

# To Examine the Potential and Scope of Ecotourism in Kerala with a Special Focus on Tourists to Ecotourism Destinations in Trivandrum

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## ABSTRACT

"Around the world, ecotourism has been hailed as a panacea: a way to fund conservation and research, protect fragile and pristine ecosystems, benefit rural communities, promote development in poor countries, enhance ecological and cultural sensitivity, instill environmental awareness and social conscience in the travel industry, and satisfy and educate the discriminating tourist".

At the threshold of the new millennium, tourism has emerged as the biggest industry of the future. Tourism today is an economic activity of immense global importance. Perhaps there is hardly any other field of activity where so many people are involved directly or indirectly. Tourism has found a niche for itself as a very effective instrument for generating employment, earning foreign exchange, and thereby facilitating overall development. Kerala is popularly known as 'God's Own Country'. Tourism is the fastest growing industry in Kerala and the State Government has been earnestly supporting the tourism sector and much of its growth is concentrated in natural areas. Changes in the market forces as well as move towards environmentally sensitive and sustainable forms of tourism offers the maximum potential for the promotion of ecotourism in Kerala.

Kerala has excellent natural resources, several wildlife sanctuaries, and National parks. Major ecotourism resources of Kerala are 14 Wildlife Sanctuaries, 6 National parks, several scenic mountains, freshwater lakes, mangroves, etc. In Kerala 56 places have been identified for development as ecotourism destinations emphasizing conservation, ecological sustainability, environmental education, and local community benefits. Thiruvananthapuram district of Kerala is one such destination. In this background, an attempt is made to study the potential and scope of ecotourism in Kerala with a special focus on Tourists to Ecotourism destinations in Trivandrum.

**Keywords:** Ecotourism; Destinations; Tourists; Tourist arrival; Tourist penetration; Ecotourism impacts

## INTRODUCTION

The origins of commercial enterprise have long historical roots. Humans have cosmopolitan since individuals used to move from one place to a different another. The needs of travel were trade, known secular obligations, economic benefits, war, migration, etc. However, the history of recent travel and commercial enterprise is merely about a century recent (Cooper, 2012). Tourism has toughened continuing growth over the decades and it's become one in all quickest growing economic sectors with in the world [1].

The idea of tourism as a development involves the movement of individuals at intervals in their own countries or across the national borders. Wahab has written of " the anatomy of tourism composed of three elements: man, the creator of the act of tourism; area, the physical part to be essentially lined by the act itself; and time, the temporal part that is compared by the trip itself and the stay at the

destination" [2].

Today ecotourism is one in all the quickest-growing segments of the commercial enterprise trade - Its potential growth is nearly unlimited. Ecotourism provides additional pleasurable experiences for tourists through additional meaty connections with native individuals and a larger understanding of the native cultural, social, and environmental problems, etc. It encourages respect between tourists and hosts and designed native pride and confidence.

Ecotourism is an alternative type with the first objective of geographic region experience to the nature lovers. Its a paradigm, philosophy, and catalyst to push accountable travel to study get pleasure from, and admire the natural beauty, wild animals, plants, and native culture. Promoting ecotourism through community participation will facilitate conserve the ecology and environment and improve the well-being of native individuals.

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Ecotourism may be a purposeful visit to natural areas to grasp the cultural and explanation of the environment, taking care not to alter the integrity of the scheme whereas providing economic opportunities that build conservation of natural resources useful to the native individual. The International Ecotourism Society defines ecotourism as "responsible travel to natural areas that conserves the environment and improves the welfare of local people." Ecotourism typically involves travel to a destination where flora, fauna, and cultural heritage are the primary attractions.

The history of ecotourism is also dated back to the 1950s and it had been not well known widely recognized or understood as a variety of attractions. Some choose countries within the African continent that are in the limelight for a jungle hunting expedition and life observation. The requirement for recreational hunting zones led to the creation of protected areas, National Parks and Game Reserves. The idea of ecotourism became wide better known and was smartly studied in the 1980s as a subject integrated with ecology, social science, sociology, ecology, and environmental science.

Honey (1999) remarked that ecotourism was developed within the womb of the environmental movement in the 1970s and 1980s. During this period, the world witnessed the awakening of governments for the preservation of ecology and the environment. The literature about nature tourism and the environmental impacts of the industry dates back to the late 1970s.

The concept of ecotourism became widely known and was vigorously studied in the 1980s as a subject integrated with ecology, anthropology, sociology, ecology, and environmental science. Ecotourism is regarded as one of the forms of responsible tourism and is an integral part of sustainable tourism development, which was declared as a global strategy during the World Summit in Rio de Janeiro in 1992. Before one decade of the World Summit, Krippendorf (1982) coined the term "Alternative Tourism" "However, it was Hector Ceballos-Lascurain who provided a precise and acceptable definition on ecotourism. The definition is stated as "traveling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestation (both past and present) found in these areas" [3].

Kerala-the 'Gods own Country' is unique in its culture and tradition. Kerala is the perfect eco-tourism with all its greenery and natural beauty. Kerala tourism follows a sustainable tourism model adopting various suitable parameters. Kerala believes in qualitative tourism attracting a limited number of visitors who are high spenders and who value local culture, community, and environment. The State has evolved a good model of Private Public Partnership in the tourism industry so that quality management is ensured. It also adheres to Environmental Impact norms, Coastal Regulatory Zone norms, and others. It also insists on the promotion of Eco practices. Ecotourism is a major vertical in sustainable tourism. In 2014, Kerala was awarded Ulysses Award for Innovation in Public Policy and Governance for Sustainable Tourism by United Nations World Tourism Organisation (UNWTO). Its ecotourism initiatives including nature-based programs; wildlife resources beaches, backwaters, and mountains which are the major attractions for both domestic and international tourists [4].

The success of a destination is largely influenced by the tourists that travel to it and the host's ability to accommodate as many different tourist types as possible Akama & Kieti (2003). It is incredibly

important to have a well-balanced destination to provide for numerous tourist types as well as to provide for the host population. In Trivandrum many varieties of travel and safari packages that are available. These range from high- to low-end experiences based largely on accommodations and type of experience.

### Ecotourism

Ecotourism has become an emerging form of alternative tourism and it provides authentic experiences to nature lovers and enthusiasts. It is an accountable visit to study, enjoy and admire the natural beauty together with wild animals, plants, and native culture. The first objective of introducing and promoting ecotourism is to conserve the setting and therefore the social and economic well being of native individuals. Conservation of multifariousness and cultural diversity is one of the necessary principles of ecotourism. It promotes the property use of natural resources and provides ample opportunities for financial gain and employment within the touristy destinations.

Laarman and Durst (1987) outline it as a natural commercial enterprise within which the traveler is drawn to a destination as a result of his or her interest in one or additional options of that destination's natural history [5].

The International Ecotourism Society in 1991 produced one of the earliest definitions "Ecotourism is responsible travel to natural areas that conserves the environment and sustains the well being of local people".

### Significance of ecotourism

Ecotourism offers opportunities to the people in the backward and remote areas to take the economic benefits. The main goal of ecotourism is to strengthen the cause of conservation by providing informed wilderness experience to visitors and it enables the visitors to study and enjoy the forest, wildlife, people, and their culture by providing additional employment opportunities for local communities.

As a result, resource dependency can be reduced to a larger extent. At the same time, it can be a powerful means for protecting and promoting the unique biodiversity along with landscapes and seascapes provided the principles of ecotourism are implemented. With the percolation effects of tourist expenditures, local people play the role of crusaders for the protection of flora and fauna.

Thus, ecotourism provides paid employment to villagers and the types of employment being generated included guides, porters, conservation workers, small shopkeepers. The ecotourism policy is to develop a sustainable community-oriented and managed approach to enforce rules for the visitors, service providers, and community members [6-8].

### Objectives of ecotourism

- To provide compatible and sustainable tourism
- To provide enlightened wilderness experience to the visitors and local inhabitants
- To impart nature education to different target groups such as children, teachers, bureaucrats, media persons, rural people, and politicians who influence the policy-making decisions at the local, state, and national levels.
- To provide park or sanctuary interpretation facilities to generate conservation awareness among the visitors by discovering wonders of nature and its intricate relationship;

and by bringing about change in perception about one's own natural and cultural environment.

- To strengthen the staff and infrastructure for managing the ecotourism and interpretation programs.
- To make employment opportunities for native individuals to cater to the wants of tourists in raising taxis, hotels, engagement in ret houses, lodges, etc.
- To generate sufficient revenue and make the activity of eco tourism self-sustaining as far as possible.
- To Involve local people in recycling the revenue from tourism for improvement of resources and facilities in the villages by subsidizing alternate energy devices, improving educational and medical facilities.

### Tourists

According to World Travel Organization (WTO), "tourists are defined as persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business or other purposes" (Stephen, 2009). Though a tourism destination can exist without any facilities, there is no tourism without tourists. This may be the reason behind the researchers' curiosity to probe into the details of visitors like ethnicity, satisfaction, spending pattern, attitude, etc. The labels 'responsible tourist', 'good tourists', and 'green tourists' are very thoughtful (Sharply & Telfer, 2002; Swarbrooke, 1999, and Wood & House, 1992). According to Krippendorff, a responsible tourist prefers a trip that is least harmful to the environment, least disturbing for the people and cultures of the destinations [9].

### Types of ecotourists

Eco-tourists have positive attitudes in themselves about the environment, culture, and development. Learning about the traditions and customs of the community, experiencing the cuisine, and watching the fairs and festivals are some of the key dimensions of ecotourism that majority of eco-tourists wish to do at the ecotourism sites. Eco-tourists are generally informed about the green practices, the size of the group, employment practices of the company, and other organizations associated with the trips. The economic benefit from the trip must percolate down to the local community [10].

Kusler (1991) proposed three main groups of eco-tourists, namely do it yourself (those eco-tourists are independent, flexible and mobile), ecotourism on tours (those are up-market group tours with demand for comfort and soft ecotourism activities) and school or scientific groups (their principal focus is to acquire and spread environmental education or research). In the same year, Lindberg (1991) emphasized the importance of dedication and time as a function of defining and classifying different types of eco-tourists based on their travel profiles. He identified four basic types of eco-tourists: hardcore nature tourists, dedicated nature tourists, mainstream nature tourists, casual nature tourists.

### Ecotourism in Kerala

Kerala has not done well in agriculture and industry in the past few decades. During this context, the state was that specialize in the event of services connected trade that is currently thought of as the sunrise section of the state's economy. More attention is now bestowed on tourism, information technology, health services, and education. Kerala Tourism started Hospitality Department

in 1950. Tourism as a department came into being in the 1960s. The enormous potential of tourism in Kerala was only examined in the 7th plan. Over the last decade, the expansion in the tourism sector in Kerala has been amazing. Kerala is progressively rated as one among the 50 must-see destinations of the world. Indian tourism has been growing consistently for the last three decades. Kerala, because of its notorious labor militancy image, always faced problems in attracting investors. Tourism is an amalgam of various productive sectors like transportation, accommodation, catering, recreation, and travel-related services. This implies that the development of tourism can facilitate to come up with earnings to completely of stakeholders, viz. taxi drivers, craftsmen, airline operators, tourist guides, and shop keepers, and so on. The financial gain generated through tourism can multiply and flow down to even the bottom strata of the economy. The industry, by its employment and income-generating impact, is expected to play a strategic role in accelerating the economic development of Kerala.

Kerala is one of the most renowned eco-destinations. Kerala ecotourism aims to let people have an insight into the local culture. Most of the foreign tourists choose eco-friendly areas to visit because Kerala has many destinations known for their natural beauty and exquisite landscape. Ecotourism along with pilgrim, backwater, and village tourism are propelling this field into new levels of progression with each passing day. Undoubtedly our wealth is nature. Kerala has a protected area of 2,324 sq.km with two national parks and 12 wildlife sanctuaries. The development of Ecotourism in the Western Ghats of Kerala, with its tropical forest eco-system, provides a natural advantage for the tourists [11].

The major ecotourism products are broadly classified as beaches, backwaters, hill stations, wildlife sanctuaries, etc. In Kerala, these are largely spread over the Western Ghats regions. The recorded forest area in Kerala is 1112559 sq.kms. Forest, wetlands, mangroves, and aquatic ecosystems are the major types of ecosystems in Kerala. As per official classification, Kerala has 41 west-flowing rivers and 3 east-flowing rivers. Unlike many other states in India, Kerala is rich with evergreen forests. It has over 25% of India's 15,000 plant species, where the majority of them grow in the Western Ghats. It includes 150 ferns, 4000 flowering plants, 600 fungi, 800 lichens, and 200 mosses. A large number of them are endemic to Kerala. Fifty-six places have been identified for the development of ecotourism destinations which emphasize conservation, ecological sustainability, environmental education, and local community benefits. A separate ecotourism wing has been set up to give policy support for the development of the ecotourism destinations in the state.

### Ecotourism spots in Kerala

Most of the resources suitable for ecotourism development are under the control of the Forest department. So it is impossible to promote eco-tourism without the help of the Forest department. The Forest Department is evolving modalities for developing community-based ecotourism products in the already identified potential ecotourism spots, through the institution of Vana Samrakshna Samithi (VSS) or Eco-Development Committees (EDCs) that is the committee of the local dependent communities [12].

Sixty eco-tourism destinations are functioning in the State implemented through the forest department (Table 1).

### Study area

The region selected for the study is Thiruvananthapuram district

Table 1: Ecotourism destinations in Kerala.

Sl.No	District	No. of Destination
1	Thiruvananthapuram	6
2	Kollam	3
3	Pathanamthitta	5
4	Alappuzha	0
5	Idukki	9
6	Kottayam	2
7	Ernakulam	3
8	Thissur	2
9	Palakkad	6
10	Malapuram	3
11	Kozhikode	5
12	Waynad	12
13	Kannur	3
14	Kasargode	1
	Total	60

Source-kerala.forest.govt.in

additionally called Trivandrum (Anglicised name), is found in the southernmost district of Kerala State and is the capital town. Mahatma Gandhi referred Trivandrum city as "Evergreen city of India". It is placed between 8°17' and 8°51' North latitudes and 76°41' and 77°17' East longitudes and is bounded by Lakshadweep island to its west and the Western Ghats to its east.

The city has its boundaries with Kollam district lies on the north, Thirunelveli and Kanyakumari districts of Tamil Nadu on the east and the south respectively. Trivandrum district is treated as one Revenue Division, which spreads over 2192 sq.kms. The district has four taluks viz. Thiruvananthapuram, Chirayinkeezhu, Nedumangad, and Neyyankara with 12 development blocks and 115 revenue villages of 1st Jan 2006. The population of the district as per census 2011 is 3,307,284. Though the district accounts for only 5.64% of States area it comprises 9.9% of the state population. Among the southern districts, Trivandrum shows a high population growth rate (Figure 1).

### Statement of the problem

Tourism is the most potential sector that has the power to grow about economic aspects by which the standard of the life of the local community could be upgraded.

The government of Kerala views ecotourism as one of the ways to improve the economy particularly within the context of restricted prospects of the producing sector, issues within the agricultural and traditional sectors, and uncertainties in farming expatriate employment in the gulf. Ecotourism has emerged as a vital sector for generating employment and income. Therefore careful management is necessary to get maximum benefits and minimum negative impacts. Also, a study on the trend and pattern of Tourist's arrival to Ecotourism Destinations in Trivandrum is pertinent [13-15].

Trivandrum is envisioned as a green city of various functional aspects with an economically lively compact urban form possessing global standards in basic facilities and services. It is the gateway for tourism in Kerala. The city is bestowed with immense scope for the development of tourism in various forms like natural tourism, heritage tourism, religious tourism, cultural tourism, healthcare tourism, educational tourism, and ecotourism offering 'Total Experience'- heritage, beaches, backwaters, wildlife and hill

Ecotourism map of Kerala

District map of Thiruvananthapuram



Source: Thiruvananthapuram Municipal Corporation

Figure 1: Ecotourism map of Kerala district map of Thiruvananthapuram.

stations. The city can provide a variety of attractions for tourist making like heritage tourism, religious tourism, natural tourism, cultural tourism, health care, etc. It a must-visit location in the tour itinerary of domestic and foreign tourists [16-18].

The development of Ecotourism in Trivandrum will be a major addition to the growth of Kerala into a premier global tourism destination. It will help to improve the contribution of the sector to Kerala's economy. Ecotourism is a remarkable and pivotal part of tourism in Trivandrum because it enhances the natural and cultural integrity of the people responsibly. Ecotourism destinations in Trivandrum are located at Neyyar dam, Agasthyarvanam, Pondmudi, Peepara Mankayam, and Arippa regions. Ecotourism activities such as trekking, rock climbing, elephant safari, nature camping, river cruise by rafting, wildlife watching, bird watching, etc. have ample scope in these regions

Trivandrum has set the objective of raising the quality of visitor attraction in protected areas and sees an opportunity to raise the number of visitors and the standard of wildlife conservation. However, the achievement of this objective is under question mark if it does not specify the importance of considering the livelihood of the community who are found in and around the protected area. Without strong support from the community, the development of Tourism, and its quality of Tourism experience will be constrained.

In Trivandrum, ecotourism has now been misunderstood or not properly understood by many tour operating companies, and tourism project developers may jump on the ecotourism bandwagon and project an environmentally conscientious image as a part of their business marketing strategy. Thus ecotourism can be misinterpreted and exploited to justify tourism development in pristine areas, which may be sacrificed to maximize tourist numbers and profits. As the number of tourists increases, ecotourism becomes mass tourism and generates similar infrastructural demands and proportionate impact on the environment as conventional tourism [19].

A large number of foreign and domestic tourists and people of governmental and non-governmental business converge to the city of Thiruvananthapuram with high aspirations. But the carrying capacity of the city is such that it cannot provide high-quality infrastructure to the satisfaction of its users. Even though the city has many tourism spots, the quality of infrastructure and other amenities are not up to the mark. There is no agency to constantly monitor and ensure the quality of infrastructure and other facilities offered by travel operators and hotels.

The present study "Potential and Scope of Ecotourism in Kerala with special focus on Tourists to Ecotourism Destinations in

Trivandrum is useful to find, the trend and pattern of tourist arrivals in Kerala and Trivandrum district, their opinion concerning Trivandrum as a tourist site and the facilities provided there and additionally the environmental and socio-cultural impact. Because of the cited importance, it is worthwhile to conduct a study on the above-mentioned topic.

## OBJECTIVES OF RESEARCH

1. To examine the potential and scope of ecotourism in Kerala
2. To make an in-depth assessment to understand the tourist's arrival to Kerala during the past five years.
3. To examine the various ecotourism sites and the development in Trivandrum district.
4. To create an in-depth analysis of the tourist arrival and therefore the impacts on Eco tourist destinations to Trivandrum both foreign and domestic during 2017-2018.

### Ecotourism spots in Trivandrum

There are six ecotourism spots in Thiruvananthapuram. The following are the initiatives of the Forest department towards the development of ecotourism.

#### Agasthyarvanam biological park

Agasthyarvanam is one of the highest peaks in the Western Ghats and is the second-highest peak in Kerala after Anamudi with a height of about 1,869 meters (6,132 ft) above sea level. It lies on the border between Kerala and Tamil Nadu. This mountain belongs to the Ashambu Hills, the southern end of Western Ghats. The forests around this peak are famous for the abundance of rare medicinal herbs and plants. It is known for trekking. The trek to the peak is 28 km long from Bonacaud and requires 2 days. Elephants and wild bulls are in abundance in this part, especially in the evenings. The original inhabitants of these hills are a tribe known as "Kanis". Currently, about 400 Kani families are living around these areas [20].

#### Neyyar and peppara eco-tourism project

The two wildlife sanctuaries in Thiruvananthapuram Districts are Neyyar and Peppara. Neyyar is situated 30 km east of Thiruvananthapuram via katakana, the sanctuary stretches from Neyyantinkara Taluk to Mundanthurai Tiger Reserve in Tamil Nadu. Neyyar wildlife sanctuary was set up in 1958 and it is covered with 12,000 hectares of rich vegetation.

Tropical evergreens, mixed deciduous and southern hill forests to sub-tropical savannahs and reed breaks make this sanctuary an ideal place for the tourists. Animals like elephants, gaur, sloth bear, Nilgiri tahr, Nilgiri langur, etc, and a variety of reptiles including the python, viper, and the flying snake inhabit this forestland.

Ecotourism activities at present in these sanctuaries is limited to conducting nature camps, visiting crocodile rehabilitation center, lion safari park, deer rehabilitation center, and boating in the reservoirs in both the sanctuaries. Very few groups mainly foreign tourists only are at present availing the trekking programs. To make more and more people interact and understand the forests, their importance, and their sustainable management for present and future generations, a few trekking programs have been envisaged. Some of the tourist attractions include Crocodile watching, boating, trekking, and Lion park safari.

#### Ponmudi

Ponmudi (Kashmir of Kerala) is located 53 km north-east of

Trivandrum City, 78km south-east of Varkala Beach, and 69km north-east of Kovalam Beach at an altitude of 1100 m. It is a part of the Western Ghats mountain range that runs parallel to the Arabian Sea. The normal temperature of Ponmudi is between 18°C to 25°C. Ponmudi is a popular spot for trekking. Other attractions near Ponmudi include Golden Valley and several rivulets and rapids, some even across the road. The lush forest area has tropical vegetation. A variety of wildlife inhabits the hills. The Golden Valley offers vistas of the hills and access to the Kallar River. Flowing through a wilderness area, it has rounded pebbles, cool water, fish, and lush green trees.

A natural spring, flowering trees, and orchids in plenty are found in the Valley. There is also a Deer Park just three km away from the resort. There is a golden Valley for bathing, where a cool, crystal-clear mountain stream splashes down the rocks.

#### Kallar eco-tourism project

Kallar near Ponmudi is in Thiruvananthapuram district. This is a valley of the Vamanapuram River. Lots of tourists on the way to Ponmudi choose Kallar as a recreation spot. A waterfall named Meenmutty 3 kilometers inside the forest from the Kallar bus stop attracts a lot of trekkers. Identifying the spot and the waterfall the Directorate of Ecotourism submitted a proposal for developing eco-tourism programs along the river. The facilities envisaged were bathing ghats, tree huts as a watchtower, toilets change rooms, trek path to the falls, signage's, cafeteria, etc. as this area was under the Thiruvananthapuram forest division the Divisional forest officer was the implementing agency for the project. The forest department had formulated a Vana Samrakshana Samithi (VSS) involving the residents and the VSS was engaged in the development of the primary infrastructure. The VSS after the development of the primary infrastructure opened the spot to tourists in 2004. Now lots of domestic tourists are attracted to the destination. The local VSS members guide them and provide all the required facilities.

#### Mankayam

Mankayam is a favorite spot for both nature and adventure tourists. is found in the Nedumangadu taluk of Thiruvananthapuram district. The soil here is very fertile and there is a large choice of Flora. The vegetation includes evergreen and semi-evergreen etc. A big waterfall in this area is Kalakkayam waterfall which is covered by rocky areas. There are a lot of picturesque spots here and trekking can also be done. There is the ecotourism zone which is covered by a variety of forest types from Mankayam to Kurisadi. Trekking of all types of medium, soft and adventure is possible.

## COLLECTION OF DATA

The study of this paper is mainly gathered with some exploratory methods in processing the research. The research is intended to cover certain specific locations where there are existing ecotourism projects in Thiruvananthapuram. The data required for this study were collected from secondary sources like the Kerala Tourism Department, Kerala Tourism Development Corporation (KTDC), India Tourism Development Corporation (ITDC), Kerala Travel and Tourism Studies (KITTS), State Planning Board, local bodies in the study area, publications of various government institutions and internet, etc. A self-structured questionnaire based on the perception of tourists in different dimensions of ecotourism i.e. environmental and socio-economic were constructed.

The total respondents were 100 from Neyyar Agasthyarkudam and Ponmudi Ecotourism destinations, out of which 20 are

international tourists, 40 respondents from national and 40 from local tourists. The Likert scale is used to measure the attitude of the respondents agree or disagree with a statement. In this Likert scale item coded as follows; 1 -Very Low, 2- Low, 3- Medium, 4- High, and 5- Very High.

## LITERATURE REVIEW

The literature on tourism has expanded enormously and there have been studies of the history of tourism (Sigaux 1966, White 1967) the development of seaside resorts (Gilbert 1939; Wall 1967; as quoted in Mathieson and Wall, 1982) Tourism geography is the study of tourism within the concepts, frames, orientations, and venues of the discipline of geography and accompanying fields of geographical knowledge. The present review of literature is an attempt to highlight the different studies which deal with ecotourism.

In the literature, ecotourism is often used interchangeably with "nature-based tourism" or "nature tourism" although it should be noted that many scholars believe there to be a distinction (Orams, 1995; Burton 1998) Additionally, ecotourism has an educational or interpretative element to it where the participants can learn about relevant environmental issues as well as develop skills to minimize the impact that they have on the environment (Burton, 1998). The long term viability of the ecotourism industry depends on the satisfaction of visitors and it is very essential for the survival of ecotourism destinations. It is a form of responsible tourism where visitor satisfaction depends upon the management of the ecotourism destination as well as the level of environmental awareness of the tourists. As ecotourism destinations have limited infrastructure to cope up with sustainability principles, the satisfaction of tourists becomes difficult for its success.

Bhatia (1993) in his book 'Tourist Development - Principles and Practices' has noted that the underdeveloped region of a country can greatly be benefited from tourism development. Sudheer's (1992) study on 'Tourism in Kerala-Problems and Prospects' highlighted the importance of tourism in Kerala and various problems confronting the tourism sector. According to Vijayakumar (1995) "ecotourism implies enjoyment of nature's bounty as well as understanding the culture and natural history of the environment". His thesis mainly

stressed the promotion of ecotourism in Kerala as it cares about the conservation of eco-system while respecting the environment.

Katja Pactz (1997) studied the connection between property development and commercial enterprise and concluded that "sustainable development is to be seen because the approach forward to ensure the long term viability of the tourism business". Babu Paul (2001), in his paper entitled 'A Perspective Paper on Tourism Development in Kerala' highlighted the profile of tourism in Kerala and brought out the constraints and prospects of the tourism industry. Niranjan Das and Syiemelieh (2004) in their study 'Ecotourism in Assam' explain that Assam has tremendous potentiality for growth and development of ecotourism. Assam forms a part of global biodiversity hot spot, with varieties of flora and fauna, which can provide a sound base to start eco-tourism ventures.

Anitha and Muraleedharan (2006) evaluate the economic valuation of ecotourism development in the Southern-Western Ghats of Kerala. The study also attempts to estimate the economic potentials of the ecotourism. The results show that sustainable development initiatives through enhancement in employment, income, etc ensures the livelihood security of the people. This helps in achieving the primary goals of conservation of natural resources and improvement in the standard of living of the local households. The study recommends for "One Tourist One Rupee Ten Trees Program" and suggests suitable strategies and action plans.

MH Salim (2008) conducted a study on 'encash the tourism potential of Kerala through Kerala Financial Corporation'(KFC) in Kerala. This study analyzed that infrastructure development holds the key to India's sustained growth in the tourism sector. Therefore the ministry of tourism has been making efforts to develop quality tourism infrastructure at tourist destinations and circuits [21].

## TOURISTS STATISTICS OF KERALA

Table 2 indicates that the number of foreign tourists per thousand Keralites is an increasing trend. In 2015 there are 1.26 foreign tourists per thousand local people in Kerala and it increased to 1.47 in 2018. In the case of foreign tourists penetration rate Ernakulam (5.91) and Thiruvananthapuram (5.70) show the highest rate and Palakkad shows the lowest (0.10).

Table 2: Tourist penetration rate of Kerala both foreign and domestic 2014-2018.

Districts	2014	2015	2016	2017	2018
Thiruvananthapuram	3.82	4.08	5.02	5.51	5.70
Kollam	0.21	0.23	0.14	0.10	0.15
Pathanamthitta	0.05	0.06	0.06	0.07	0.08
Alapuzha	1.24	1.31	1.60	1.54	1.69
Kottayam	0.98	1.11	1.10	0.72	0.97
Idukki	3.10	3.35	2.02	1.70	2.25
Ernakulam	4.89	4.99	5.25	5.84	5.91
Thrissur	0.10	0.11	0.14	0.15	0.16
Palakkad	0.03	0.03	0.04	0.03	0.03
Malappuram	0.22	0.24	0.20	0.18	0.20
Kozhikode	0.16	0.17	0.17	0.18	0.19
Waynad	0.62	0.65	0.37	0.47	0.51
Kannur	0.13	0.15	0.09	0.09	0.10
Kasargode	0.08	0.10	0.06	0.04	0.06
State	1.19	1.26	1.32	1.39	1.47

Source: Compiled by the researcher

$$\text{Tourist Penetration Rate} = \frac{(\text{Number of Visitors} \times \text{Average length of Stay})}{(\text{Midyear Population} \times 365)} \times 100$$

Table 3 indicates that the number of domestic tourists per thousand Keralites is an increasing trend. In 2014 there are 5.66 domestic tourists per thousand local people in Kerala and it increased to 7.20 in 2018. In the case of domestic tourists penetration rate Ernakulam (16.59) and Wayanad (16.35) show the highest rate and Malappuram shows the lowest (1.97). Thus the differences in the tourist penetration rate are affected by the institutional setups in the state. The important activities of these institutional setups are catalyzing private investment, strengthening promotional activities, marketing activities, and training manpower resources. That is different agencies under the state government in Kerala, plays a crucial role in coordinating and supplementing efforts of the state government to enhance the tourist arrivals to the state. The major institutional setup for the tourism promotion in Kerala is the department of tourism (Figures 2 and 3).

Tables 4-6 reveal Foreign Tourist arrival to Kerala during the year 2018 crossed 1,096,407 showing an increase of 0.42% of the previous years. It shows an increase of 5.15% over the previous year. Domestic Tourist arrival to Kerala during the year 2018 is 15,604,661. It shows an increase of 6.35% over the previous year's figure 13,172,535. Foreign exchange earnings for the year 2018 are Rs: 8764.46 Crores which recorded an increase of 4.44% over the

previous year. Total Revenue (including direct & indirect) from Tourism during 2017 is Rs 36,258.01 Crores, showing an increase of 8.61% over the last year's figure. The tourist statistics indicate that Kerala has benefitted immensely from the tourism sector.

Table 7 shows that in 2018 the maximum number of foreign tourists visited Kerala during January followed by February and domestic tourists in December and May.

Table 8 reveals that out of 1.56 crore domestic tourist visits, 9.74 million visits (62.42%) were made by Keralites. Tamil Nadu contributed 8.84% of the domestic tourist visits. It was followed by Karnataka with a share of 6.42% and Maharashtra with a share of 3.66%. The other major source markets are Andhra Pradesh (1.8%), Gujarat (1.54%), and Delhi (1.65%). In the year 2016, the % share of Keralites against the total domestic tourists was 66.05% which shows that the contribution of the other states against the total domestic tourists increased significantly this year (Figure 4).

Table 9 reveals Foreign exchange earnings from tourism have shown steady growth over the years. In 2018, Kerala has earned 8764.46 crores as foreign exchange earnings from tourism against 8392.11 crores in the year 2017 showing a growth of 4.44%. Ernakulam and Trivandrum lead in foreign exchange earnings (Figure 5).

## DATA ANALYSIS AND INTERPRETATION

Among the 22 territorial divisions of the state, the number of

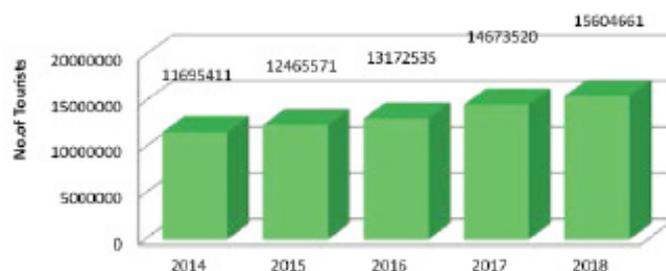
**Table 3:** District wise tourist domestic penetration rate of Kerala from 2011 to 2018.

Districts	2014	2015	2016	2017	2018
Thiruvananthapuram	8.44	9.18	9.95	5.51	12.29
Kollam	1.60	1.72	1.85	0.10	2.29
Pathanamthitta	1.56	1.75	1.89	0.07	2.31
Alappuzha	1.89	2.08	2.42	1.54	3.13
Kottayam	3.43	3.80	3.96	0.72	4.28
Idukki	9.50	10.01	11.34	1.70	15.12
Ernakulam	13.38	14.15	14.75	5.84	16.59
Thrissur	13.18	13.70	13.80	0.15	14.68
Palakkad	2.72	2.85	2.86	0.03	2.98
Malappuram	1.73	1.78	1.73	0.18	1.97
Kozhikode	4.01	4.19	4.48	0.18	4.91
Wayanad	11.17	11.96	11.39	0.47	16.35
Kannur	3.75	3.91	3.98	0.09	4.49
Kasargode	2.58	2.93	3.35	0.04	3.47
State	5.66	6.01	6.26	1.39	7.20

Source: Compiled by the researcher



**Figure 2:** Foreign tourist's arrival statistics.



**Figure 3:** Tourists arrivals domestic: 2014-2018.

**Table 4:** Foreign tourists arrival Statistics: 2014-2018.

Tourist Arrivals	2014	2015	2016	2017	2018
Foreign Tourists Arrivals	923366	977479	1038419	1091870	1096407
Percentage Variation Over Previous Year	7.6	5.86	6.23	5.15	0.42

**Table 5:** Domestic tourists arrival statistics: 2014-2018.

Tourist Arrivals	2014	2015	2016	2017	2018
Domestic Tourists Arrivals	11695411	12465571	13172535	14673520	15604661
Percentage Variation Over Previous Year	7.71	6.59	5.67	11.39	6.35

**Table 6:** Earnings from tourism 2014-2018 (RS in Crores).

Year	Foreign Exchange Earnings	% of Increase	Earnings From Domestic Tourists	Total revenue Generated From Tourism	% of Increase
2014	6398.93	15.07	12981.91	24885.44	12.11
2015	6949.88	8.61	13836.78	26689.63	7.25
2016	7749.51	11.51	15348.64	29658.56	11.12
2017	8392.11	8.29	17608.22	33383.68	12.56
2018	8764.46	4.44	19474.62	36258.01	8.61

Source: Tourism Department, Government of Kerala

**Table 7:** Month wise foreign and domestic tourist arrivals during 2018.

Sl. No	Month	Foreign	Domestic
1.	January	167980	1422483
2.	February	152003	1226778
3.	March	120711	1228451
4.	April	85493	14,70552
5.	May	45427	1594332
6.	June	36746	1084238
7.	July	68868	1176994
8.	August	60121	995577
9.	September	44769	1119445
10.	October	73263	1281028
11.	November	99271	1364805
12.	December	141755	1639978
Total		1096407	15604661

Source: Tourism Department, Government of Kerala

**Table 8:** Distribution of domestic tourist visits in Kerala.

Sl. No	State	No of Tourists	Percentage Share
1.	Kerala	9739934	62.42
2.	Tamil Nadu	1378992	8.84
3.	Karnataka	1002062	6.42
4.	Maharashtra	570419	3.66
5.	Andhra Pradesh	281538	1.8
6.	Delhi	258082	1.65
7.	Gujarat	240009	1.54
8.	Uttar Pradesh	145297	0.93
9.	West Bengal	135363	0.87
10.	Lakshadweep	121156	0.78
11.	Telangana	102644	0.66
12.	Rajasthan	69148	0.44
13.	Madhya Pradesh	59602	0.38
14.	Haryana	46956	0.3
15.	Punjab	43940	0.28

16.	Orissa	29888	0.19
17.	Bihar	28705	0.18
18.	Assam	28448	0.18
19.	Goa	25034	0.16
20.	Jharkhand	20456	0.13
21.	Uttaranchal	14377	0.09
22.	Pondicherry	12523	0.08
23.	Chandigarh	12064	0.08
24.	Chhattisgarh	9302	0.06
25.	Himachal Pradesh	6495	0.04
26.	Mahe	4289	0.03
27.	Jammu And Kashmir	4275	0.03
28.	Arunachal Pradesh	4097	0.03
29.	Andaman And Nicobar Islands	3284	0.02
30.	Tripura	2690	0.02
31.	Nagaland	2486	0.02
32.	Sikkim	2101	0.01
33.	Manipur	1998	0.01
34.	Mizoram	1366	0.01
35.	Meghalaya	977	0.01
36.	Daman And Diu	756	0
37.	Dadra And Nagar Haveli	162	0
38.	Not Specified	1193746	7.65
Total		15604661	100

Source: Tourism Statistics-2018, Tourism Department Government of Kerala

foreign tourists arrived in the territorial division of Kerala for the year 2017-18 is highest at Athirapally ecotourism center which lies in the Charpa range of Vazhachal division with 15773 foreign visitors and the second is Ponnudi in Thiruvananthapuram with 3356 foreign travelers. The total foreign visitors at Vazhachal are 16301 and Trivandrum is 4990. The other territorial divisions the no. of foreign tourists is comparatively less. There are many places like Achencovil, Anchal, Konni, Kalady, Mannrkkad,

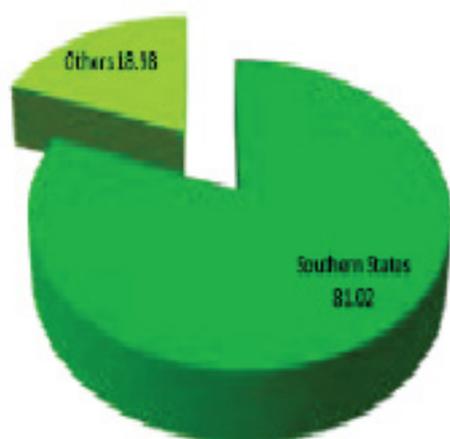


Figure 4: Tourists visiting Kerala.

Aganganmala, Meenvallam, and Dhoni waterfalls in Palakkad, Kakkad, Kakkavayal, Peruvannamuzhi, Janakikkad in Kozhikode, Manathavady in Wayanad were the no of foreign travelers reported zero. Nedumgayam of Nilambur south and Azhakupuri, Paithalmala of Kannur division the number of foreign tourists is reported 19,18and 15 respectively.

The number of native tourists is recorded highest at Athirapally of Charpa range Vazhachal with 1324074 native tourists followed by Ponmudi in Thiruvananthapuram district with 448097 and then Konni ecotourism and Treetop huts with 187092 native tourists. The least recorded native tourist is at Begur in Waynad with 758 and 401 native travelers (Tables 10-12).

The total number of foreign tourist visiting eco-tourism destinations at Ponmudi, Mankayam and Kallar Trivandrum

Table 9: District wise foreign exchange earnings from tourism- 2017-2018.

Sl. No	District	2017	2018
1.	Alappuzha	576.73	763.58
2.	Ernakulam	3489.24	3902.37
3.	Idukki	325	358.39
4.	Kannur	39.38	46.07
5.	Kasargod	8.57	32.95
6.	Kollam	47.86	72.63
7.	Kottayam	248.64	346.03
8.	Kozhikode	100.73	146.99
9.	Malappuram	141.81	140.77
10.	Palakkad	13.15	15.72
11.	Pathanamthitta	15.4	15.61
12.	Thiruvananthapuram	3233.65	2739.97
13.	Thrissur	82.82	90.59
14.	Wayanad	69.14	92.79
	Total	8392.11	8764.46

Source: Kerala Tourism Statistics(2018)

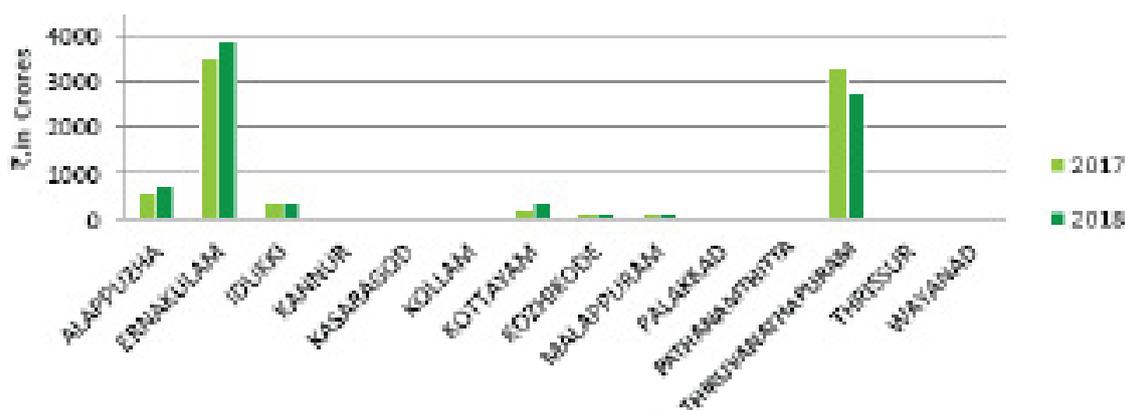


Figure 5: Foreign exchange earnings 2017-2018.

Table 10: Details of tourists and income generated from eco-tourism activities in territorial and wildlife divisions of Trivandrum 2015-2016.

Sl. No	Division	Name of Range	Location of Eco-Tourism Centre	No. of Visitors				Income Generated
				Native	Foreigners	Students	Total	
1	Trivandrum	Palode	Ponmudi	286651	2517	21120	310288	8009600
			Mankayam	29599	80	4772	34451	915630
			Paruthi-ppally	Kallar	64524	1245	7592	73361

Source: Kerala Forest Department

**Table 11:** Details of tourists and income generated from eco-tourism activities in territorial and wildlife divisions of Trivandrum 2016-2017.

Sl. No	Name Of Wildlife Sanctuary/National Park	District	Division	No. of Visitors				Income Generated
				Native	Foreigners	Students	Total	
1	ABP Range,Kottor	Trivandrum	TVPMWL division	41798	4769	0	46567	2726755
2	Neyyar WLS			87767	2743	0	90510	10023905
3	Peepara WLS			13223	6	0	13229	3987930

Source: Kerala Forest Department

**Table 12:** Details of tourists and income generated from eco-tourism activities in wildlife divisions of Trivandrum during 2017-2018.

Sl. No	Name of Wildlife Sanctuary/National Park	District	Division	No. of Visitors				Income Generated
				Native	Foreigners	Students	Total	
1	ABP Range,Kottor	Trivandrum	TVPMWL Division	82387	4921	0	87308	2497850
2	Neyyar WLS			75561	1564	0	77125	6614120
3	Peepara WLS			9256	35	0	9291	1321834

Source: Kerala Forest Department

**Table 13:** Showing the category of tourist (Source: Computed by the researcher).

Category of tourists	No. of respondents
National	40
Foreign	20
Local	40
Total	100

**Table 14:** Perception of tourists on environmental quality in Trivandrum.

Perceived Positive Impacts	Environmental Quality				
	Scaling Items				
	1	2	3	4	5
Increase environmental education and awareness	0	23	37	34	11
Increase environmental efforts	0	8	28	51	13
Conservation of Natural resource	4	10	28	63	4
Improve environmental quality	4	4	28	55	9
Preservation of water resources	1	0	8	73	21
Total Score	9	22	109	276	58
Perceived Negative Impacts	1	2	3	4	5
Decreased water and air quality	29	52	4	4	1
Destruction of Natural Habitat	30	50	3	4	0
Ecosystem Damage	16	68	10	1	5
Soil Erosion and landslide	21	65	5	0	4
Decreased landscape characteristics	4	70	15	0	4
Total Score	126	305	37	9	14

Source: Computed by the researcher

during 2015-16 was 3842 and the native tourists was 380,774 and the total income generated was 10,882,370/- whereas in the wildlife sanctuaries in Thiruvananthapuram the total foreign travelers are 7518 and native tourist 142,788 and the total amount generated was 16,738,590/-. In 2017-18 the foreign tourist in the territorial divisions in Thiruvananthapuram have increased to 4900 and the Native tourist also increased to 603,370 and the income generated was 16,804,142 as compared to 2015-16 and in the wildlife sanctuaries the total foreign tourist has increased to 6520 and native tourist to 167,204 and the total income generated was 10,433,804/-. The native tourist to Neyyar and Peepara wildlife sanctuaries was more in 2015-16 and less in 2017-18 and

**Table 15:** Tourist perception on socio-cultural influence in ecotourism destinations in Trivandrum.

Perceived Positive Impacts	Socio-Cultural Influence				
	Scaling Items in %				
	1	2	3	4	5
Rising infrastructural development	0	23	66	13	1
Involvement of local people	4	5	47	43	0
Increased gender equity	21	61	12	5	4
Better information accessibility	1	43	31	7	19
Approach with tourist	0	0	35	43	20
Total Score	26	133	191	111	44
Perceived Negative Impacts	1	2	3	4	5
Loss of cultural identity	37	52	20	0	0
Decreased influence of local language and customs	30	47	25	0	15
More touristic oriented development	0	6	8	73	21
People leave primary work to tourism-related jobs	1	45	39	26	5
Children leave their education for tourism	9	36	36	15	10
Total Score	77	186	128	114	51

Source: Computed by the researcher

the foreign tourist visitors at Neyyar in 2017-18 was also less. An amount of 1453.66 lakh has been generated towards eco-tourism activities in various ecotourism centers in 2015-16 and an increase of 1667.94 lakh has been generated towards eco-tourism activities in various eco-tourism centers in 22 territorial divisions in the State during 2017-18 [22].

Table 13 shows that the most number of tourists arriving Trivandrum is National and local tourists and foreign tourists are second in position [23-25].

Table 14 reveals that a low level of response (305 scores) regarding the negative environmental impact on Neyyar, Agasthyarvanam, and Ponnudi. About 72% of tourists believe that these hill stations are not affected by any decreased impact on landscape change. These Ecotourist spots still preserve the beauty and can accommodate ecotourism development in a wide manner the effort of the Forest department and tourism department proved a positive recognition in protecting the landscape characteristics, at the same time high level of response generated from tourists

regarding positive environmental impact especially to preserve the accessible water resource (73%). At the same time, the response level was negligible with 'very low' for in positive environmental impact regarding the need for increased environmental education and efforts (51% in environmental efforts). The importance of environmental awareness was stressed by all tourists with medium to the high-level rating.

In the given Table 15, the socio-cultural impact is been decided with the parameters of rising the infrastructure. Involvement of local people in tourist activities, increasing gender equity, better information access, and approach to tourists end ups in the traveler opinioned with medium and low positive impacts, whereas sharing expertise and culture with traveler supported high positive impacts [25-27].

About 73% of the tourists extremely supported the very fact that Neyyar, Agasthyarvanam, and Ponmudi are tourist-oriented. Based on the opinion from tourists, it ought to be noted that the main focus of taking part the tribal communities is needed for better ecotourism development. In the case of increasing gender equity in tourism development in these regions the response was low (61%). This may be because of the risk and safety factor perceived by tourists for this low level of response in considering gender equity in ecotourism development in Ponmudi and Agasthyarvanam.

## CONCLUSION

Kerala could be converted into a tourist paradise and there is considerable scope for it. The returns from the tourism economy can effectively answer to the problems of unemployment and non-productivity present today in the state. Trivandrum is a paradise for nature lovers. Its coastal location, greenery, evergreen forest, mountains, hills, valleys stream, rivers, backwaters, beaches, lagoons, cultural heritage, and rich bio-diversity provide a wide base for the development of eco-tourism. The success of the Eco-development project in Trivandrum reflects the concern for achieving a balance between conservation of the forest and wildlife and livelihood of people living in and around it. Ecotourism can help the local people for economic development. The local people in the ecotourism spots can attain high economic development through the implementation of suitable economic projects in these places. Attempts are to be made to attract a greater number of tourists both foreign and domestic to these ecotourism destinations potential of Kerala. Countries like the UK, France, Germany, USA, etc are very good markets and hence more tourists can be obtained from these nations.

As per the tourism data (Tourism Department, Government of Kerala) about 10.96 lakh international tourists visited Kerala during 2018. Thiruvananthapuram holds the second position with 3.43 lakhs foreign tourist arrivals followed by Alappuzha with 95000 tourist arrivals, while Ernakulam leads with total foreign tourist arrival of 4.88 lakh. The total domestic tourist arrivals to the capital city were recorded at R27.12 lakh while it was 25.05 lakh in 2017, showing an increase of over two lakh domestic visitors. Though the city was not much affected by the flood in 2018, the capital city, however, witnessed a reverse trend from September which continued up to December with an average decline of 9.34 in four months, worrying about the industry. The tourism officers attributed the negative trend to the unseemly unrest which happened in connection with the Sabarimala issue. The tourism statistics released by the Tourism Department puts forth an alarming trend, with tourist arrivals taking a dip. The Nipah scare

and the floods had their effect on tourism with domestic as well as foreign tourists eschewing Kerala from their travel itinerary.

Kerala can further move up in international tourism with strategic planning and regular monitoring of the activities done. It is the role of Government and other local authorities to improve communication strategies and providing more exposure to our destinations and other tourist attractions will improve this scenario. The Study of tourist destinations in hill-stations of Trivandrum offers a pleasant climate, calmness with great potentialities of promoting ecotourism. The study evaluated the positive and negative impacts of ecotourism developments in Neyyar, Agasthyarvanam, and Ponmudi ecotourism destinations in Trivandrum and to assess the environmental and socio-cultural impacts of ecotourism development in these regions. The analysis of collected data reveals that environmental quality in terms of conserving natural resources, improving environmental quality Agasthyarvanam, and Ponmudi achieving good status. The low status observed in negative environmental impacts like ecosystem damage and natural hazards.

The perception against socio-cultural influence and communication, local people participation, and gender equity needs to be improved while less distortion observed on the loss of cultural value and heritage and leading primary work to tourism-based jobs. The study finally concludes that there needs to have appropriate planning for these destinations to provide infrastructural facilities for ecotourism development. Furthermore, new potential sites for ecotourism development are to be identified and planning is to be made accordingly for their development to promote and attract travelers from India and abroad. Solely the combined and sincere effort from each stakeholder as well as every city will bring a positive amendment within the growth of tourism. It's additionally necessary that the requirement for communities and conservation ought to go hand in hand.

## SUGGESTIONS

Tourism today is considered as an industry adding a considerable amount to the exchequer. It is revealed from the survey that in Trivandrum, domestic tourist is coming more than a foreign tourist. Infrastructural facilities should be improved to attract foreign visitors so that earnings from tourism will be more.

- More hotels and restaurants which are clean with modern amenities and moderately expensive and assuring best services may be provided to the international tourist close vicinity of the centers. Resorts can be built under public-private participation. Information centers, entertainment facilities, communication system require urgent attention in Kerala.
- Steps should be taken to improving marketing facilities for ecotourism promotion in Trivandrum district. Ecotourism marketing is different from traditional marketing as it involves the marketing of products and services with positive ecological outcomes to environmentally concerned consumers.
- Implementation of proper security measures during boating should be a must. Special care should be given to women tourists and children.
- The tourist information centers are necessary. To provide proper information and education for visitors, tourist information centers are necessary. To earn foreign exchange, proper-publicity should be made to attract foreign tourists towards ecotourism. Ecotourism exhibition is an important

tool for ecotourism promotion. Brochures and guidebooks can also be used as a promotional method. Advertising and mass communication media can be used for the promotion of ecotourism. It is recommended promotion should be taken up. Internet and social networking sites for marketing.

- The tourist spots should be 'plastic-free'. Adequate waste boxes should be kept in all tourist areas to keep the surroundings clean. These wastes should be collected and Hi-tech pollution control equipment should be used to prevent pollution.
- Separate policies are required for ecotourism, distinguishing it from mainstream tourism operations. We need long term planning. The Government and other agencies should examine ways to assist with ecotourism operations research.
- Implement modern ticket- issuing system to visitors and also impart training to Staff on GPS, computer application, etc.
- Empowerment of women and indigenous people economically and socially to take part in tourism development.
- The cultural value, social system, economic system, the way of life, local environment, and political setup should be preserved and respected.
- Giving employment to the local community in managing home stays, cooking, serving as guides, involving in rescue operations, maintenance of premises and monitoring, acting as guides to bird lovers, etc
- Providing a platform to showcase their skills such as handicrafts, pottery, etc., this would also enable them to earn an extra income.

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