

Sustainable Ecotourism Development in Periyar Tiger Reserve - An Analysis of Ecotourism Experience by the Tourists

Dr. Shweta Saibal Samanta Sahoo¹. Mr. Mukunda BG²

¹Assistant Professor, Faculty of Management Studies,
Sri Sri University, Bidyadharpur, Cuttack, Odisha – 754 006,
²H.O.D and Assistant Professor, Department of Tourism and Travel Management,
Karnataka College of Management and Science,
Thirumenahalli, Bangalore, Karnataka – 560 064,

Abstract: In recent years, tourism has become one of the fastest-growing businesses. It is widely acknowledged that tourism has outpaced other industries in terms of growth. Furthermore, tourism has been viewed as a catalyst for regional development. Tourism that is successful can enhance tourist visits, income, employment, and government revenue. Ecotourism is a relatively recent concept in tourism that was inspired by the desire to live in harmony with environment. It's all about combining conservation, community involvement, and environmentally friendly travel. Thekkady's Periyar Tiger Reserve is one of Kerala's most popular ecotourism locations. Since 1981, it has been recognised as Periyar National Park, and its ecotourism development project has been well-known since 1996. The word "ecotourism experience" refers to any type of ecotourism activity. The evaluation of the ecotourism experience domain is critical because it has the potential to influence eco-tourist satisfaction.. In this context, the study is conducted to explore the strategies that could offer the finest ecotourism experience in Periyar Tiger Reserve for tourists on a sustainable basis. The study involves the collection of both primary and secondary data. Analysis of data reveals that some constraints are being faced by the tourists such as overcrowding, lack of proper amenities, lack of cleanliness and hygiene, and lack of coordination among the staff in Periyar Tiger Reserve reduce the tourist satisfaction level, should be immediately taken care of to improve the tourist satisfaction and make them repeat visitors.

Keywords: Ecotourism, Sustainable Travel, Tourist Satisfactions, Strategies, and Periyar Tiger Reserve.

Introduction

The tourism industry has made a significant contribution in terms of growing foreign exchange revenues, creating jobs for trained and semi-skilled workers, and unlocking entrepreneurial potential while also preserving and conserving natural resources and culture. Tourism is now more than ever recognised as a significant economic contributor in many destinations across the world, bringing value to foreign exchange and supporting export businesses. The demand and supply relationships in the tourist industry, the accompanying visitor and investment expenditure patterns that they stimulate, and the economies structure all have an economic influence (Antigua and Barbuda Tourism Development Programme, 2003). In recent years, tourism has become one of the fastest-growing businesses. It is widely acknowledged that tourism has outpaced other industries in terms of growth. Furthermore, tourism has been viewed as a catalyst for regional development. Tourist visits, money, jobs, and government revenues can all benefit from successful tourism.

Ecotourism is a relatively recent concept in tourism that was inspired by the desire to live in harmony with environment. It's all about combining conservation, community involvement, and environmentally friendly travel. Ecotourism refers to any tourism programme that is based on nature, is environmentally sustainable, emphasises education and interpretation, and benefits local people. Ecotourism is defined by the International Ecotourism Society (TIES, 1990) as "responsible travel to natural regions that conserves the environment and improves the well-being of local people." By offering enjoyable experiences for both visitors and hosts, ecotourism principles aim to reduce impact, raise environmental and cultural knowledge, and foster respect. It delivers immediate financial advantages for conservation, aids local people's empowerment, and promotes awareness of the host country's political, environmental, and social systems.

As whole ecotourism is intended to:

- To boost the value of stable ecosystems, strengthen protected area management systems in public and private sites to conserve biological and cultural variety.
- Promote biodiversity conservation through creating cash, jobs, and business possibilities through ecotourism and related business networks.
- By obtaining their approval and full participation in the planning and operation of the ecotourism enterprise, share the advantages of development equally with local communities and indigenous people (Rajaseenan, et.al, 2012).

Ecotourism has grown in importance in recent years, and it is now one of the fastest-growing parts of the tourism business. Fillion et al. (1992) found that 40-60% of all foreign tourists are nature tourists, and 20-40% is wildlife-related tourists, based on an analysis of inbound tourist motivations to various World sites. According to Ceballos – Lascrain (1993), According to the United Nations World Tourism Organization (UNWTO), nature tourism accounts for 7% of all international travel spending. Globally, ecotourism/nature tourism is increasing three times faster than the whole tourism business (UNWTO, 2007). According to a UNWTO research from 2010, ecotourism is the fastest-growing segment of the tourism business, growing at a rate of 20 to 34

percent per year globally. Ecotourism is predicted to grow quickly over the next two decades, with worldwide spending on ecotourism expected to grow faster than the tourism sector overall.

Ecotourism in Kerala

Kerala is noted for its ecotourism attractions due to its diverse flora and fauna, and the state's policies emphasise sustainability, conservation, and biodiversity preservation. The potential ecotourism spots identified in the forests of Kerala are:

- Thiruvananthapuram- Neyyar, Peppara, Ponnudi, Arippa.
- Kollam- Thenmala, Kolathupuzha, Achan Kovil.
- Pathanamthitta- Konni, Pamba, Kochupamba.
- Alappuzha- Gandhismrithivanam.
- Kottayam- Kumarakam.
- Iduki- Thekaddy (Periyar Tiger Reserve), Munnar, Rajamala, Chinnar.
- Ernakulam- Thattekad Birds Sanctuary, Mangalavanam.
- Trissur- Athirapally, Peechi.
- Palakkad- Malampuzha, Valayar, Parambikulam, Nelliambathi, Silent Valley.
- Malappuram- Nilambur, Nedumkayam.
- Kozhikkode- Kakkayam, Chaliyam.
- Waynad- Thilpetty, Muthanga, Thirunlli.
- Kannur- Pythamala, Kottiyoor.
- Kasargode- Ranipuram.

Periyar Tiger Reserve

Thekkady's Periyar Tiger Reserve is one of Kerala's most popular ecotourism locations. Since 1981, it has been recognised as Periyar National Park, and its ecotourism development project has been well-known since 1996. Periyar Tiger Reserve is frequently considered as one of South India's best-managed tourism attractions, and is well-known for its local community-forest department teamwork (Narain et al., 2005). From an ecological standpoint, Periyar Tiger Reserve is seen by many as a key test of the state's ability to conserve a fragile environment in which nature and humans coexist so closely, according to Saji and Narayan (2012). Thekkady is the most sought after destination due to its location advantage, situated in the border areas of Tamil Nadu and Kerala, offering easy associability to both States and is en route to other destinations. Periyar Tiger Reserve was awarded the award for Excellence in Environmental Concern in 2000 and was also accepted as the Conservation Model by Tiger Task Foundation in 2005 as an ecotourism destination with immense scope for growth. The climate, terrain, and opportunity of seeing wildlife up close on the lakeshore while taking a boat excursion make Thekkady a one-of-a-kind tourist destination. A boat excursion on the Periyar lake is a popular tourist attraction in Thekkady. Following the construction of the Mullapperiyar Dam in 1895, low-lying forest regions were submerged, resulting in the formation of this lake. It provides a wide range of options to meet the needs of different types of tourists.

Since the area was designated as a Tiger Reserve in 1978 (the twelfth of its kind in India), tourism has become a significant management challenge, with an annual increase in the number of people visiting the park. Since the area was designated as a Tiger Reserve in 1978 (the twelfth of its kind in India), tourism has become a significant management challenge, with an annual increase in the number of people visiting the park.

Review of Literature

Sahani, Nemai (2018), Ecotourism is a sort of tourism that follows a set of environmentally beneficial norms and principles. It's practised all around the country, including in Himachal Pradesh. Alternative tourism activities are the way to tourism sustainability, and they comprise a variety of tourism activities based on nature and adventure that minimise environmental effect, provide economic and cultural advantages to the community, and preserve the destination area's tourism resources. The development of eco-tourism in biological sites or protected areas, with the help of local government agencies and non-governmental organisations, allows for better resource management. **Weaver, (2002)**, Eco-Tourism is a type of tourism that emphasises possibilities for learning and appreciation of the natural environment, or a part of it, within a cultural context. It appears to be environmentally and socio-culturally sustainable (as per best practise), especially in a way that enhances the destination's natural and cultural resource base while simultaneously increasing the operation's viability. **David A. Fennell, (2017)**, Eco-Tourism, according to the Economic Commission for Africa (2011), is a panacea for environmental conservation, socioeconomic development, and improving the living standards of local people while also preserving their culture and traditions. **Suchsmita, (2011)**, The phrase "ecotourism" refers to environmentally conscious travel in natural areas. Its goal is to safeguard the environment while also increasing the local community's well-being. It has aroused the curiosity of a diverse variety of interest groups as a financially rewarding recreational pastime as well as a conservation and development tool. **Emmanuel, et.al (2017)**, Ecotourism contributed to the preservation of nature and the socio-cultural fabric of the local community in a research conducted in Ghana, as well as raising public awareness about the importance of natural and human resources. **C C, Miller(2017)**, Ecotourism has been shown to aid in sustainable development by empowering local people and offering an alternative source of income while also contributing in the conservation of natural resources. The fundamental problem for ecotourism is that the local community is employed in the ecotourism company while the owners are away from the island; yet, success can be achieved by mixing contributions from local community owners and stakeholders. **A. Sangpikul (2017)**, As middlemen in offering the eco-tourism experience (local experience) among local inhabitants and visitors, tour operators play a critical role in generating the social advantages of ecotourism characteristics. The length or duration of tour programmes has an impact on society as tourists connect with local populations and exchange culture. For example, tourists on a lengthy tour (night trip) are more likely to spend more money in the tourist destination than on any other trip. **Li, (2004)**, "Ecotourism has the potential to help a region achieve long-term development. Contribution to GDP, population

growth, environmental consciousness, trade balance, and other key metrics are utilised to make judgments about development in a certain location." **Bhavani (2016)**, Ecotourism is the fastest growing segment of the tourism business in numerous Indian states. Ecotourism institutions must be enhanced to send more money into host communities by eliminating leakages if the business is to be effective in alleviating poverty in developing regions. **B. N. Ravikumar (2016)**, in the thesis stated that, all stakeholders, including hotels, visitors, and surrounding towns, are more keen to share benefits. Their commitment to contributing to sustainable tourism, however, is limited by the lack of a benefit-sharing structure that allows people to share in the industry's benefits. Investors (hoteliers) have taken steps to share some benefits, such as health care, water supplies, education support services, and infrastructure development, while waiting for a benefit-sharing system. The quantity of money that stays in local economies is critical to the expansion of ecotourism. **Das and Deori (2012)**, They feel Assam has a lot of potential for increasing ecotourism, which can be used to generate local economic benefits while also assuring environmental conservation through local environmental awareness programmes. The goal of the project was to see how ecotourism may help the Deepor Beel Wildlife Sanctuary build a long-term development strategy. The data for the study was gathered through observation and inferences from secondary sources. Ecotourism should be used to produce revenue for the local community so that they may improve their quality of life. **Biju, M.R., (2006)**, Ecotourism is a relatively new concept in the tourism business. It is defined as deliberate travel to natural areas in order to better understand the cultural and natural beauty as well as the history of the environment while preserving the ecosystem's integrity. Ecotourism is a rapidly expanding segment of international tourism that generates economic opportunity for locals while conserving natural resources. It is characterised as a sort of ecologically friendly nature-based tourism that involves environmental education and interpretation. **Raghavan V.P., (2006)**, Ecotourism is a type of tourism based on a region's natural heritage and environment. Profits from this programme are utilised to support long-term economic development and to fund local conservation projects that help to protect the environment. Kerala has the highest potential for leveraging tourism for employment and revenue generation. Kerala has many natural resources that can be easily capitalised on through ecotourism. **Shaan, (2005)**, the three levels of sustainable development are the economy, society, and environment, and the primary challenge of sustainable development is to maintain or improve the current state of these three levels. Tourism money has the ability to improve the state of the economy. The community has gained social recognition and opportunities as a result of tourism boom. Environmental tourism development can help improve the state of the environment in society by promoting environmental awareness, cleaning programmes, and other environmental-related activities. The **Times of India** reported (November 09, 2019), Kerala's forest department-managed ecotourism programmes have drawn a considerable number of visitors, and their popularity is projected to expand in the future years, according to the report. In 2017-18, the department received Rs 137.31 crore in ticket sales from ecotourism activities given by various wildlife divisions. There are 60 such places in Kerala. Within the same time period, 12.68 lakh individuals visited ecotourism destinations. 24,537 foreigners and 42,032 students visited these venues. The 400 forest protection committees and 190 eco-development committees (EDC) in the Periyar and Parambikulam tiger reserves play a crucial role in promoting their programmes. Local tribesmen were hired as watchmen, guides, and guards to maintain inclusivity. **Mathew and Vijay Kuriakose (2015)**, According to them, responsible tourism in the Periyar Tiger Reserve has resulted in the establishment of homestead organic farming in 612 households, as well as the formation of new micro businesses by various self-help groups producing processed foods, paper bags, value-added commodities, and so on. According to the survey, ecotourism operations in the Periyar Tiger Reserve helped 68 percent of tribal people and 63 percent of locals. Forest guards have been used as a source of money in the Periyar Tiger Reserve, according to **Chaudhari (2013)**, many tribal communities rely on ecotourism activities like green walks and tribal heritage tours to supplement their income. **M. Ravish (2012)**, The study discovered that a growing and unregulated sort of mass tourism with high inflows of day visitors was the reserve's major threat to maintaining the balance between conservation and tourism. One of the most noteworthy findings is that the ecotourism project did not significantly benefit the local population, and the EDC's efforts to empower the locals were ineffective and incomplete. **K R Pillai (2010)**, Indigenous peoples were severely reliant on forest resources for a living, according to the report, and they were abused while selling their wares, such as pepper. Decentralised democratic innovative ideas like centralised pepper marketing, a tribal guiding team made up of 20 tribal youths who were given necessary tourism, communication, and interpersonal skills training, a tribal hamlet (a sort of museum where their own past culture was recreated and interpreted to tourists), and women empowerment through Self Help Groups empowered these indigenous communities, according to the researchers. These programmes eventually assisted them in improving their quality of life, reducing poverty, strengthening the social fabric, diversifying the economy in the tribal settlement, instilling self-esteem and financial discipline in tribal youngsters, and ultimately improving the quality of life. **Saji and Narayanan (2010)**, they declared the ecotourism project a success in terms of community tourism participation. It was, however, a failure in terms of stopping the steady deterioration of true culture and the uniqueness of tribal settlements' traditional lifestyle. They stated that the type of development and urbanisation occurring in and around the park was jeopardising the natural integrity of the area. Community tourism had a substantial impact on the long-term growth of locations, according to the study. **Ranade (2008)**, by establishing successful ecotourism initiatives like Periyar Tiger Reserve, which helped increase employment potential and benefited the local population, ecotourism has become a mechanism for job creation. Ecotourism activities such as training of eco-rangers, eco-guides, eco-lodges, cultural empowerment and cultural exchange with local populations, conservation, and research, according to the researcher, require people for project implementation. **Vijayakumar (2004)**, In order to promote Kerala as a model state for ecotourism growth on a national and international scale, further ecotourism products should be developed while conserving resources and assisting local people, as well as satisfying the needs of eco tourists.

Need for the study

Tourism is a thriving business that makes a significant contribution to the economy, and assessing tourist satisfaction in ecotourism areas is unique since eco-tourists differ from mainstream tourists. Ecotourism experience is an integral part of ecotourism which is not explored at all, especially in the Indian context. The recommendation intention or revisitation intention of tourists is a major component in enhancing the economic contribution from a particular destination, as a repeated visitation of tourist or the

recommendation of the tourist who has already visited a destination will have a positive influence on the pull motivation and push motivation which will attract even first-time visitors to the destination. Therefore, ecotourism experience and its link with future behavioural intention need to be evaluated (Beerli and Martin, 2004 Yoon and Uysal, 2005).

Scope of the study

The economic contribution of tourism may be enhanced through better destination planning and development strategies which could be evolved based on effective feedback mechanism through evaluation of satisfaction levels from visitors who have visited the destination and attempts may be made to evaluate the possibilities of revisitation. The current study provides an in-depth understanding of different components which help in developing ecotourism experience and the linkage of this experience to future behavioural intention.

Statement of the problem

Ecotourism generates revenue for national parks and other natural area-based resources that would otherwise be unavailable. Furthermore, ecotourism offers a feasible economic alternative for the development of local communities, as well as various other sources of income. Thekkady is one of the main destinations in the Idukki district which attracts thousands of foreign and domestic tourists every year. Thekkady's main attraction is the Periyar Tiger Reserve. From 1996 to 2004, the India Eco Development Project (IEDP) was implemented at Periyar Tiger Reserve. Periyar Foundation Trust was established in 2004 for sustaining eco-development initiatives. The U.N.-India Biodiversity Governance award (2012), founded by the Government of India and the United Nations Development Programme for best maintained Protected Area in the country, was given to Periyar Tiger Reserve in honour of its conservation efforts in Thekkady. Community-based eco-tourism programs are the hallmark of this destination. The local community at the destination is responsible for the management of eco-tourism activities and the major activities include:-1) A Nature Walk, also known as a green walk, is a hiking programme that provides an excellent opportunity to observe birds, butterflies, and other wildlife; 2) Cloud Walk, is a guided trek and the major attractions are the grasslands, evergreen, deciduous and riverine forests. However, several areas of ecotourism development continue to be overlooked. The amenities and other services supplied to support various ecotourism activities in the study area do not satisfy eco tourists, lowering their happiness level. Furthermore, the current development has overlooked concerns of sustainability; hence, emphasising both economic and ecological and social benefits should be considered. As a result, ecotourism is seen as a critical conservation strategy for balancing the needs for conservation and rural development while also providing a high-quality tourism experience for visitors.

Research Objectives

The objectives of this research are:

- To become familiar with the concept of ecotourism.
- To become familiar with ecotourism attractions of Periyar Tiger Reserve that attracts the eco tourists
- To identify the problems that cause tourists' dissatisfaction and offer suitable recommendations for the sustainable ecotourism development of Periyar Tiger Reserve.

Methods of data collection

To analyse the study's major objectives, the researcher used both qualitative and quantitative research approaches. The study used both primary and secondary data sources to reach its objectives. Observations, discussions, and interviews with various tourism stakeholders were used to complement the data. Primary data from the Officials of ecotourism, the local community and tourists were collected through a field survey with the help of a carefully designed interview schedule by personal interview. Secondary data was collected from a variety of sources, including journals, theses, dissertations, reports from UNWTO, TIES Department of Tourism, Kerala Forest and Wildlife Department, and other international organisations.

Ecotourism activities in Periyar Tiger Reserve

☐ Nature walks

This is an educational programme that allows visitors to observe birds, butterflies, and other animals. The hiking routes, which are typically 4 to 5 kilometres long and traverse a variety of environments, are made up of several nature trails. The pathways frequently travel through evergreen and damp deciduous forests, with marshy meadows intermingled. The two-and-a-half-hour programme is available in six time periods. A maximum of six people can travel on a nature walk at a time, covering the boat-landing – Kokkara route, led by a professional tribal guide.

☐ Clouds walk

The exuberance of Cumbam Valley, the dizzying heights of Mangaladevi, Kumarikulam, the splendour of Palani hills, habitat specialist birds, and butterflies, including endemics like the Nilgiri Pipit, broad-tailed grass bird, tree nymph, and others, may all be seen from the clouds walk.

☐ Border trekking - Protection oriented range hiking

This is a full-day conservation-oriented hard walk that begins at 8 a.m. and ends at 5 p.m., covering 15 kilometres. The path winds through rolling hills. Trekkers will see views of the towering escarpments that border the park watershed and the broad plains below at altitudes ranging from 900 to 1300 metres. Apart from birds and butterflies, this route frequently sees gaur, sloth bear, elephant, and other mammals. A total of 12 travellers in two groups can participate in the programme. Two guides and an armed forest guard will accompany the trekkers.

☐ Bamboo rafting - Dawn to dusk range hiking

This is a dawn-to-dusk range hiking and rafting tour through some of Periyar Tiger Reserve's best forest regions. A mosaic of habitats will be covered beginning at 8 a.m. from the boat dock before the company gets into bamboo rafts. Rafting lasts about three hours and provides a panoramic view of the lake's reflection of forest-clad slopes. Elephants, gaur, and sambar have been spotted near the lake's edge. A maximum of ten tourists will be accompanied by an armed guard and four guides.

☐ The Bamboo Grove

Between bamboo thickets are fifteen bamboo homes with hygienic and modern furnishings. The bamboo grove's ambiance allows visitors to listen to the whistling of bamboo culms, bird tweeting, and the flow of little rivulets emerging from the adjacent Periyar meadows' marshes. In the centrally positioned 'Kalari,' a conference hall with audio-visual equipment, the bamboo grove programme also provides an eco-friendly environment for conducting conferences, symposiums, workshops, and training programmes. An introduction session, a visit to a tribal colony, wildlife film displays, bird watching, trekking, and a complimentary boat trip on the famous Periyar Lake are all included in the bamboo grove package.

☐ **Jungle Inn - Jungle in the night**

Nature enthusiasts can stay in one of the watchtowers built inside the woodlands amid the atmosphere of the jungle with limited creature comfort. The forest hut at Kokkara, about an hour's walk from the forest check station, is a great place to stay for two people who want to share the peace and quiet of the jungle night.

☐ **Bullock cart discoveries**

This is a trans-boundary project in which tourists are driven through the farmlands of a village in Tamil Nadu, buried in a valley behind the mountains of the Periyar Tiger Reserve, to witness a variety of crops and wildlife.

☐ **Jungle scout (Night trekking)**

This innovative eco-tourism programme aims to delight individuals who want to spend the night in the wilderness while also helping to safeguard the environment by participating in a regular forest protection party as a paid volunteer.

• **Periyar Tiger Trail**

The Tiger Trail is an ambitious trekking and camping programme with one-night and two-night stays available. The initiative is unique in that it is led by a group of rehabilitated poachers and park tree cutters who have a thorough understanding of the forest terrain.

Discussion & Findings

Constraints faced by Tourists visiting Periyar Tiger Reserve

Despite the tremendous ecotourism potential at Periyar Tiger Reserve, there are some constraints faced by tourists visiting it, such as overcrowding, lack of coordination among staff at the entrance/ticket counter and boat jetty, serpentine queue leading to long waiting time, restrictions on the dress when the tourists opt for a nature walk, lack of cleanliness and hygiene, technological constraints about communication inside the protected area, restrictions on the non-renewable source of energy, lack of amenities like toilets and canteens inside the protected area and lack of orientation about the insect bites during the nature walk which causes tourist dissatisfaction at present. All these should be taken care of by the government. Further, the majority of the respondents have suggested the E-Ticketing facilities for all ecotourism activities and better coordination among the staff at Periyar Tiger Reserve.

Following are the few recommendations made by the researchers to offer a quality tourism experience at Periyar Tiger Reserve:

- The ecotourism destinations can be promoted by providing quality ecotourism experiences to tourists. Quality ecotourism experience can be ensured through various ecotourism activities offered as attractive packages at reasonable rates depending on the carrying capacity of destinations. Coordination among the wildlife and tourism officials can provide better and more sustainable ecotourism programs and conservation on the other.
- Service Quality by all the service providers at the destination like accommodation units, transport, etc must be enhanced through appropriate training programs on customer handling, etiquettes may be imparted to employees at both skilled and semi-skilled levels.
- The staff must be equipped with knowledge about ecotourism guidelines and they must be trained for enhancing their communication skills, especially in foreign languages which would help them to cater to the requirements of foreign ecotourists.
- To lessen the negative influence on the environment, ecotourism locations may provide amenities such as restrooms and canteens utilising green technologies and recycling processes.
- Education and interpretation components must be emphasized to provide a quality ecotourism experience through the learning experience.
- Local community interaction and display of indigenous art forms must be encouraged.
- Cheaper accommodation through the bed and breakfast businesses, home stays along local cuisine should be promoted by the tourism department.
- Efforts must be made to enhance connectivity, provide better infrastructure at the destination, and also en route to the destination.
- Feedback from tourists must be collected periodically and appropriate measures must be taken from time to time to assess and enhance visitor satisfaction.

Conclusion

Tourism is the world's largest service industry. Apart from mass tourism expansion, which has characterised tourism development for years, tourism planners are becoming more environmentally sensitive. Tourism is an ideal business for advancing sustainable development because of its international relevance. At the end of the day, ecotourism is capable of instilling environmental awareness in the minds of visitors. Ecotourism is a sort of alternative tourism that aims to reduce negative impacts on places while increasing community benefits. International recognition has been given to this type of tourism as a catalyst for environmental protection and economic development. Participating in ecotourism activities by local communities is a step in the correct approach. It provides alternative sources of income to local communities living in and near protected areas, reducing their dependency on forest resources and enhancing their commitment to forest preservation. The lessons from the Periyar experience are critical for India's enormous protected area network since it demonstrates the necessity for communities and conservation to work together. The study discovered that the increasing and uncontrolled form of mass tourism with heavy inflows of day visitors has become a

major threat to the park's and reserves' continued ability to maintain the balance between tourism and conservation after discussing sustainable ecotourism in Periyar National Park. The facilities for such mass tourism promotion are not yet developed at the Periyar tiger reserve. Tourists are currently welcomed without creating basics facilities and amenities for them and sustainable development of such facilities is essential to offer a quality tourism experience at this tiger reserve which otherwise will reduce the tourists' experience of the destination. No destination, especially an eco-destination, will thrive in the long run if it is not properly developed and adequately managed to avoid overcrowding, environmental consequences, and the loss of biological and cultural integrity.

References:

1. A. Bhavani.,(2016), Improving Sustainable Development of Ecotourism in India - A View, PARIPEX - Indian Journal Of Research, Vol.5, No.2, Feb, 2016, pp.205-207
2. Beerli A and Martin JD (2004). Factors Influencing Destination Image. *African Journal of Business Management*, 4(5), pp 657-681.
3. Biju, M. R. (2004, July–December). “Eco-Tourism in Kerala.” *South Asian Journal of Socio-Political Studies (SAJOSPS)*, 12(1), 94–102.
4. Ceballos-Lascuráin, H. (1993), ‘Definition of Ecotourism’, *Ecotourism as a World-wide Phenomenon in Ecotourism: A Guide for Planners and Managers*. Edited by Lindberg, K and Hawkins, D.E., The Ecotourism Society, North Bennington Vermont, pp 12-14.
5. Chaudhuri, T. (2013). From policing to “social fencing”: shifting moral economies of biodiversity conservation in a South Indian Tiger Reserve. *Journal of Political Ecology*, 20(1). <https://doi.org/10.2458/v20i1.21752>
6. Das and Deori (2012), Evaluation of Ecotourism Resources: A Case Study of Nameri National Park of Assam (India), *Revista Brasileira de Ecoturismo (RBEcotur)* 5(3) DOI:10.34024/rbecotur.2012.v5.6286.
7. Das, Suchismita (2011): “Ecotourism, Sustainable Development and the Indian State,” *Economic & Political Weekly*, Vol 46, No 37.
8. Ecotourism Association of Australia (1992), Newsletter 1, 2 The Ecotourism Society of Australia (1991 a, b).
9. Emmanuel, A., Nsor, C. A., Arthur, E. K., & Boadi, S. (2017). The socio-cultural impact of ecotourism on park-adjacent communities in Ghana. *African Journal of Hospitality, Tourism and Leisure*, 6(2), 1–14. <https://www.researchgate.net/deref/http%3A%2F%2Fwww.ajhtl.com%2F>
10. Fillion, F. L., Foley J. P., & Jaquemot, A. J. (1992). The economics of global tourism. Paper presented at the fourth World Congress on National Parks and Protected Areas, Caracas, Venezuela, February 10 -21.
11. Kiss, A. (2004). Is community-based ecotourism a good use of biodiversity conservation funds? *Trends in Ecology & Evolution*, 19(5), 232–237. <https://doi.org/10.1016/j.tree.2004.03.010>
12. Li, W. (2004). Environmental management indicators for ecotourism in China’s nature reserves: A case study in Tianmushan Nature Reserve. *Tourism Management*, 25(5), 559–564. <https://doi.org/10.1016/j.tourman.2003.06.001>
13. Mathew, P. V., & Kuriakose, V. (2015). Successful Endeavours in Eco-Tourism; Experiences from Thekkady, Kerala. *GJRA - Global Journal for Research Analysis*, 4(9), 179–181.
14. Miller, C. C. (2017). Challenges and Potentials of Ecotourism as a form of Conservation and Sustainable Development on Zapatera Island, Nicaragua. *Swedish University of Agricultural Sciences*, 71–83. <http://stud.epsilon.slu.se>
15. Narain S, Panwar, H. S., Gadgil, M., & Thapar V. (2005). “Joining the dots: the report of the Tiger Task Force” New Delhi. The Ministry of Environment and Forests, Government of India.
16. Narayan, P.K., Narayan, S., Prasad, A. and Prasad B.C. (2010), “Tourism and economic growth: A panel data analysis for Pacific Island countries”, *Tourism Economics*, 16(1), pp 169–183
17. Pillai, K. R., & Suchintha, B. (2006). Women empowerment for biodiversity conservation through self-help groups: a case from Periyar Tiger Reserve, Kerala, India. *International Journal of Agricultural Resources, Governance and Ecology*, 5(4), 338. <https://doi.org/10.1504/ijarge.2006.009925>
18. P.S, Ranade (2008), *Ecotourism Perspectives and Experience*. The Icfai University Press, Hyderabad, PP 31-75.
19. Raghavan, V. P. (2006): “Economy of Ecotourism in Kerala: A Perspective”,
a. *Kurukshetra*, Vol. 55, No. 2, December, p. 23.
20. Rajasenan. D, Abraham and Bijith George (2012), “Livelihood Security and Socioeconomics of Community Based Ecotourism in Kerala”, *South Asian Journal of Socio-Political studies*, January, XII (2), pp 23-27.
21. Ravish Mathew, (2012), *Visitor Satisfaction and Community Empowerment for Sustainable Ecotourism, An Evaluative Study on Periyar Tiger Reserve in Kerala*, Pondicherry University, India.
22. Ravikumar, B. N. (2016). Sustainable development and ecotourism in hilly areas of Chikmangalur district. *Kuvempu University, Department of Environmental Science*. <http://hdl.handle.net/10603/86554>
23. Sangpikul, A. (2017). Ecotourism Impacts on the Economy, Society and Environment of Thailand. *Journal of Reviews on Global Economics*, 6, 302–312. <https://doi.org/10.6000/1929-7092.2017.06.30>
24. Sahani, N. (2019). Application of analytical hierarchy process and GIS for ecotourism potentiality mapping in Kullu District, Himachal Pradesh, India. *Environment, Development and Sustainability*, 22(7), 6187–6211. <https://doi.org/10.1007/s10668-019-00470-w>
25. Shaalan, I. M. (2005). Sustainable tourism development in the Red Sea of Egypt threats and opportunities. *Journal of Cleaner Production*, 13(2), 83–87. <https://doi.org/10.1016/j.jclepro.2003.12.012>
26. Vijayakumar B., Pillai K.R. & Shibu Sridhar (2008), *Tourism Employment and Labour Market Issues*, Kerala State Institute of Languages, Thiruvananthapuram.

27. Weaver, D. (2002), The evolving concept of ecotourism and its potential impacts. *International Journal of Sustainable Development* 5, 251–64
28. Yoon, Y., and Uysal, M. (2005). “An examination of the effects of motivation and satisfaction on destination loyalty: A structural model”, *Tourism Management*, 26(1), pp 45-56.
29. Activities at Periyar Tiger reserve referred from the Web site <http://periyartigerreserve.org/>. Retrieved on 03rd Aug 2015
30. Antigua and Barbuda Tourism Development Programme, 2003.
31. Annual Report of United Nations World Tourism has been referred from the Web site. www2.unwto.org/annual-reports. Retrieved on 20th Dec 2012.
32. https://m.timesofindia.com/city/kochi/state-earned-rs-137-cr-via-eco-tourism/amp_articleshow/71976117.cms
33. Official records of Periyar Tiger Reserve, 2015.
34. “United Nations World Tourism Organization (2000)”, *World Tourism Barometer*, TSA, RMF Series, Madrid.
35. “United Nations World Tourism Organization (2012)”. *Tourism Highlights 2012*.
36. What is Eco Tourism ? Details referred from web site -The International Ecotourism Society (TIES). <https://www.ecotourism.org/what-is-ecotourism>. Retrieved on 26th April 2012.