSM1 .88 WSM5 .89 Waste Management WSM2 .69 0.786 0.889 WSM3 .76 WSM3 .76 WSM3 .76 WSM3 .76 WSM8 .76 W		CON5	.81		
CON6 .77 Conservation of Nature CON4 .70 0.747 0.919		CON9	.80		
Conservation of Nature CON4 CON3 .69 0,747 0,919 CON3 .69 .69 .75 CON8 .75 .75 .67 CON1 .72 .72 .80 WM2 .75 .80 .80 Water Management WM4 .76 0.725 0.846 0.725 0.846 WM1 .70 WM3 .60 EM1 .79 EM4 .75 .79 .85 0.749 0.863 Energy Management EM5 .85 0.749 0.863 .863 EM2 .62 WSM1 .88 WSM5 .89 .88 .88 Waste Management WSM2 .69 0.786 0.889 Waste Management WSM2 .69 0.786 0.889		CON7	.79		
CON3		CON6	.77		
CON8	Conservation of Nature	CON4	.70	0.747	0.919
CON2		CON3	.69		
CON1		CON8	.75		
WM2 .75 WM5 .80 WM4 .76 0.725 0.846 WM1 .70 WM3 .60 EM1 .79 EM4 .75 EM4 .75 Energy Management EM5 .85 0.749 0.863 EM2 .62 WSM1 .88 WSM5 .89 Waste Management WSM2 .69 0.786 0.889 WSM3 .76		CON2	.67		
Water Management WM5 WM4 .76 WM1 .70 WM3 .60 EM1 .79 EM4 .75 Energy Management EM5 EM3 EM2 EM2 EM2 EM2 EM2 WSM1 SM5 WSM5 S89 Waste Management WSM2 WSM3 .76 WM84 VM94 VM95 VM94 VM95 VM95 VM95 VM95 VM95 VM96 VM96 VM96 VM96 VM96 VM96 VM96 VM96		CON1	.72		
Water Management WM4 .76 0.725 0.846 WM1 .70 WM3 .60 .60 .60 .79 .60 .79 .85 0.749 0.863 .85 0.749 0.863 .86 .86 .86 .86 .86 .86 .86 .88 .89 .89 .89 .88 .89		WM2	.75		
WM1 .70 WM3 .60 EM1 .79 EM4 .75 Energy Management EM5 .85 0.749 0.863 EM2 .62 WSM1 .88 WSM5 .89 Waste Management WSM2 .69 0.786 0.889 WSM3 .76		WM5	.80		
WM3 .60 EM1 .79 EM4 .75 Energy Management EM5 .85 0.749 0.863 EM3 .72 EM2 .62 WSM1 .88 WSM5 .89 Waste Management WSM2 .69 0.786 0.889 WSM3 .76	Water Management	WM4	.76	0.725	0.846
EM1 .79 EM4 .75 Energy Management EM5 .85 0.749 0.863 EM3 .72 EM2 .62 WSM1 .88 WSM5 .89 Waste Management WSM2 .69 0.786 0.889 WSM3 .76	-	WM1	.70		
Energy Management EM4 .75 Energy Management EM5 .85 0.749 0.863 EM3 .72 EM2 .62 WSM1 .88 WSM5 .89 Waste Management WSM2 .69 0.786 0.889 WSM3 .76		WM3	.60		
Energy Management EM5 .85 0.749 0.863 EM3 .72 EM2 .62 WSM1 .88 WSM5 .89 Waste Management WSM2 .69 0.786 0.889 WSM3 .76		EM1	.79		
EM3 .72 EM2 .62 WSM1 .88 WSM5 .89 Waste Management WSM2 .69 0.786 0.889 WSM3 .76		EM4	.75		
EM3 .72 EM2 .62 WSM1 .88 WSM5 .89 Waste Management WSM2 .69 0.786 0.889 WSM3 .76	Energy Management	EM5	.85	0.749	0.863
WSM1 .88 WSM5 .89 Waste Management WSM2 .69 0.786 0.889 WSM3 .76		EM3	.72		
WSM5 .89 Waste Management WSM2 .69 0.786 0.889 WSM3 .76		EM2	.62		
Waste Management WSM2 .69 0.786 0.889 WSM3 .76		WSM1	.88		
Waste Management WSM2 .69 0.786 0.889 WSM3 .76		WSM5	.89		
WSM3 .76	Waste Management	WSM2		0.786	0.889
		WSM3	.76		
WSM4 .68		WSM4	.68		



Environm	nental Susta	ainability		SUS4 SUS6 SUS2 SUS5 SUS3 SUS7 SUS1	.63 .75 .76 .79 .76 .73	0.732	0.889
	s of fit indic	<u>ces</u>					
X^2	df	CFI	IFI	GFI		AGFI	RMSEA
485.9	417	0.973	0.973	0.836		0.805	0.034
Note							

 X^2 = Chi-square; df = degree of freedom; CFI, comparative fit index; IFI =incremental fit index; GFI =goodness-of- fit index; AGFI = adjusted goodness-of-fit-index; RMSEA = root-mean-square error of approximation

AVE = Average Variance Extracted, CR = Composite Reliability

Hypothesis testing

After confirming the measurement model, the present study tested the proposed hypothesis (i.e., there is a significant effect of Environmentally Responsible Tourism practices on the sustainability of Destinations) through Structured Equation Modeling. The results of the structural model indicate that the model fits the data very well ($X^2 = 124.37$, df = 44; $Probability\ level = .000\ CFI = 0\ .989$; $IFI = 0\ .990$; GFI = 0.946; AGFI = 0.904: $RMR = 0.034\ and\ RMSEA = 0.038$). The study revealed that Perceived Environmental Responsible Tourism Practices explained 67.24% of the perceived destination sustainability. While examining the path of coefficients, the results revealed that the destination community's affirmative notion of Environmentally Responsible Tourism practices remarkably affects the perception of sustainability of tourist destinations ($\beta = 0.82$, p < 0.05).

Discussion & Implications

This study was an endeavor to evaluate the impact of Environmentally Responsible Tourism activities on the sustainability of destinations from the destination communities' perspective. The results revealed that destination communities perceive that constructs of Environmentally Responsible Tourism practices have a significant impact on the sustainability



of destinations (Figure 2). All these dimensions have a positive beta (β), thereby suggesting the perceived impact on the sustainability of tourist destinations. The study's findings reveal that the destination community's perception regarding Environmentally Responsible Tourism activities is an essential predictor to influence their notions of the sustainability of tourist destinations. The study finding emphasizes the role of environmentally friendly practices for achieving the destination sustainability. The findings also reiterate the incorporation of these initiatives for the betterment and excellence of the tourist destinations.

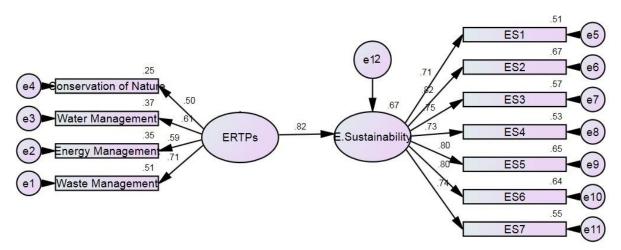


Figure 2. SEM Model: Impact of ERTPs on Environmental Sustainability

Conservation of Nature

In the context of the tourism industry, conservation of nature implies the judicious use of all the natural resources present at the tourist destination to maintain the integrity and a balanced environment at the destination. As natural resources sustain the livelihoods of destination communities, biodiversity loss directly impacts the quality of life of communities. Thus tourism establishments had to adopt sound environmental practices that inevitably contribute to the quality of their surroundings, improving the experience for guests and the living standards of local communities.



Items scoring high in the study included: experienced environmental consultants to undertake the Environmental Impact Assessment EIA (mean=4.16), Incorporation of local architectural styles (mean=4.22), educating local communities (mean=4.17), Buying of sustainably produced crafts (mean=4.18), Planned landscaped areas (mean=4.11), Code of conduct for guests for interaction (mean=4.16), Providing funds or involving volunteers (mean=4.11). These should be given due consideration in the agenda of tourism development. It suggests that developments at tourist destinations should aim at incorporating these environmentally responsible practices for achieving the sustainability of these destinations. For instance, Ocean Blue Adventures in Plettenberg Bay supports the Ocean Research and Conservation Africa (Orca) Foundation Orca aiming to return the local marine and coastal environment to a pristine condition by combining conservation and community development, science, education, business, and tourism.

This emphasizes the significance of promoting and maintaining the tourist destination's environmental integrity in light of responsible tourism development. Tourism and conservation can benefit mutually from each other. Tourism helps by lending support to those conservation programs which will 'develop' educational, scientific, and recreational resources, with the objective that they, in turn, will attract more and different kinds of tourists. It is also essential to impart environmental education (mean = 4.17) to local communities to create awareness among them regarding the destructive consequences of tourism development if not appropriately managed. This can be achieved by academic assistance, conservation lessons, environmental debates, and educational weekend seminars to locals.

Water Management

As the tourism activities at the destination result in wastage of large quantities of water either at the accommodation units or the outdoor water sports activities, the concerned authorities at the tourist destinations are targeting at reducing the wastage of water and



improvement of water quality as the water shortage will significantly affect the visitation patterns to the destination. It revealed that the practices regarding water conservation like *Installation of low-flow or dual-flush* (mean=4.07), *Use of biodegradable & phosphorous-free* (mean=4.33), *Use of mulching* (mean=4.16), *Designing of water systems* (mean=4.31) and *Regular service of water pipes, valves* (mean=4.10) has an indispensable role in achieving the environmental sustainability of the tourist destination.

The environmental sustainability through water conservation can be achieved through several approaches like by checking the relationship between the number of tourists that can be accommodated and the volume of water used by setting a benchmark (e.g., 300 litres per bed night), by using wastewater to water ornamental plants around the hotels, etc. This could enhance the hotels' surroundings with flowers and other plants, and, in turn, will enhance the environmental sustainability of the tourist destination.

Energy Management

A significant threat to the sustainability of tourism is the escalating demand for energy resulting in the depletion of natural resources and associated risk to the global climate. This study has presented many environmental energy conservation strategies through which to achieve persistent environmental sustainability. The findings evidenced that these energy-saving practices like *Investment in renewable energy systems* (mean=4.35), *Install automatically closing off lights* (mean=4.21), *Insulation of roofs* (mean=4.21), *Installation of energy-efficient machines* (mean=4.20) and *Use of compact fluorescent lamps* (mean=4.16) can play a pivotal role in enhancing and strengthening the destination sustainability.

Thus, the environmental sustainability of the tourist destinations can be accomplished by adopting various energy conservation strategies like energy-efficient light bulbs, the use of thermopane windows to reduce energy costs, the use of solar energy panels, etc. Conserving energy resources by using them efficiently and using "clean" energy sources, such as solar and



wind power, can help reduce pollution and minimize negative environmental and social impacts. For example, Coral Divers in Sodwana Bay replaced its 40 W light fittings in the camp with energy efficient 15 W bulbs, which has reduced its electricity use for lighting by 48%. Kruger National Park fitted its three largest camps with 4500 Compact Fluorescent Lamps as part of an efficient lighting feasibility study, saving the Park about Rs.6, 000 a month in energy bills.

Waste Management

As tourism activities produce waste in large quantities, dumped in poorly designed waste dumps, or discarded to nearby areas out of sight of guests. Improper waste disposal not only visually degrades the environment but can lead to water and soil pollution through the leaching of contaminants from waste dumps. Uncontrolled disposal of toxic items results in the contamination of water, soil, and air, threatening the environment and human health. Therefore, it is essential to adapt the responsible waste management practices that are about carefully planning the disposal of waste and reducing and recycling.

The authorities ensure and should take responsibility for the proper dumping of waste. It is found that practices like *knowledge of the nature of the wastes* (mean=4.63), *use of recycled or chlorine-free paper* (mean=4.57), *labeling of separate bins for wet waste* (mean=4.54), *use of biodegradable products* (mean=4.51) and *store, collect and dispose of hazardous waste* (mean=4.49) have a significant role in achieving the sustainability of tourist destination. As waste management and energy savings have been critical concerns in environmental management, thus should be given due consideration in the agenda of tourism development. For example, Grootbos Nature Reserve has established a waste recycling depot, and all waste sorted into glass, paper, cardboard, and cans. Over 90% of its glass bottles, paper, and cardboard are recycled.



Conservation of Nature, water conservation, energy savings, recycling of waste, and waste management are the environmental management issues that have been of concern to the tourism industry. Thus, the study spotted the areas (Conservation of Nature, Water Management, Energy Management, and Waste disposal Management) that impact the environment of the tourist destinations, thereby contributing to the sustainability of destinations. The critical implication of the present study for the Kashmir Valley tourism industry is the compilation of ERTPs as these could be incorporated into other fragile and ecosensitive tourist destinations of the valley.

Since most of the research related to sustainable tourism development occurs in the industrialized nations in West or American states (Tosun, 2001), this study would be useful for other researchers of the Indian sub-continent. To evaluate the sustainability of destinations, the contents of ERTPs based on regional consultations of CEOs of tourist destinations (Butler, 1998) could be used. The constructs of the ERTPs allow experts to assess and evaluate the use of water, consumption of energy, and waste production (Spenceley, 2003a). The present study recognizes the framework of approaches upon which DMO's should strive to achieve the sustainability of tourism destinations (Clarke, 1997). Therefore, the present research summarized the list of Environmentally Responsible Tourism practices through which the aim can be achieved, i.e., the sustainability of destinations. With widespread uptake and implementation of ERTPs, issues like environmental degradation, global warming, climate change, and biodiversity extinction can be well addressed and managed. While incorporating these activities, tourist destinations can achieve a competitive advantage in such a competitive environment via increasing market demand for environmentally sustainable holidays.

It is essential to implement environmentally friendly practices and offer capacitybuilding programs related to environmental education for local destination communities' to enhance the perception of communities related to tourism activities and sustainability.



Concerned authorities should also give due consideration to the local community's needs and the needs of the tourists while implementing an infrastructure development plan (for instance, incorporation of local architectural styles to improve the aesthetic impact of the development). To carry the development within the limits of carrying capacity, a proper scientific and careful management approach is essential for infrastructure development and other facilities.

Through the application of ERTPs at the destinations the governments and DMO's who are signatories to the international conventions like Convention on Biological Diversity, Convention on Environmental Impact Assessment in a Transboundary Context and Conventions on Climate Change like Kyoto Protocol and Djerba Declaration may get assisted in achieving obligations made towards implementing these international protocols and conventions. The themes like the linkage between poverty elimination, environmental conservation, and natural resource usage, which were prioritized at the World Summit on Sustainable Development in 2002, are significantly addressed by the contents of Environmentally Responsible Tourism Practices. Thus ERTPs are there therefore relevant concerning the current scenario of sustainable development at the global level.

Limitations and directions for future study

Finally, it is worth mentioning the limitations of this study in light of the comprehensive, holistic, and integrated nature of sustainable tourism development. Though the role of environmentally friendly practices is a widely recognized approach in mitigating the adverse effects of tourism on the environment, few empirical pieces of evidence are evident to substantiate this role in achieving the sustainability of destinations. Thus, the present study was conducted to assess the effect of these activities on tourist destinations' sustainability. As the sustainability of tourist destinations not only depends upon the appropriate formulation and implication of activities that are environmentally friendly but also depends upon the sociocultural and economic dimensions of sustainability as well. In the present study, only



environmental sustainability has been taken care of, while other sustainability areas have not been considered. Thus the other studies should focus on other sustainability areas. Similar studies in other destinations shall be carried out to develop responsible tourism as a sustainable model for destinations.

Further improvisations of scales should be considered as most of the research studies are communities specific. From the tourists' perspective, their perception of the different aspects of responsible tourism development, their satisfaction, and intention to revisit can bring new insights to DMO's to develop destination marketing strategies. One more direction of the study shall be the involvement of other stakeholders like hospitality business sectors, DMO's and Govt. agencies in responsible tourism management and destination sustainability, thereby paving insights for framing a new model in tourism development. Since the present research illustrated a new prototype, further validation and improvisation on other tourist areas may usher more robustness to this environmentally sustainable model.

Conclusion

The present investigation revealed that there is a significant positive association between environmentally responsible tourism practices and destination sustainability (environmental) as recognized by the destination community. The research revealed that ERTPs are a good predictor of environmental sustainability, thereby has a remarkable contribution to achieving the sustainability of destinations. The study's findings unveiled that $Waste\ Management(\beta=0.71)$ has a vital role in enhancing sustainability, thereby suggesting that effective and responsible waste management activities shall be incorporated at tourist destinations.

This will not only have implications for environmental quality but also for resource and economic sustainability as well. Also, the study found that *Water Management*, $(\beta = 0.61)$; *Energy Management* $(\beta = 0.59)$ and *Conservation of Nature* $(\beta = 0.50)$; are the good predictors



and has an indispensable role in protecting the probity and integrity of the fragile ecosystem, thereby generating productive benefits for local communities and thus encourages conservation besides contributing to environmental sustainability. All these activities have an outstanding contribution to the management of destinations in a sustainable manner. While tourism destinations make more significant efforts to achieve equilibrium between sustainability and development, environmentally responsible tourism practices can improve these ventures of development concerning sustainability. This consequently can boost and enhance the competitiveness of tourism destinations.

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