

## Environmental Maintenance and Ecotourism: An Analysis into The Observation Of Tourists And Maintenance Agencies in India

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### Abstract

In developing countries, tourism industries offers promising economic development with a positive outcome. However, the tourism industry is subjected to the certain limitation in terms of the inhabitants of the local and ecological community. It provides the hardship for the tourism in native people in emphasize of culture and environment as an important factor in ecotourism. The evolution of ecotourism engaged in the provision of environmental pollution-free. The concept of ecotourism is still an emerging concept in the provision of results and overall prospects of the environment. For this, it is necessary to evaluate the ecotourism potential and perception to evaluate the relationship between environmental conservation and ecotourism. This research aimed to evaluate ecotourism in India in terms of natural and cultural terms for evaluation of the relationship between ecotourism and conservation. The examination of ecotourism is based on an evaluation of the relationship between tourists' perception and conservation agencies in India. The analysis of results revealed that there exists a positive relationship between ecotourism and environmental conservation in terms of conservation agencies and tourists perception. Also, it is identified that there is no significant difference lies between conservation agencies' and tourists perception with the evaluation of the positive relationship between environmental conservation and ecotourism in India. Through analysis, the to improve energy conservation and ecotourism in India are suggested.

**Keywords:** *Ecotourism, Environmental conservation, Conservation Agencies, Perception, Environment, Sustainable*

### Introduction

In recent years, the rapid advancement in the country's economy subjected to rapid development in the economy [1]. The potential of ecotourism to improve rural livelihoods and environmental protection has led to its growing popularity in biodiversity hotspots. Poverty is deeply ingrained in many facets of society, and it can be lessened [2]. Improvements in communication and in the international transport sector continued to contribute to the global demand of tourism. Previous studies have shown that tourism continues to grow and developing countries rely on tourism for economic benefits. As the tourism industry continues to grow in developing countries and encouraged internationally as a tool for economic development and political appease, protected areas continue to be affected, contaminated and difficult to manage [3]. According to the International Ecotourism Society (TIES), ecotourism is "ethical travel to natural areas that preserves the environment and promotes the well-being of local people." As a result, the core components of ecotourism are (i) a solution based on nature; (ii) a sustainability dimension from the perspective of conservation; (iii) a sustainable human factor taking into account the participation and benefits of local people; (iv) education, awareness, and learning; and (v) ethical marketing and business management of indigenous products. Moreover, it prevents harmful externalities like mining, forestry, and poaching, acting as a "human shield." [4]. Therefore, developing nations take a net profit advantage from tourism, but at the same time have a particular negative impact on environment, due to the fact that the legislation frameworks are less effective due to political lobby.

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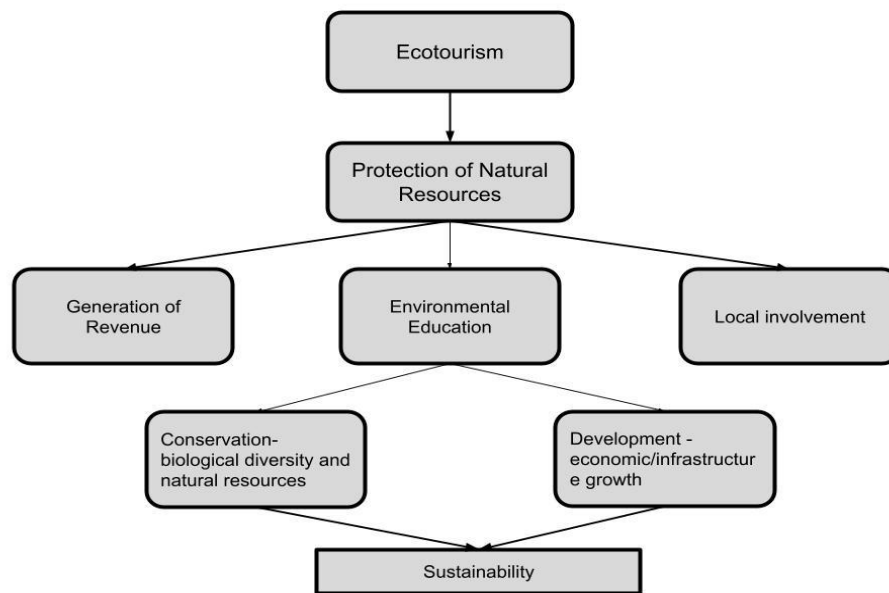
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Through efficient market research, it generates income as a subset of sustainable tourism [5]. By the 1980s, people became disenchanted with mass tourism and also more aware of the threat it posed to natural and cultural landscapes, and have called for changes within tourism that could render it more sustainable. Scholars like David Fennel, which started working on the topic in the 1980s and authored the general text *Ecotourism: An introduction* while also contributing to the establishment of „Journal of Ecotourism“, opened the way for further investigations into ecotourism and emphasized the need for its theoretical foundations and policy guidelines [6]. According to its size and growth, ecotourism grew between 10% and 30% annually during the 1990s [7].

The potential of ecotourism as a human development strategy for integrated conservation and development (ICDP) in rural developing nations. In his book, Butcher presents a strong argument that when NGO programs are implemented in rural impoverished areas in developing nations, they are obligated to provide aid and assistance according to a set of predetermined standards that were developed in the West. In summary, language emphasizing sustainability and community empowerment may legitimate the power disparity between the rural poor and comparatively wealthy western-based NGOs [8]. It is meant to be a low-profile activity so that nature, as well as the local community, is not alarmed. Ecotourism has gained popularity due to its significant capability in environmental sustainability and uplifting of territorial neighborhoods. The fundamental intent of such a trip is to understand the flora, fauna, and cultural heritage of a specific natural reservoir [9]. Modernizing their ecotourism industries has helped a number of developing countries attain economic stability while minimizing adverse social and environmental effects. These businesses made a tangible difference by reducing poverty and fostering peace in Costa Rica, Ecuador, Tanzania, Kenya, India, and Nepal [10].

*"Environmentally responsible travel to natural areas, in order to enjoy and appreciate nature (and accompanying cultural features, both past and present) that promote conservation, have a low visitor impact and provide for beneficially active socio-economic involvement of local peoples."*

But Ecotourism is not only a trip to nature; it has various other elements of responsibilities into it. Thus an ecotourist should have different ideologies from that of a regular tourist. He should be aware of his each action that might disturb the harmony of the ecosystem [11]. Approximately 70 million indigenous people depend on forests for their livelihood, according to the United Nations SDGs Report [12] eighty percent of rural residents in developing countries rely on traditional plant-based treatments for basic medical care. Furthermore, only a percentage of essential biodiversity sites are covered by protected areas, which currently make up 15% of terrestrial and freshwater ecosystems and 7% of marine regions. These areas have not yet been effectively preserved or are fully representative of biology. In addition, impoverished rural women are especially susceptible to the depletion of common pool resources. In addition, 120 countries are home to some 7,000 species of plants and animals that are illegally traded, while illegal poaching and wildlife trafficking still hinder conservation efforts. A more integrative perspective integrates literature on ecosystems from scholars and professionals who are representative of different continents and languages. His book focuses on the on-site environmental impacts of ecotourism and from his perspective, it represents the ecologists' contribution to the ecotourism literature and analyses a wide range of topics; such as the impacts of off-road vehicles on wildlife or more common ecotourism activities such as the effects of trampling by hikers or impacts on soil and vegetation produced by horse-riding and off-road vehicles [13]. In figure 1 the classification and impact of the ecotourism and energy conservation is presented.



**Figure 1: Classification of Ecotourism**

The environmental-conservation approach recognizes people's influence on their surroundings and aims at finding ways to preserve, protect and actively involve people in this endeavor; this is in opposition with the development approach, which looks for more job opportunities through the means of tourism and for increasing the economic welfare of the host communities [14].

### Related Works

#### Perception of Tourists

In the first place, the revised literature makes it possible to summarize the reasons why tourists are involved in Ecotourism. They have different reasons. For example, some are looking for recreational activities such as appreciation of wildlife, birding, hiking, relaxation, exercise, swimming, and water sports. Some others are in seeking of experiencing and enjoying wilderness settings and scenery. The country's network of national parks (103), wildlife sanctuaries (543), conservation reserves (73), and community reserves (45), many of which are tiger, elephant, Ramsar wetland, biosphere, Natural World 2 C. CABRAL AND R. L. DHAR Heritage Sites, and Important Bird Areas, makes up nearly 4.92% of its total land area and offers substantial ecotourism potential [15]. The ecology, economics, and society in another part of Nepal were impacted by ecotourism. Tourism-dependent households in the Annapurna conservation region are encouraged to employ renewable energy sources [16]. They are training local tourism entrepreneurs in leadership development, communication, and management. Building tourism infrastructure in the Annapurna conservation area (ACA), educating visitors, and enabling tourism businesses all have a good impact on ecotourism [17]. India is home to two significant biodiversity zones—the North-East Himalayas and the Western Ghats—out of the world's 34 biodiversity hotspots. India is designated as a mega-diversity country because of its distinct flora and fauna [18]. Indian philosophy holds that people have a close relationship with the natural world. According to Vedic mythology, people worshipped natural forces because they believed that certain natural phenomena or objects were divine. The idea that all natural beings are completely one is the most important one in Vedic philosophy [19].

The study highlights that ecotourism in India holds potential to address poverty and environmental degradation but faces slow progress due to challenges in implementation. While successful examples exist, many destinations struggle with sustainability. The review identifies gaps in research, stresses multidimensional impacts, and proposes future directions to strengthen ecotourism's role in advancing sustainable development in India [20].

The review finds that while ecotourism is expected to support biodiversity conservation and community development, indigenous communities often fail to realize these benefits. Key barriers include limited human, financial, and social capital, inequitable benefit distribution, and land insecurity.

Strengthening land rights, community empowerment, and fair economic mechanisms are essential for ecotourism to truly enhance indigenous livelihoods and conservation outcomes [21]. The study, social inclusion is essential to cooperative tourist marketing success. DMOs can clarify clear objectives, lessen free-riding, and create stable relationships by promoting inclusive networks. The study emphasizes the crucial significance of social relationships and the paucity of attention given to them in the literature on tourism. [22]. The study shows that Quebrada Verde demonstrates strong community resilience to COVID-19 through self-organization, solidarity, and cultural identity, enabling recovery of its ecotourism activities. However, climate change poses more lasting threats. While internal social cohesion is robust, weak external linkages limit adaptive capacity. Strengthening networks with authorities and stakeholders is essential to ensure long-term resilience and sustainable ecotourism [23]. But tourists give the highest support to the development and implementation of the interpretation program, which is considered an effective way to understand the opinion of respondents based on available knowledge and information for resources.

### **Perception of Conservation Agencies**

To begin with, conservation agencies are both government and non-governmental agencies, one that provide services and others acting as destination caretakers. As will be seen, destination caretakers often have a different perception of government agencies.

"Tourism will facilitate economic diversification, preservation of cultural integrity and protection of the environment of the Sultanate of Oman" [24]. However, this organization was also aware of the negative impacts of Ecotourism. At instance, to provide information and appropriate knowledge to the local people it impacts on tourism in both positive and genitive terms in Oman. The tourism developed based on the campaign stated as 'Tourism Enriches'. In those organization, sustainable ecotourism impacts in terms of economic, environmental and social terms. Additionally, to deal with the sustainable tourism United Nations World Tourism Organization cooperation is evolved.

In [25] stated that the ecotourism derives the legitimacy for sustainable prescriptions involved in examination of linkage for development in ecotourism and sustainable environment. Throughout the world, ecotourism is promoted based on UN wings, Natural Conservancy by NGOs in terms of national and international scenario, national government and communities and the World Wildlife Fund (WWF). The larger financial conservation agencies evaluated the Ecotourism in terms of conservation programs and employment opportunities for declaration of the protected area. Additionally, ecotourism improves the tourist awareness about the local people in terms of biodiversity and beauty to support conservation in nature.

But there is a shift in the perception of the relationship between Ecotourism, sustainability and environmental conservation by those who are destination caretakers. In direct conversations with the authors, they let them catch a glimpse of the dilemma they face. On one hand, they undertake their work as caretakers of the ecosystem, sacrificing their own economy and their family time. On the other hand they are tired of their work because of poor working conditions and other reasons. Thus,[26] points out: "A central dilemma for conservation agents was summed up by Jaafa, who in May 2001 was considering leaving his work with the Biosphere ICDP: „I'm tired of it. The reason I'm tired is that the pay is unacceptable'. The slowness of the project salary, as well as job insecurity and the negative social consequences of conservation work, has motivated manual farmers to cultivate their links with the subsistence economy". While most people believe that protecting Mt. Kasigau is important, many community members also speak about the importance of cutting trees for firewood, thus representing a disconnection between beliefs and actions. Local people need firewood and materials, so they do not consider it illegal to take them from a national park. As Andrea Falsetto points out, "this indicates a conflict between support for conservation and pursuit of basic needs" [27].

### **Ecotourism and energy conservation**

In the phenomenon of ecotourism, the central character in itself is the '*ecotourist*' who actually is the real traveler. There have been several individual types of research to know about the general profile and characteristics of ecotourists. One such research was reported by Wilson (1987) [28] conducted in Ecuador, which suggests that the majority of the ecotourist, are male, high-income groups, and high education status tourists. According to Lee (2007) [29], there are three basic criteria that define ecotourists as:

1. Type of sites visited by the tourists (tourist at a nature base site as ecotourist).
2. On-site activities criteria (tourists engaging in a particular activity/s).

### 3. Motivation criteria (underlying motivation of traveling to an eco-tourism destination).

The alternative words for tourism is encompasses the different strategies for tourism in terms of 'eco', 'controlled', 'appropriate', 'cottage', 'responsible', 'green tourism', 'people to people and 'small scale' for alternative tourism for the conventional and sustainable process. Specifically, Weaver (1993) [30] examined the benefits of the alternative tourism design from the perspectives of attractions, economic impacts, accommodation, and regulations. The sensitive approach in tourism development withstands the need for local people, resources and , tourists in a competitive manner. In table 1 the tourism design alternatives are presented.

**Table 1: Alternative tourism design**

Accommodation	Attractions	Market	Economic impact	Regulation
The community is not overwhelm	Improved authenticity and uniqueness on the promoted community	In local number tourists are not overwhelmed; stress are avoided	With a single dependence sector, economic diversity is promoted	Community concentrated on the strategic decision and critical development process
Benefits are distributed evenly	With promotion of self-fulfillment attractions and educational preference are improved	The deluge cycles are draught those are eliminated and fostered in equilibrium	The interaction is based on the sectors and interaction with each other	The capabilities for planning is based on social, ecological and economic capabilities
Within the infrastructure homes and business competition need to be provided	The existence of the local benefits are gain the tourists attractiveness	A more desirable visitor type	Higher net revenues and money is circulates within the community	The interest community is based on the integration of the stress
In tourism sector higher opportunity is provided for the local participate and entrepreneurs		The vulnerability is minimal within major market disruption	High number of jobs based on economic activity is generated	Future generation welfare is considered in to account

**Source:** Weaver (1993) [30]

### Research Methodology

This paper details the roadmap used to conduct inquiry and to develop this work. This begins with defining the selection of topic, research problem, and setting up the objectives of the study and moves forward to explain the research methods employed in the study, including details about the research design, sampling framework, data collection, data analysis, and interpretation methods.

### Hypotheses of the Study

Three hypotheses have been developed to assess the perception of Eco Ecotourism and Environmental Conservation in the light of research objectives

H1: There exists a positive relationship between environmental conservation and ecotourism based on the perception of the tourists in India.

H2: There exists a positive relationship between environmental conservation and ecotourism based on the perception of the agencies in India.

H3: There lies a significant relationship between tourists perception and conservation agencies with ecotourism and environmental conservation

## **Research Design**

Research design specifies the methods and procedures for collection and analyzing the needed information in a coherent and logical way. Since the nature of the study was such that it could not adhere essentially to a particular research design, as such, a mixed approach to research was taken into consideration that started with exploratory research followed by descriptive analysis and testing of the hypothesis. In the exploratory phase, existing studies were critically reviewed to establish the research model and develop the research instrument. The aim was to look for ideas, patterns, and hypotheses for further research. Through exploration, researchers developed concepts more clearly, established priorities, developed operational definitions, and improved the final research design. As the concept of Ecotourism is still in its infancy stage in India, such exploratory design was undertaken. Further, in the descriptive phase of research, a survey was conducted to obtain data from the respondents which were then analyzed to test the proposed hypotheses. Thus, the present study adopted a mixed approach.

## **Sampling Design**

The following elements were covered under the sampling design of the present study: The study was carried out in India tourists and agencies in India.

## **Population for the Study**

The population for this study comprised of Tourists that have visited India in the year 2021 and the Conservation agencies that have their operations in India. As per the data received from the Department of Tourism, India 927,815 tourists visited India for the year 2021.

## **Sample Structure and Size**

In total 408 respondents were selected from three locations of India (Mumbai, Hyderabad and Kodaikanal) in this study. Out of these 408 respondents, 378 were tourists and 30 were the conservation agencies.

## **Sample Size (Tourist)**

The sample size of 390 was divided into three parts which equaled to 130 meanings from each zone i.e. Municipality, Province, and Districts of India we took responses of 130 respondents. An equal sample of 10 hotels was chosen randomly from each destination and from each Hotel, 13 respondents were interviewed. There were some unengaged respondents which resulted in the rejection of some questionnaires thus making our final sample for Tourists 378.

## **Sample Size (Conservation Agencies):**

And for conservation agencies, we took a sample size of 30 which included government departments, NGOs and travel firms. Usually, for smaller populations, the general rule of thumb is to have at least 30 respondents in a sample. In our case, the population of Conservation Agencies was small, so as a general rule of thumb we took 30 conservation agencies as our sample.

## **Sampling Technique**

For the Tourist population, sampling method chosen was multistage sampling. As our area under study was India, so we divided India into three zones i.e. Municipality, Province, and Districts on the basis of division. From each zone i.e. Municipality, Province, and Districts India, a Tourist destination was selected based on the highest no. of Tourist Inflow. As per the Data provided by the Department of Tourism. The selected sample place was Mumbai in Maharashtra state, Hyderabad in province and Kodaikanal is municipality. Then again, we selected 10 hotels from each of the selected Tourist Destinations. Selection of the Hotels was made using random sampling by way of the list provided by the Department of Tourism, India.

## **Data Sources**

The data for analysis is collected in terms of primary and secondary sources. The primary data were collected from conservation agencies and tourists through structured questionnaires. The evaluation of the survey is evaluated based on the conservation agencies' and tourists' perceptions in the examination of environmental conservation and ecotourism. The secondary data were collected from different agencies such as statistical reports, research reports, articles published, websites, and electronic media.

## Results and Analysis

The main objective of the study is to analyze the correlation between Ecotourism and Environmental Conservation based on primary data collected from Tourists and Conservation Agencies. Keeping in mind the above-mentioned objectives, a structured questionnaire was developed and used as an instrument to gauge the factors measuring Ecotourism and Environmental Conservation. For this purpose, factor analysis was done to extract various constructs. Moreover, in the present study, Spearman's and Pearson's Correlation was done to study the correlation between Ecotourism and Environmental Conservation with regard to the perception of Tourists and Conservation agencies. Finally, the constructs were compared using an independent t-test. The collected tourist's respondents' demographic profiles are presented in table 2.

**Table 2: Demographic profile of respondents**

Demographics	Category	Frequency	Percent
<b>Gender</b>	Male	208	51
	Female	200	49
	Total	408	100
<b>Type</b>	Tourist	378	92.6
	Conservation Agency	30	7.4
	Total	408	100
<b>Nationality</b>	India	376	92.2
	Foreigner	32	7.8
	Total	408	100
<b>Age</b>	20 – 39	342	83.8
	40 – 59	62	15.2
	60 – 79	4	1
	Total	408	100
<b>Education</b>	Primary school	10	2.5
	High school	1	0.2
	College	64	15.7

As shown in Table 1 above, it is observed that the gender composition of the tourists was nearly even, male (51%) and female (49%). A large number of the respondents were tourists (92.6%) followed by conservation agencies (7.4%). More than half of the respondents were India people (92.2%) and the rest (7.8%) were foreigners. The majority of the respondents (83.8%) were of the age group of 20-39 years while only 1% of the respondents were above 59 years of age. Most of the respondents had an education till university level (81.6%) followed by the college level (15.7%), only a handful had been to primary school (2.5%). The majority of the respondents had an income below Rs. 50,000 (49.5%).

### Measure of Ecotourism

The evaluation is based on the consideration of the ecotourism variable count of 20 items that are identified from existing literature and evaluated with pilot statistics. The selected 20 variables are examined with factor analysis and reduced to 18 items to reliable results. The results of the factorial analysis for 20 items are presented in table 3.

**Table 3: KMO and Bartlett's Test (Against items that measure Ecotourism)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.626
Bartlett's Test of Sphericity	Approx. Chi-Square	1852.511
	Df	190
	Sig.	0

In above table 3 the examined results expressed that dataset considered are suitable for Exploratory factorial analysis as the value of KMO is estimated as 0.626. The factor analysis expressed that the adequate and efficient with the Bartlett's test value minimal than 0.05. Also, the above table 3 expressed that the results are statistically significant those exhibits validity and suitability response those are addressed in the evaluation. With factor analysis the eigen values are processed with the extraction of the PCA approach. The defined PCA analysis exhibits value of 56.22% on the estimation of the variations.

**H1: There exists a positive relationship between environmental conservation and ecotourism based on the perception of the tourists in India.**

Data for tourists group is not normally distributed so Spearman's Correlation would be used to see the correlation between Ecotourism & Environmental conservation.. Spearman's Correlation is non-parametric rank transformation-based test. The correlation analysis is presented in table 4.

**Table 4: Correlation Relationship between ecotourism and environmental conservations**

			Ecotourism_Tourist	Environmental_Conservation_Tourist
Spearman's rho	Ecotourism_Tourist	Correlation Coefficient	1	.572**
		Sig. (1-tailed)		0
		N	378	378
	Environmental_Conservation_Tourist	Correlation Coefficient	.572**	1
		Sig. (1-tailed)	0	
		N	378	378
**. Correlation is significant at the 0.01 level (1-tailed).				

To reject  $H_0$  at least one significance 1-tailed value must be less than or equal to the level of significance. As the table supports the decision of the researcher, the researcher accepts **H1**. Thus, the researcher may conclude that there exists a positive relationship between the variable environmental conservation and ecotourism based on the perception of tourists in India.

**H2: There exists a positive relationship between environmental conservation and ecotourism based on the perception of the agencies in India.**

Data for the tourists group is normally distributed so Pearson's Correlation would be used to see the correlation between Ecotourism & Environmental conservation. Pearson's Correlation is a parametric test as in table 5.

**Table 5: Correlation between ecotourism and environmental conservation**

		Ecotourism_Agency	Environmental_Conservation_Agency
Ecotourism_Agency	Pearson Correlation	1	.567**
	Sig. (1-tailed)		0.001
	N	30	30

Environmental_Conservation_Agency	Pearson Correlation	.567**	1
	Sig. (1-tailed)	0.001	
	N	30	30
**. Correlation is significant at the 0.01 level (1-tailed).			

As the table 5 above support the decision of the researcher, the researcher accepts **H2**. Thus, the researcher may conclude that the positive relationship lies between the ecotourism and environmental conservation of the conservation agencies perception.

**H3: There lies a significant relationship between tourists perception and conservation agencies with ecotourism and environmental conservation**

**SUB - HYPOTHESIS 3.1:**

**H<sub>3.1</sub>: There lies a significant variation between tourists perception and conservation agencies for the ecotourism.**

To test the **Sub - Hypotheses 3.1**, firstly the Levene's test is used to assess the equality of variance between the tourist group and the Conservation Agency Group. The significance level of this test is 0.05. Then, following the decision of this test, the independent samples t- test is applied. Where the Levene's test is not significant, the t-test with equal variances is applied. Where the Levene's test is significant, the t-test with corrected degrees of freedom is applied. In both instances the significance level of the t-test is 0.05 (two tailed) as in table 6.

**Table 6: Group Statistics for Ecotourism**

Group Statistics (Ecotourism)					
	Type	N	Mean	Std. Deviation	Std. Error Mean
Ecotourism	Tourist	378	1.953	0.35306	0.01816
	Conservation Agency	30	1.8722	0.24363	0.04448

**Table 7: Sample t-test for Ecotourism**

Independent Samples Test (Ecotourism)										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Ecotourism	Equal variances assumes	5.50	0.01	1.122	406	0.22	0.0807	0.0657	-0.0483	0.2099
	Equal variances not assumes			1.68	39.38	0.101	0.0807	0.0480	-0.0163	0.1779

In table 7, the Levene's test rejects the assumption of equal variances at the significance level of 0.05 ( $p=0.019$ ) and the unequal variance t-test with unequal sample size is applied. The t-test retains  $H_0$  at the significance level of 0.05 ( $p=0.101$ ). As illustrated in table above Tourists have reported a higher mean score ( $M=1.953$ ,  $S.D=.35306$ ) on ecotourism relative to the conservation agencies ( $M=1.872$ ,  $S.D = .24363$ ). The independent Sample test ( $t=1.6811$ ) and ( $Sig. = .101$ ) in the case of Ecotourism indicates that there is no significant variation observed based on tourists' perception and conservation agencies in the case of Ecotourism as the value of  $-P|I|$  is greater than the significance level ( $Alpha=.05$ ), so we fail to accept hypothesis 3.1. The analysis concluded that there is no significant difference observed between the tourist's perception and conservation agencies in ecotourism.

### SUB - HYPOTHESIS 3.2

**H<sub>3.2</sub>:** There lies a significant difference for tourists perception and conservation agencies based on environmental conservation

The statistics of the environmental conservation for the tourists and environmental agencies are presented in table 8.

**Table 8: Comparison of Group Statistics**

Group Statistics (Environmental Conservation)					
TYPE		N	Mean	Std. Deviation	Std. Error Mean
Environmental Conservation	Tourist	378	1.67	0.40344	0.02075
	Conservation Agency	30	1.6402	0.34746	0.06344

**Table 9: Comparison of Environmental Conservation**

Independent Samples Test (Environmental Conservation)										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Env. Conservation	Equal variances assumed	0.122	0.727	0.394	406	0.694	0.02985	0.07582	-0.11919	0.17889
	Equal variances not assumed			0.447	35.506	0.657	0.02985	0.06675	-0.10558	0.16528

In table 9. Levene's test retains the assumption of equal variances at the significance level of 0.05 ( $p=0.727$ ) The t-test retains  $H_0$  at the significance level of 0.05 ( $p=0.694$ ). As illustrated in table above Tourists have reported higher mean score ( $M=1.670$ ,  $S.D= .40344$ ) on environmental conservation relative to the conservation agencies ( $M=1.640$ ,  $S.D = .34746$ ). From the independent Sample test ( $t=.394$ ) and ( $Sig. = .694$ ) for Environmental conservation, indicates no significant difference in the perception of tourists and conservation agencies in cases of Environmental conservation as the value of  $-P|I|$  is greater than the significance level ( $Alpha=.05$ ), so we fail to accept hypothesis 3.2. Thus it

can be interpreted that there lies no relationship lies between tourists' perceptions and conservation agencies' environmental factors.

### **Suggestions to Develop Ecotourism in India**

As long as there is a clear understanding of ecotourism as a concept, government, and community's willingness to conserve and promote, desire to learn from the successful ecotourism destinations, then India may be seen in the near future as a successful eco-destination along with a number of other top ecotourism destinations, as the main aspect – the presence of incredible nature to be discovered – is already there. Some of the suggestions to strengthen Ecotourism Development in the India have been highlighted below:

#### **Tourism Policy**

Its high time that the Tourism Department of India comes up with a proper Tourism Policy for the State and a full Chapter focusing on Ecotourism be included in the said Policy.

#### **Improved Marketing Practices**

In order to sell tourism products and services, marketing plays an important role. Ecotourism products should be publicised for attracting tourists towards ecotourism products. In order to provide proper information to the visitors, tourist information centres should be setup at airports and at tourism destinations. Tourism department should be careful while designing the marketing strategies for ecotourism products. Ecotourism marketing is different from main stream tourism marketing. So it's important and necessary that Tourism department hires professionals on full time basis who can handle the marketing part effectively. Tourism department should recruit people having specialization in Marketing and Ecotourism. It has to be understood that Directors and MD's are generalists and hold administrative positions. Generally, people holding such positions are from non-tourism background. So in that case it becomes more important to hire full time tourism professionals in order to aid and suggest the generalists.

#### **Environmental Fees**

Strongly recommend fixation of Environmental Fees for Hotels, Transport and Health & Spa Facilities in resort areas. This way the money collected could be directly used for environmental conservation at the destinations.

#### **Complete Ban on use of plastics and smoking at public places.**

Use of plastic at Tourism Destinations needs to be completely banned. Same should apply to smoking. There has to be a complete ban on Smoking at public places. Heavy fines and penalties should be imposed on people who are seen smoking at public places. Also strict punishment and heavy fines needs to be imposed on people who sell or buy plastics bags along with those who are seen littering and polluting the environment in one way or other.

#### **Safeguarding Historical Sites and monuments**

Cultural heritage is defended as an important part of ecotourism. India has an extraordinary, vast and diverse pool of cultural heritage and ancient monuments. Vandalism of Historical Monuments, sites and other local heritage must be seriously curbed through regular monitoring and maintenance.

#### **Environmental Assessment Committee& Eco Certification**

The government should form an Environmental Assessment Committee to assess Environment Impact before allowing any new tourist activity or infrastructure at Tourist destinations. Eco Certification wherein those Hotels, Guest Houses, House-Boats shall be issued Certificates who follow standards to address social and environmental aspects. Some schemes should be offered to ensure and develop interest of the stakeholders.

#### **Use of Bio-Toilets based on bio-digester technology**

Bio-Digester is a decomposition mechanized toilet system which decomposes Human Excretory Waste in the digester tank using specific high graded bacteria further converting it into methane and water, discharged further to the desired surface. This can be a unique solution to places where there is no proper water connection or in the areas where there is scarcity of water. This can be looked upon as a solution to toilet needs at eco-fragile areas, gardens, etc. Also Tourism Department should test the

feasibility of bio-toilets for its use in Houseboats. It can be a game changer for houseboats and may help in the proper disposal of Human Excretory Waste.

### **Up gradation of Tourist Facilities**

Tourism Department should focus on upgrading the facilities at destinations. In this modern era facilities such as washrooms, clean drinking water, washrooms for disabled, etc., are counted among the basic facilities and are first focus of destination developers. Unfortunately such facilities are still not the main focus of Tourism authorities in India. It's important that facilities such as washroom for disabled, wheel chair friendly tracks, shaded sitting areas, bio toilets, etc are added to the destinations like Garden

### **Safety and Security Measures**

Safety and Security measures taken by government agencies and departments are not sufficient in India. There has to be proper safety and security measures in order to build the confidence among tourists. Tourism department should constitute a team which can inspect and monitor the activities of service providers. Activities like rafting, heli skiing, etc should be continuously monitored and only be allowed once the authorities are fully sure about the safety standards adopted by the service providers.

### **Up-to-date and user friendly website**

Internet is an important medium for information exchange as well as for business generation. Today customers gather most of the information online before choosing a product or service. So it's important that the Tourism Department of India maintains an up-to-date and user friendly website. Website would act as an effective medium in promoting and highlighting ecotourism side of India. Specially crafted ecotourism packages can be sold via website. Department of Tourism should see to it that the websites is equipped with all modern features such as online bookings, grievance portal, etc

### **Waste Management, Waste Recycling& Proper Disposal**

Waste management plays an important role in developing and promoting ecotourism. Proper waste management, placement of disposal bins of bio degradable and non biodegradable waste to be ensured. Clearly labelled separate bins for plastic, metal, paper and glass should be installed at places as it would help in easy recycling and proper disposal of wastes. In tourists places an adequate number of dustbins need to be provided to provide a clean environment. The collected waste needs to be properly processed and disposed of in appropriate manner. The disposal waste needs to be burned safely and in appropriate conditions. The prolonged effort with R&D to be improved to evaluate the regular pollution monitoring. Recycling is important for the management of waste those impact negatively on the natural environment. The greenhouse gases and chemical wastes need to be filled in appropriate landfill places. Recycling must be minimized for the evaluation of a large amount of energy in the production of raw materials. Recycling needs to be conserved to preserve the natural resources in India to protect the environment.

### **Public Private Partnership (PPP)**

A public private partnership is involved in the provision of effective partnership between the public and private sectors. In this, both private and government agencies need to agreed to perform risks and tasks, in which each party retains its responsibilities and identity. It is important that the Tourism Department and Tourism Corporation of the state should outsource its assets to private entrepreneurs in order to relieve itself out of the extra burden. Unemployed youth who carry a degree in tourism should be given the first opportunity to run these assets rather than outsourcing the public assets to rich business community. When unemployment figures are booming in the valley, outsourcing public tourism assets to young tourism graduates will definitely bring some relief to the community. State government along with the tourism department should draft a special policy wherein they should allow lease of land under PPP model to young tourism graduates who are willing to start their own ecotourism related projects. Also State government should request the A public private partnership can be described as cooperation between the public and the private sector, in which the government and the private sector carry out a project together on the basis of an agreed division of tasks and risks, each party retaining its own identity and responsibilities. It's important that Tourism Department and Tourism Corporation of the state should outsource its assets to private entrepreneurs in order to relieve itself out of the extra burden. Unemployed youth who carry a degree in tourism should be given the first opportunity to run these assets rather than outsourcing the public assets to rich business community. When unemployment figures are booming in the valley, outsourcing public tourism assets to young tourism

graduates will definitely bring some relief to the community. State government along with the tourism department should draft a special policy wherein they should allow lease of land under PPP model to young tourism graduates who are willing to start their own ecotourism related projects.

## Conclusion

In the issue of balancing eco-tourism and environmental conservation, the researcher looked at the responses of tourists and conservation agencies. Using a convenience sample of 408, the study distributed a survey to know how these two groups viewed eco-tourism and environmental conservation. Results were tabulated and analyzed for normality and significance. The researcher therefore concludes that the eco-tourism and environmental conservation are positively and significantly related to each other from the perspective of both tourists and conservation groups. Both of these two groups see how the eco-tourism affects environmental conservation and vice-versa. Both see how certain beliefs like responsible travel, minimizing negative impacts on the environment, creating awareness and mixing tourism with conservation ring are resonant with beliefs like efficient planning and waste disposal, green building and site inspections, upholding ambient water, air and noise qualities and recycling. These groups don't see much difference in these two concepts as they both are needed in the survival of India's tourism and natural resources. Any tourist package and government policy must take this significant relationship into account if they want to ensure the sustainability of India. Moreover, most importantly, any attempt at changing the situation in India would do well to heed the learning from the experience of other ecotourism efforts in other parts of the world.

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