

ANTECEDENTS OF ECOTOURISM DEVELOPMENT: AN EMPIRICAL ANALYSIS OF CASE STUDY IN MAHARASHTRA

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ABSTRACT

Tourists have demonstrated increased environmental awareness. It has been observed that ecotourism has considerable potential for integrating biodiversity conservation and socioeconomic development of the destination's local community. This study examines the ecotourism practises of the "Velas" village in the Ratnagiri district of Maharashtra. This village on the coast of Maharashtra's Konkan region is home to the critically endangered Olive Ridley Sea turtle. The villagers discovered these turtle nests and began preserving them with the assistance of the non-profit Sahyadri Nisarga Mitra. The turtle hatchlings' release from their eggs is a delight for nature and biodiversity enthusiasts. The success of the ecotourism model in the village was determined by contacting 400 tourists to identify the factors that contributed to its success. Four major characteristics, namely environment, local culture, community involvement, and tourist satisfaction, were identified by the findings. Under these four pillars, 25 subjects were examined. The top six contributors were identified based on the most important perspectives of the tourists. The ecotourism development process followed by the villagers is supported by these four elements.

Keywords: Ecotourism, Conservation, Turtle, Culture, Community, Satisfaction, Tourists.

INTRODUCTION

Tourism is primarily a manifestation of human attitudes toward nature. The most popular tourist destination is one that is hospitable. These places are more likely to be visited again and recommended to others. Ecotourism is defined as "*responsible travel to natural areas that focuses on environmental conservation, sustainable practises, the well-being of local people, and educational opportunities*" (TIES, 2015). Approximately 370 million jobs would be supported by the tourism industry by the year 2026, because of its rapid expansion in the coming decades (WTTC India, 2016). Maharashtra had the highest number of both international and domestic tourists visiting the state. Tourists are increasingly drawn to natural, cultural, and historic destinations.

According to area and population, Maharashtra is the third-largest state in India. The western ghats, the Sahyadri mountain ranges, and the Konkan coast feature verdant coastal regions, waterfalls, beautiful beaches, and hill stations. The wildlife refuges, caves, temples, monuments, and national parks have been a major tourist attraction (MTDC, 2019). The state's ecotourism policy was formulated in 2008. It was revised in 2016 to include provisions for local employment generation, environmental protection measures, the promotion of local art and culture, sustainable practises, and the development of multiple destinations. The revised ecotourism policy also highlighted the importance of community involvement and growth.

This study is based on the ecotourism practises of the village of Velas. This village is situated along the Konkan coastline in the Ratnagiri district of Maharashtra. The endangered Olive Ridley Sea turtles' nest on the beach of the village (*Lepidochelys Olivacea*). These turtles return to the beach where they were born to lay their eggs. The female ridley turtles perform arribada to lay thousands of eggs and bury them in the sand. Due to ignorance and lack of awareness, the villagers ate these eggs. Sahyadri Nisarg Mitra (SNM) exerted significant effort to develop ecotourism practises in the village. SNM volunteers played a crucial role in raising awareness and engaging locals in the conservation effort (Katdare et al., 2012). Today, the village has several hatcheries to prevent poaching and consumption of these eggs. Turtle festival is a celebration of the release of hatchlings from their eggs. Thousands of tourists visit the village to observe the turtles' first steps. This overall process has altered the village's socioeconomic status. The village practises ecotourism with community participation. This ecotourism model could be of great benefit to other destinations concerned with endangered species conservation.

REVIEW OF LITERATURE

The idea of ecotourism is not a novel one. Hetzer (1965) had mentioned the pillars of responsible tourism in his work. Hetzer identified four pillars of tourism: minimising environmental impact, respect for local culture, benefits to the indigenous community, and maximising tourist satisfaction. His work connected tourism and environmental conservation. 2002 saw a worldwide emphasis on the significance of ecotourism. This year has been designated the International Year of Ecotourism (IYE). The three most important factors considered for ecotourism were nature conservation, tourism development, and the support of local communities (UNWTO, 2002).

Ecotourism in the Amazon was identified by Stronza (2008) as the most promising forest conservation method. It also assisted the natives in generating profits and employment. Community engagement was identified as a second factor. Kenya's ecotourism development benefited tremendously from the community's participation Honey (2009). A study conducted in Cambodia revealed the significance of native socioeconomic development to ecotourism development Carter et al. (2015). The impact of ecotourism development in Costa Rica was determined by Hunt and his colleagues. It helped create jobs for the indigenous population, enhanced their quality of life, and improved their standard of living Hunt et al. (2015). Ecotourism research in Sri Lanka revealed the need for standardised practises Fernando (2016). A study conducted in Russia determined the effects of constant ecotourism practise monitoring. It contributed to the formation of a systematic ecotourism development process Dzhandzhugazova et al. (2019). Wondirad et al. (2020) emphasised the significance of tourists' satisfaction with Indonesia's marine ecosystem. They suggested that local community participation in the development of sustainable practises was advantageous.

In India, the tourism ministry had developed policies for the preservation of biodiversity. In addition to the conservation of nature, they aimed to protect native/tribal communities and their culture (Ministry of Tourism, 1998). Government of India's Department of Tourism emphasised the significance of development efforts towards the social welfare of the host destination. Natives were the most important stakeholders in ecotourism destinations (Department of Tourism, 2002). A study conducted on the islands of Andaman and Nicobar revealed that tourists were concerned with basic amenities, comfortable accommodations, and safety (2015). Das & Hussain (2016) conducted their research in and around Kaziranga National Park. Locals were found to have favourable attitudes toward ecotourism practises. They participated in organising numerous cultural and regional festivals in the region.

ENVIRONMENT AND ECOTOURISM

The environment played a significant role in the evolution of ecotourism practises. Mirsanjari & Mirsanjari (2012) highlighted a variety of sustainable environmental development strategies. It included urban greening, eco-friendly products, and a sustainable transportation system. Yaseera & Sharma (2014) conducted research in Jammu and Kashmir to demonstrate that ecotourism is the main source of income for the locals in the Anantnag district. Cobbinah (2015) found that environment preservation was the predominant activity and the primary source of income for the indigenous people of Kakum Conservation Area in Ghana.

CULTURE AND ECOTOURISM

Culture is a crucial factor in the evolution of sustainable practises. The perception of ecotourism was contingent on the economic, social, and cultural characteristics of the host community Rasoolimanesh et al. (2017). Malaysian cuisine was found to be an attractive way for tourists to connect with the local culture Alias et al. (2016). Safitri & Putra (2018) investigated the cultural and social impact of ecotourism in the Ratargul swamp forest. They determined that the locals became knowledgeable about the environment and that they raised tourists' awareness. According to Pionce et al. (2018), the local culture was a paradox, and there was a significant gap between ecotourism development and interaction with the native culture.

LOCAL COMMUNITY PARTICIPATION AND ECOTOURISM

Participation of the local community is crucial to the ecotourism development process. The natives divided up the work and assumed responsibility for the preservation of biodiversity. Their participation contributes to the inventive productivity of the community De Lange et al. (2016). The local community involved in the conservation process had a greater awareness and comprehension of ecotourism practises. This participation led to the implementation of sustainable practises at the site Liu et al. (2014). Understanding the host community required complex criteria. Developing ecotourism practises within the host community necessitated several complex shifts in community awareness, knowledge, effort, climate, resources, and leadership practises Walter et al. (2018).

TOURISTS SATISFACTION AND ECOTOURISM

The satisfaction of tourists plays a crucial role in the growth of ecotourism. The term satisfaction has been used to refer to post-consumption evaluation and tourist expectations Kozak & Rimmington (2000). In destinations where the host community was actively involved in the tourism process, tourist satisfaction was higher. These communities made tourists feel safer and more connected to them Jurowski (2016). Transportation facility, hospitable host community, entertainment activities, quality of time, and improved services at the destination were rated very highly by tourists Mathew (2016).

Research Gap

Literature reveals limited research on endangered sea turtles in India. There are numerous studies with varying perspectives on ecosystems, the environment, eco-friendly practises, and eco development. However, there is a dearth of extensive empirical research in the Indian context. In the context of ecotourism practises in the Western Ghats of India, the present study is pertinent. There has been a discernible shift in the preferences and choices of conventional tourists. They are

more aware of carbon footprints and natural resource conservation. This study seeks to close this gap by identifying the most influential pillars of ecotourism development in the Maharashtra village of Velas Pechini (1967).

Research Methods

The design of this study is both descriptive and exploratory. The purpose of the study was to identify the top five factors that contribute to the development of ecotourism in the Velas village. As the instrument of study, a structured questionnaire was used. 400 visitors to the village during the turtle festival were surveyed for information. To collect primary data from tourists, a random sampling technique was employed. The secondary data was gathered from pertinent search engines such as ProQuest and EbscoHost. Government websites and reports were also reviewed for additional documents. The research instrument had a significant Cronbach's Alpha (R) (0.820). A standard seven-point Likert scale was utilised to ensure the criterion validity of the research instrument. The words were used appropriately and were relevant to the context. Following were the null versions of the hypotheses statements:

H₁: There exists no significant relationship between the environmental attributes and ecotourism parameters.

H₂: There exists no significant relationship between the factors of culture and ecotourism parameters.

H₃: There exists no significant relationship between the factors of community participation and ecotourism Parameters.

H₄: There exists no significant relationship between the factors of ecotourism and satisfaction of tourists.

The analysis of the data has been done through SPSS version 26.0. It involved descriptive statistics, reliability statistics, hypothesis testing and factor analysis.

Data Analysis and Interpretation

The descriptive statistics on the demographic variables reflected those 223 male tourists and 177 female tourists visited the village during the turtle festival. 90% of the tourists were below 40 years of age and were mostly graduates (75%). 120 tourists were married. The tourists were mostly employed (274). Table 1 represents the descriptive statistics of the respondents.

		N	Minimum	Maximum	Mean	Std. Deviation
Gender	Male-223, Female -177	400	0	1	0.44	0.497
Age	up to 30 years- 278, 31 to 40 years- 121, 51 and above- 1	400	1	5	1.62	0.935
Marital Status	Married- 120, Unmarried - 280	400	1	2	1.70	0.459
Education	Up to 12th- 34, Graduate- 299, Postgraduate- 67	400	1	3	1.42	0.762
Occupation	Employed- 274, Business- 126	400	1	3	1.63	0.930
Valid N (listwise)		400				

Chi square test was done to test the hypotheses. A summary of this test is represented in Table 2. The alpha $\alpha = 0.05$ is the level of significance and the confidence interval = 95%.

Null Hypotheses	Factors	N Valid Cases	Pearson Chi-Square value	Df	Asymptotic Significance
H ₀₁	Environment	400	83.727 ^a	8	.000
H ₀₂	Culture	400	46.456 ^a	8	.000
H ₀₃	Community Participation	400	45.322 ^a	8	.000
H ₀₄	Satisfaction of tourists	400	42.358 ^a	8	.000

H₁ Table 2 shows that the p value (0.000) is less than the alpha value (0.05). As a result, the null hypothesis is rejected, while the alternate hypothesis is accepted. It is concluded that there is a significant relationship between the environmental attributes and ecotourism parameters.

H₂ Table 2 shows that the p value (0.000) is less than the alpha value (0.05). As a result, the null hypothesis is rejected, while the alternate hypothesis is accepted. It is concluded that there is a significant relationship between the factors of culture and ecotourism parameters.

H₃ Table 2 shows that the p value (0.000) is less than the alpha value (0.05). As a result, the null hypothesis is rejected, while the alternate hypothesis is accepted. It is concluded that a significant relationship exists between the factors of community participation and ecotourism parameters.

H₄ Table 2 shows that the p value (0.000) is less than the alpha value (0.05). As a result, the null hypothesis is rejected, while the alternate hypothesis is accepted. It is concluded that there is a significant relationship between the factors of ecotourism and satisfaction of tourists.

Factor Analysis

All the factors included in the four pillars (environment, local culture, community participation and satisfaction of tourists) of the study were jointly considered to identify the important factors from the tourist’s perspectives. Factor analysis was done for this purpose. The Table 3 represents the Kaiser-Meyer-Olkin Measure of Sampling Adequacy value through KMO and Bartlett’s Test.

KMO and Bartlett’s Test		
KMO Measure	0.819	
Bartlett’s Test of Sphericity	Approx. Chi-Square	11403.381
	Df	585
	Sig.	0.000

Kaiser-Meyer-Olkin value is significant (0.819). The values more than 0.75 are considered statistically good. It indicates that all the factors considered in this study were relevant. The top six factors identified through factor analysis are:

1. Nest Conservation
2. Availability of Drinking water
3. Maintain Carrying Capacity
4. Quality Local Food
5. Clean energy and zero waste
6. Prevent Consumption

When all 25 items are taken together and their importance to tourists is taken as 100%, then the above mentioned six items constitute 26%. This is of highest importance to tourists as reflected in Table 4 and 5.

Components	The Initial Eigenvalues		
	Total	% Variance	% Cumulative
1	8.811	25.765	25.765
2	3.077	20.514	46.279
3	2.136	14.242	60.521
4	1.872	12.478	72.999
5	1.077	7.180	80.179

Rotated Component Matrix ^a					
	Components				
	1	2	3	4	5
Nest Conservation	0.823	0.187	0.094	0.196	-0.006
Availability of Drinking water	0.756	0.031	0.102	0.279	0.022
Maintain Carrying Capacity	0.728	0.002	0.162	0.006	0.063
Quality Local Food	0.680	0.341	0.071	0.061	0.087
Clean energy and zero waste	0.659	0.391	0.184	0.037	0.208
Prevent Consumption	0.590	0.184	0.095	0.432	0.124
Providing Good Facility	0.408	0.747	-0.003	0.328	-0.023
Ecotourism education	0.113	0.716	0.151	0.054	0.219
Ecotourism economic development	0.186	0.716	0.081	0.304	-0.049
Local hospitality	0.178	0.645	0.071	0.061	0.044
Local conservation	0.081	0.138	0.717	0.153	0.137
Safety	0.050	0.034	0.638	0.101	-0.202
Cultural norms	0.105	0.051	0.628	0.055	0.116
Local PS	0.251	0.118	0.483	0.210	0.162
Ecotourism employment	0.217	0.212	0.019	0.726	0.102
Ecotourism infrastructure	0.250	0.420	0.167	0.625	-0.085
Friendly Local	0.136	-0.051	0.314	0.534	-0.023
Cleanliness	0.113	0.083	0.030	0.041	0.815
Prevents Overcrowding	0.087	0.118	-0.021	-0.012	0.662
Reducing Pollution	0.011	0.055	0.047	-0.036	0.505
Reducing Waste	-0.051	-0.070	0.174	0.381	0.476
Environment Preservation	0.084	0.025	-0.048	-0.055	0.164
Environment Conservation	-0.088	0.126	-0.027	0.147	0.063
Environment Education	-0.092	-0.058	0.016	0.141	-0.198
Environment Protection	0.078	0.044	0.158	-0.187	0.116

Table 5 reflects the various factors that have the highest order of preference as per the tourists who visited the village. Factor 1 comprises of six items that were Nest Conservation,

drinking water, Maintain Carrying Capacity, Local Food, Clean energy and no waste and Prevent Consumption.

FINDINGS

The analysis of the data revealed that the younger generation visited the village the most frequently. They were more interested in experiencing nature and comprehending the endangered turtle conservation process.

The study's first pillar was environment. It was determined that environmental factors were essential for the village's ecotourism development. The factors that comprised this pillar were nest conservation, clean energy and zero waste, reducing consumption, and environmental preservation and protection. Volunteers were responsible for the conservation of the village's biodiversity. They worked to locate the hidden nests on the beach, and the eggs were transferred to hatcheries without incident. This also decreased the risk of poaching and local egg consumption. Villagers and NGO volunteers collaborated to preserve the environment. The waste generated in the village was collected, separated, and utilised in a variety of ways. It was not discarded on beaches. The ecotourism standards also included guidelines for tourists' waste management. This contributed to the preservation and protection of an environment suitable for ridley turtles.

The study's second pillar was local culture. The data indicated that cultural factors were essential for the development of ecotourism in the village. This pillar included local food, cultural practises, local products, and services, maintaining cleanliness, preventing overcrowding, reducing pollution, and decreasing waste. The findings indicated that tourists enjoyed the Konkani cuisine and the seafood offered by the locals. These were typically home cooked and tailored to the customers' preferences. Tourists were interested in the cultural practises practised by the villagers. Rangoli making, local cashew nuts, a stroll through the plantation area, warli painting making, and other native practises were widely practised by the locals. The locals established a culture of adhering to stringent measures for maintaining the cleanliness of the village and beach areas. The villagers provided tourists with prearranged homestay accommodations. This limited the number of tourists in the village at any given time and prevented overcrowding. To reduce waste and pollution in and around the village, the villagers and the volunteers worked in rotation. The third pillar of the study was community involvement. Findings reflected that community involvement was an essential component for ecotourism development in the village. The factors included under this pillar were: Ecotourism education, ecotourism, and economic development, local for hospitality, local for conservation, ecotourism employment, ecotourism infrastructure development. Local community was actively involved in the entire ecotourism development process. They educated the tourists about the ridley turtles, and the entire conservation process followed at the village. The ecotourism provided economic prospects to the natives, and they experienced improvement in their socio-economic status. The locals treated the guests as their family members and involved them in all their rituals. Every household was involved in the conservation process and maintaining the ecotourism norms in the village. Some of the households had constructed single rooms with air conditioners for accommodating specific guests. Mostly the homestay facility did not have air conditioners.

The fourth pillar of the study was tourist satisfaction. Under this pillar, the following factors were considered: potable water, maintaining carrying capacity, good facilities, safety, friendly locals, environmental conservation, and environmental education. Findings revealed that tourist satisfaction was crucial to the development of ecotourism in the village. The village provided tourists with readily available drinking water. They found the village environment to be safe and secure. The guests enjoyed the accommodations and meals provided by the homestay. The homestay accommodations had to be reserved, which assisted in maintaining the beach and village

carrying capacity. The tourists found the locals to be hospitable towards them, and they educated them very effectively on the conservation process. The conservation methods utilised by the locals were satisfactory to the tourists. The visits to the hatcheries and beach were organised methodically. The guests were thrilled to see the hatchlings make their way toward the water.

Managerial Implications

The present study's findings have the following managerial implications: 1) Tourism planners and other stakeholders can create nature-based experiences for tourists through strategic planning. 2) Tourism marketers can explore awareness camps and nature walks as attractions at ecotourism destinations. 3) Government officials can seek out Bed and Breakfast programmes in the vicinity of sensitive zones to accommodate tourists. 4) Tour guides may use the findings of this study as a metric for maintaining the village's or destination's carrying capacity. 5) Academic research may benefit from the study's findings by incorporating these four pillars into future ecotourism development research.

CONCLUSION

Ecotourism development in villages has the potential to improve the lives of villagers and contribute to the conservation of biodiversity, according to the present study. The community of Velas Village has adopted a conservation model that has gradually evolved over time. The NGO, government support, and community participation have enabled the enrichment of the village's cultural norms. Additionally, it has generated income and employment opportunities for the villagers. The ecotourism development process in the village has created a win-win situation for all parties involved in the tourism industry. Efforts should be made to support these initiatives and encourage other communities/destinations to engage in ecotourism development.

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