

## **Strategies for Developing Sustainable Ecotourism In Kerala**

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### **ABSTRACT**

Sustainable development of any kind can reduce the social pressure on natural resources. Tourism activities especially ecotourism could also increase pressure on natural resources within a tourist destination if the same is carried out in an unsustainable mode. Opportunities for income generating activities should be offered to local people as a part of ecotourism development to win the local support and ultimately, the success of the project. Planning of nature related destinations should take into account the demands of local people before implementing various ecotourism projects and should aim at improving the living standards of local people. Implementation of ecotourism in nature-related destination may be the best form of income generating activity that is completely ecological. Reduction of pressures on the natural resources, co-operation among regions and countries, acceleration of information, protection of the

ecological balance, experience exchange between rural and urban people can be ensured through proper implementation of ecotourism projects in the state.

The paper aims to develop strategies for sustainable ecotourism development in the state of Kerala. First part of the paper broadly defines some of the initiatives taken by the Kerala government in this direction. In the second part of the paper, a thorough SWOT analysis is carried out for the development of a TOWS matrix to generate strategies for ensuring sustainable ecotourism in the state.

**Keywords:** ecotourism, SWOT, strategy, sustainable, TOWS.

## **INTRODUCTION**

World tourism, considered to be one of the largest foreign exchange earner, is growing at a very fast pace especially in developing countries. It can be said that, since its inception, that is from 1970 to 1990, this industry has shown a tremendous growth of 260 % (Brandon, 1996). Tourism, thought to be an activity enjoyed only by small group of relatively well off people during the first half of the last century, has come a long way (Neto, 2003). It has grown to become a mass phenomenon during the post World War II period particularly from 1970's onward. A continued rise in income and leisure could be considered the primary reasons for the rise in tourism demand. Also it accounts for more than 10 % of total employment, 11 % of Gross Domestic Product (GDP) with total tourist trips predicted to increase around 1.6 billion by 2020 (Hundole, 2002). World Tourism grew by an estimated 7.4 % in 2000, with foreign exchange reaching its peak of US \$476 billion, which was larger than the export value of petroleum products, motor vehicles, telecommunications, equipment or any other single category of product

or service (Drumn et. al., 2002a; Neto, 2003). Having recognized the role of tourism in the world economy, international agreements such as ASEAN has declared tourism as one of the priority sector among eleven considered most important. Additionally, tourism has been successful in increasing global ties through businesses, conferences, VFR's (Visiting friends and relatives) and leisure. Hence making these sectors a principal export earner for 83% of the developing countries in the world. Information Technology or IT has also started gaining importance in tourism as the present day tourists are more information sensitive (Sheldon, 2000).

As far as Kerala is concerned it was only in the seventh plan that tourism found its place in the functioning of Department of Tourism, which indicates that the state government was very late in realizing its tourism potential. Declining agriculture, stagnation in individual growth, compounded by globalization and trade liberalization could be considered the primary reasons for the export dependent state to look for better and newer avenues to improve its economy. It was as late as 1990 that the state government had identified tourism as a major foreign exchange earner as well as employment generator (Sreekumar et. al., 2002). Even then, the state has shown a commendable growth in this sector within the last few years. The number of domestic as well as international tourist arrivals to the state has crossed two lakhs generating revenue of nearly Rupees four thousand crores which is 6.29% of the state's Gross Domestic Product (GDP). In the year 1986, government of Kerala accorded an industry status to tourism so as to promote the state's tourism products and to attract Foreign Direct Investment (FDI). According to World Travel and Tourism Council (WTTC), travel and tourism is one of the largest industries in Kerala today, contributing to Rs. 39.3 billion or 3.7 % of the Gross State Product (GSP) and is projected to rise to Rs. 216.5 billion or 5.2 % of GSP.

This paper aims to develop strategies for sustainable ecotourism development in the state of Kerala. First part of the paper broadly defines some of the initiatives taken by Kerala Government in this direction. In the second part, a thorough SWOT analysis is carried out for the development of TOWS matrix to generate strategies for ensuring sustainable ecotourism in the state (Sindhu et. al., 2009).

## **DEFINITION OF KEY CONCEPTS**

Before starting any projects in Ecotourism, it is important to understand various definitions related to the same.

### **Ecotourism**

“Ecotourism”, a relatively new concept in tourism and a frequently debated term, is seen as a potential vehicle that provides environmental, socio-economic and cultural benefits at both local as well as national level. First hand experiences like being able to smell the flowers and vegetation at its roots, being able to hear the song of birds and pull leeches from your skin in a rain forest, are the characteristics of ecotourism (Hundole, 2002). Large International and National organizations like UNEP and World Tourism Organization (WTO) have acknowledged the role of ecotourism in improving the economy.

The term ecotourism means ecologically sustainable, low impact, culturally sensitive, earning oriented, and community supporting tourism. Nowadays travelers are more informed, conscious and sensitive towards nature, forcing tourism industry to give a serious thought towards this

concept. Though a variety of terms like Nature tourism, Sustainable Nature tourism, Scientific or Research tourism, Green/Sustainable tourism and Responsible Tourism are frequently linked and sometimes confused with Ecotourism, principles like the following differentiates ecotourism from its cousins (Drumn et. al., 2002a).

- Low impact upon protected areas;
- Involvement of stakeholders(individuals, communities, ecotourists, tour operators and government institutes) in the planning, development, implementation and monitoring phases;
- Respect towards local culture and tradition;
- Generation of sustainable and equitable income for local communities and other stakeholders, including private tour operators and;
- Education to stakeholders about their role in conservation.

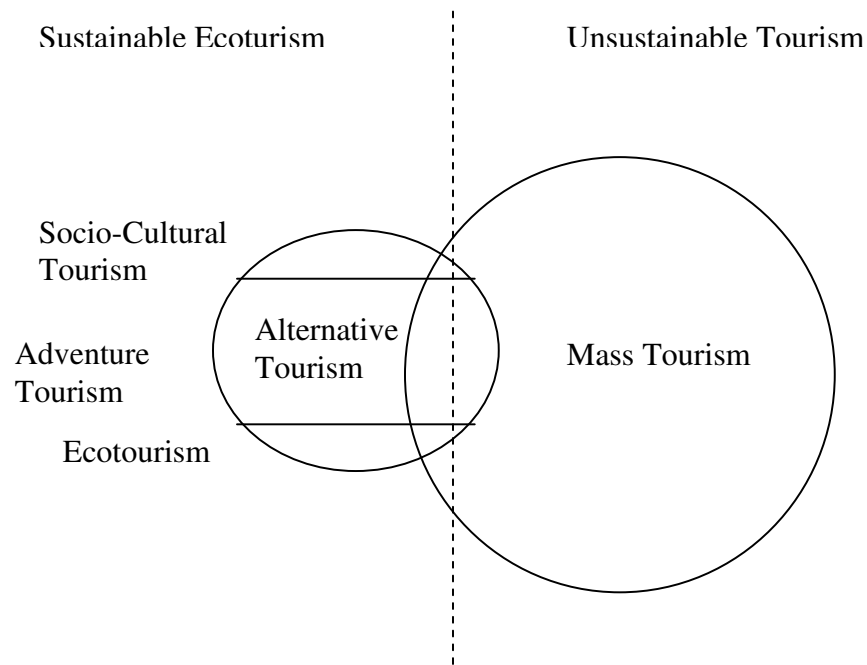
### **Sustainable ecotourism**

The concept of sustainable eco-tourism is mainly appropriate in heavily visited areas. Sustainable is defined as meeting the needs of the present without compromising the ability of future generations to meet their needs (Terry, 2008). It aims at “carbon neutral travel”. Though it is very close to ecotourism still it does not meet with the criteria (Drumn et. al., 2002a). This concept could be implemented in big resorts, hotels and home stays where there is a heavy inflow of tourists. Here they can contribute towards nature conservation through the development of farms or by imparting conservation education to tourists.

As shown in Fig 1, there is just a thin line of differentiation between sustainable tourism and ecotourism, which also shows that there is as such no absolute boundary between sustainable and unsustainable tourism (Eriksson, 2003). Hence it becomes very necessary for the state

government to develop such strategies that protects the state's biodiversity and rich natural features from unsustainable tourism.

**Figure 1. Conceptual Model of Tourism (Source: Eriksson, 2003)**



#### PRESENT SITUATION IN KERALA ECOTOURISM

The area which is becoming popular in Kerala these days is ecotourism. Kerala is the first state in the country to have commissioned an exclusive ecotourism projects at Thenmala situated in the Western Ghats. Activities such as trekking through rain forests and wildlife sanctuaries, staying in tree top huts and the like are also gaining popularity. Kerala has already geared up to meet the challenges of converting the entire tourism trade in the state to eco-friendly tourism. The various schemes are undertaken by the state government towards this direction includes, motivating tourists to use natural ventilation instead of air conditioners to conserve power, create minimum impact in forests, protect wildlife sanctuaries farms in environmentally sensitive

region, reduce pollution in backwaters through the use of traditional boats which uses wind or human energy and to reduce usage of chemicals in backwaters for cleaning (Kang, 2001) .

### **3.1 Initiatives taken for promoting ecotourism in Kerala**

Initially, Kovalam considered as one of the best beaches in the world, got a bad name due to indiscriminate and non-comprehensive planning, which resulted in tourists patronizing the destination less and less. Having learned a lesson, the government and the people are very keen to restore Kovalam back to its pre-eminent position as a major tourist destination of India and promote sustainable ecotourism in Kerala. As a precautionary measure and not to repeat the experiences of Kovalam, the state has taken several initiatives.

Accordingly, the state has come up with several policies like, “Tourism Conservation, Preservation and Trade Act”, “Conservation and Preservation of Area’s Act, 2005”, “Participatory Ecotourism Programme of Forest Department 2005” to promote sustainable ecotourism (Seema et. al., 2006). According to Tourism Vision 2025, Kerala envisages only 7% increase in international visitors and 9% increase in domestic visitors to avoid indiscriminate tourist arrivals. In the year 1998, a participatory biodiversity conservation programme, funded by World Bank called “India Eco-Development Project” was launched in Periyar Wildlife Sanctuary, to develop an ecotourism component, called “Thekkady Tiger Trail” (Thampi, 2000). Under these schemes, Tribal Trekkers Eco-development Committee and Periyar Tiger Samrakshana (PETS) were implemented. Several youths were employed as watchers by Forest Department to protect Periyar from destruction and created an alternative source of income for local people. Involvement of Panchayat members in Kumabalangi Model Village project and

formation of Thenmala Ecotourism Society are the best examples of design, implementation and conservation of natural resources with support of local people.

A separate ecotourism directorate has been created to support development of ecotourism in the state. Kerala Tourism "Eco-Initiative Programme", an Eco-Certification Scheme was launched in the year 2004, to make all sub sectors within tourism eco-friendly (Government of India, 2005b). It has established daily ticket counters at all nature related destinations to collect statistical data regarding tourist arrivals to the state. Again, to promote cleaner, healthier and hygienic environment, "Sanskriti" a multi-dimensional project was launched. Certain ecotourism initiatives implemented through forest department included, creating modalities for developing community based ecotourism products already identified as potential ecotourism spots through the institution of local dependent communities like Vana Samrakshana Samithi or Eco-Development Committees (VSS/EDC.). Indicating the importance given to ecotourism by the state tourism department, a National Seminar on ecotourism was conducted by Kerala Institute of Travel and Tourism Studies (KITTS) in the year 2006. Tamil Nadu and Kerala were the first states to develop eco-region strategies for improving inter-state environment for anti-poaching co-ordination, through a common wireless and habitat protection ecosystem service (Government of India, 2005a). This will support an alternative source of livelihood for local people.

In order to keep pace with the present technologies ecotourism department has developed a website, <http://www.ecotourismkeralam.org> that gives information on 16 ecotourism projects and showcases all initiatives taken by the government. Ecotourism Directorate has unveiled a

common logo for its ecotourism offerings. It is believed that the common logo and branding – “Kerala by Nature” for state’s ecotourism initiatives will help create a unified brand and make it easier to market their products. A brochure titled “Stay into Nature’s Playground” providing information regarding 18 ecotourism projects in Kerala has also been launched ([www.thehindubusinessline.com](http://www.thehindubusinessline.com)).

Several new initiatives have been taken in this direction by the state in the year 2006-07, which includes the following (Economic Review, 2007).

- Development of Responsible Tourism;
- Promoting Destination Management System and
- Identifying lesser known and unseen places.

## **SWOT Analysis**

To develop corporate missions, objectives, strategies and policies various strategic formulations are done for long-range planning processes. It begins with the situational analysis. For making strategic decisions, strategic factors in the light of current situation are analyzed using SWOT, an acronym for Strengths, Weaknesses, Opportunities and Threats (Wheelen et. al., 2004). Hence here an attempt has been made to identify Strengths, Weaknesses, Opportunities and Threats of ecotourism in Kerala.

### **Strengths of Kerala Ecotourism**

- It is found as one of the 10 paradises by the National Geographic Traveler;
- The state is known for its natural features with rich biodiversity and rare species;
- Providing quality experience to tourists by certifying tourism products like house boats, hotels and home stays;

- The state is among the 50 places in the world recommended to be visited in a lifetime by standard agencies;
- Natural features with rich biodiversity and rare species;
- Advantage of multi-dimension tourism;
- Innovative unique diversity of ecotourism products like Thenmala, Kumabalangi and Aranmula;
- Known for specific ecotourism products like backwaters, migratory birds, tiger trails and the like;
- Rural village rich and diverse with unique attractions;
- Well-knit communication and transportation system;
- Existence of facilities and infrastructure within eco-destinations for tourists;
- Policy initiatives that support sustainable ecotourism;
- EIA notification not mandatory for sanctioning ecotourism projects;
- Good access and connectivity;
- Inland backwater channels used for transportation of locals and tourists;
- Smooth law and order, peace and tranquility;
- Gives safety an utmost importance for example appointment of coast guards at all beaches in Kerala;
- Trained and qualified staff available;
- Attractive dynamic website using most innovative forms of Information Technology;
- Separate website for ecotourism;
- Separate directorate for ecotourism;
- Constant increase in the state and central budget allocation for ecotourism;
- Very committed political and administrative staff;
- Policies that support sustainable development;
- Vibrant Panchayat Raj system that supports participative ecotourism model;
- Well-informed and watchful conservation groups;
- Small and medium operators give variety and local flavor to its ecotourism products;
- Strong partnership with private sector;
- Close co-ordination of the state government with local people while developing Ecotourism projects;
- Certification of tourism products like house boats, hotels, home-stays for providing quality experience to tourists;
- Concentrating more on high- end specific tourists;
- Consciously evolved strategy with active collaboration of all stakeholders;
- Most of the tour operators in India such as Thomas Cook, SITA and TCI feature Kerala prominently in their national and international holiday brochures;
- Noted for its innovative and market focused strategies;
- First state to cooperate with other Indian states. Eg. Cooperation with Tamil Nadu towards protection of Periyar Tiger Reserve;
- Presence of Destination level committees.

### **Weaknesses of Kerala Ecotourism**

- Improper marketing strategy used, to market nature-related destinations;
- Lack of constructive pricing for domestic as well as international tourists;
- Various schemes stresses less on local employment, conflicts with Panchayati Raj rights, has difficult procedural formalities and ignores harmful effects on environment;
- Lack of basic infrastructure;
- Government undermining skills of local people to run ecotourism projects;
- Ignorance towards small and medium tour operators to promote big multinational enterprises;
- Absence of clear and well defined policies;
- Increasing neglect of solid and liquid waste management at the tourist destination;
- Red tapism and complicated procedural formalities under various schemes by the state which makes sanctioning of various ecotourism projects difficult and time consuming;
- Lack of proper utilization of funds;
- Too many governmental and non- governmental organizations causing overlap in interest and activities;
- Limited estimation, recognition and classification of flora and fauna;
- Lack of links for search engine within the ecotourism website;
- Developmental activities concentrating in main areas of national parks only;
- Conflict between Tourism and Ecotourism policies;
- Benefits confined to few locals such as those employed by the forest department;
- Ecotourism projects has increased pollution in nature related destinations;
- Lack of creativity and imagination to innovate;
- Absence of clear guidelines for monitoring ecotourism projects;
- Lack of proper utilization of experts while preparing ecotourism plans;
- Lack of interpretive signing;
- Lack of training courses and exposure visits;
- Violent construction of resorts and hotels on the beach causing pollution, insecticide spray on backwaters and unsustainable extraction of ground water causing quarry pollution in destinations are some of the negative practices within the state ;
- Very few quality house boats;
- Restrictive policies and high cost makes the state the most inaccessible;
- Lack of proper ecotourism definition, have kept most stakeholders away from contributing to ecotourism projects;
- New business enterprises related to ecotourism have to go through various restrictive formalities;
- Poor image due to militant trade unionism;
- Ecotourism project mechanism and practices in tune with mass tourism concept;
- False publicity of large ecotourism projects as a source of employment and income generation;
- Warnings of environmentalists and nature conservationists due to which excessive tourism activities are sidelined;

- Ecotourism projects sanctioned without proper understanding of local conditions;
- Lack of co-ordination among various line departments causing serious hurdle in the development of ecotourism;
- Lack of professional knowledge and ability in managing natural resources;
- Lack of regulatory mechanisms and controls.
- Increase in pollution due to implementation of ecotourism projects at nature related destinations.
- Environmental Impact Assessment or EIA notification not mandatory for sanctioning ecotourism projects.

### **Opportunities for Kerala Ecotourism**

- Large and growing markets of Asia like China and high expenditure markets of Middle East, Japan, China and the like;
- To develop Meetings, Incentives, Conventions and Exhibitions(MICE) for business tourists;
- Increased intra-regional travel for leisure, business, study and MICE;
- Highly environment conscious tourists and local people;
- Scope to develop recreational facilities in dams and hydel projects;
- Availability of experts in several areas of tourism;
- Availability of funds from various financial institutions;
- Vast potential to develop multi dimensional tourism;
- Interested private sector to invest in developing activities in tourism from India and abroad;
- Open Sky policy that invites private airlines;
- Vast potential of biodiversity and species richness;
- Implementation of Responsible tourism;
- Being a late comer in tourism the state had the opportunity to learn from others mistakes;
- Opening of Konkan Railway which connects to other states like Maharashtra and Goa making the state more accessible;
- Ample scope for research;
- Highly interested private sector to invest in developing activities and tourism from India and abroad ;
- New job and income possibilities from ecotourism;
- Increase in tourist arrivals;
- New IT policy document that gives more emphasis on collaboration between IT and Tourism.

### **Threats faced by Kerala ecotourism**

- Increase of misdirected and uncontrolled visitors to protected areas;
- Transformation from nature- friendly activities to mass tourism;

- Over-emphasis on tourism may lead to economic recession during the periods of downturn;
- Unstable political condition like hartals and bandhs;
- Regional crisis e.g. terrorism, avian flu and tsunami;
- Prevalence of contagious diseases and its media coverage;
- Lack of crisis management readiness;
- Negative travel advisories;
- Currency fluctuation;
- Ethnic and religious conflicts;
- Increasing fuel prices making travel expensive;
- Changing agricultural scenario;
- Competing economic activities in the adjoining states;
- Unplanned growth will lead to pollution, environmental ecological hazards and cultural degradation;
- Similarly placed states may offer significantly better services, if action is not taken to remove weaknesses;
- Forgetting limits to growth and carrying capacity;
- Opening up of more forest areas;
- Poor understanding of nature while planning ecotourism projects;
- Lack of community participation in ecotourism projects;
- Absence of multi-stakeholder mechanism for planning, implementing and monitoring ecotourism projects;
- Increasing fuel prices making travel expensive.

After having scanned the internal as well as external environment of ecotourism in Kerala some of the factors which were considered as most important Strengths, Weaknesses, Opportunities and Threats by the authors were taken for an expert opinion from 13 experts. The experts belonged to private, government as well as non governmental organizations. Approximately 60% of the experts who took part in this study were senior government officials related to tourism. They were asked to rank each of the Strengths, Weaknesses, Opportunities and Threats according to its importance. The rater was given full discretion to add or delete points which they felt were appropriate or inappropriate for Kerala ecotourism. Accordingly these were then incorporated in The Table 1 and Table 2 along with their weights as well as ratings. The rating

for each factor has been assigned according to a rating scale where in a rank of 5.0 is considered Outstanding and 1.0 as Poor.

As shown in Table 1 an Internal Factor Analysis Summary (IFAS) has been done to analyze how well these factors are responding in the light of their importance to the ecotourism in Kerala. Hence, an Internal Factor Evaluation (IFE) Matrix has been constructed.

**Table 1 Internal Factor Evaluation (IFE) Matrix for Ecotourism in Kerala**

<b>Internal Strengths</b>			
<b>Factor</b>	<b>Weight</b>	<b>Rating</b>	<b>Weighted Score</b>
Natural features with rich biodiversity and rare species (S1)	0.20	4.15	<b>0.930</b>
Strong partnership with the private sector (S2)	0.09	2.88	<b>0.259</b>
Attractive and dynamic website using innovative forms of Information Technology (S3)	0.05	4.75	<b>0.238</b>
Rural village rich and diverse with unique attractions (S4)	0.06	3.62	<b>0.217</b>
Constant increase in state and central budget allocation for ecotourism (S5)	0.04	3.23	0.129
Gives utmost importance towards the safety of tourists (S6)	0.02	2.75	0.055
Providing quality experience to tourists by certifying tourism products like house boats, hotels and home stays (S7)	0.02	2.62	0.052
Vibrant Panchayat Raj system that supports participative ecotourism model (S8)	0.02	1.85	0.037
Existence of facilities and infrastructure within the eco destination (S9)	0.01	1.85	0.019
Presence of destination level committees (S10)	0.01	1.69	0.017
Policy initiatives that support sustainable ecotourism (S 11)	0.02	0.23	0.005
EIA notification not mandatory for sanctioning ecotourism projects (S 12)	0.01	0.38	0.004
Good access and connectivity (S 13)	0.01	0.08	0.008
<b>Internal Weaknesses</b>			
<b>Factor</b>	<b>Weight</b>	<b>Rating</b>	<b>Weighted Score</b>
Various schemes put less stress on local employment and conflicts with Panchayat rights (W1)	0.10	3.77	<b>0.377</b>
Lack of links and search engines within the ecotourism website (W2)	0.07	4.50	<b>0.315</b>
Ecotourism projects has increased pollution in nature related destinations (W3)	0.07	3.07	<b>0.219</b>
Lack of proper utilization of experts while preparing ecotourism projects (W4)	0.05	3.54	<b>0.177</b>
Lack of proper utilization of funds (W5)	0.04	3.00	0.12
Government underestimating the skills of local people by not allowing them to run ecotourism projects (W6)	0.04	2.85	0.144
Red tapism and complicated procedural formalities under various schemes by the state which makes sanctioning of various ecotourism projects difficult and time consuming (W7)	0.04	2.69	0.108
Lack of creativity and imagination to innovate (W8)	0.03	3.50	0.105
<b>Total</b>	<b>1.00</b>		

**Table 2 External Factor Evaluation (EFE) Matrix for Ecotourism in Kerala**

<b>Opportunities</b>			
<b>Factor</b>	<b>Weight</b>	<b>Rating</b>	<b>Weighted Score</b>
Highly interested private sector to invest in developing activities and tourism from India and abroad <b>(O1)</b>	0.10	3.92	<b>0.392</b>
Increase in tourist arrivals <b>(O2)</b>	0.07	4.10	<b>0.287</b>
Availability of funds from various financial institutions <b>(O3)</b>	0.09	2.46	<b>0.221</b>
New IT policy document that gives more emphasis on collaboration between IT and Tourism <b>(O4)</b>	0.06	3.31	<b>0.199</b>
Availability of experts in several areas of tourism <b>(O5)</b>	0.06	3.10	<b>0.186</b>
Vast potential to develop multi-dimensional tourism	0.04	3.69	0.148
Ample scope for research	0.05	2.15	0.108
Availability of large growing markets of Asia like China and Japan and high expenditure markets such as Middle East	0.02	2.62	0.052
<b>Threats</b>			
<b>Factor</b>	<b>Weight</b>	<b>Rating</b>	<b>Weighted Score</b>
Unplanned growth will lead to pollution, environmental ecological hazards and cultural degradation <b>(T1)</b>	0.11	4.00	<b>0.440</b>
Opening up of more forest areas <b>(T2)</b>	0.07	4.50	<b>0.315</b>
Transformation from nature friendly activities to mass tourism <b>(T3)</b>	0.07	4.08	<b>0.286</b>
Poor understanding of nature while planning ecotourism projects <b>(T4)</b>	0.06	3.50	<b>0.210</b>
Forgetting limits of growth and carrying capacity <b>(T5)</b>	0.06	3.00	<b>0.180</b>
Increase of misdirected and uncontrolled visitors to protected areas <b>(T6)</b>	0.04	3.53	0.141
Lack of community participation in ecotourism projects <b>(T7)</b>	0.05	2.20	0.110
Absence of multi stakeholder mechanism for planning, implementing and monitoring ecotourism projects <b>(T8)</b>	0.05	1.30	0.065
<b>Total</b>	<b>1.00</b>		

Thus, regardless of the number of strengths, weaknesses, opportunities and threats included in the above IFE and EFE Matrix the weighted score equal and above 0.019 has been selected as the Strengths, Weaknesses, Opportunity and Threats of ecotourism in Kerala and included in Table 3.

**Table 3 SWOT analysis for Ecotourism in Kerala**

<b>Strengths (S)</b>	<b>Weaknesses (W)</b>
S1. Natural features with rich biodiversity and rare species	W1. Various schemes put less stress on local employment and conflicts with Panchayat rights
S2. Strong partnership with the private sector	W2. Lack of links and search engines within the ecotourism website
S3. Attractive and dynamic website using innovative forms of Information Technology	W3. Ecotourism projects have increased pollution in nature related destination
S4. Rural village rich and diverse with unique attractions	W4. Lack of proper utilization of experts while preparing ecotourism projects
<b>Opportunities (O)</b>	<b>Threats (T)</b>
O1. Highly interested private sector to invest in developing activities and tourism from India and abroad	T1. Unplanned growth will lead to pollution environmental ecological hazards and cultural degradation
O2. Increase in tourist arrivals	T2. Opening up of more Forest areas
O3. Availability of funds from various financial institutions	T3. Transformation from nature friendly activities to mass tourism
O4. New IT policy document that gives more emphasis on collaboration between IT and Tourism	T4. Poor understanding of nature while planning ecotourism projects
O5. Availability of experts in several areas of tourism	T5. Forgetting limits of growth and carrying capacity

## **TOWS Matrix**

The SWOT as shown above presents the current situation of Kerala ecotourism. TOWS Matrix has been developed and presented in Table 4 in order to reduce Kerala's weaknesses and threats to promote ecotourism in a more sustainable manner. TOWS Matrix illustrates how external opportunities and threats facing a particular situation can be matched with the internal strengths and weaknesses, to result in four sets of possible strategic alternatives (Wheelen and Hunger, 2004).

**Table 4 TOWS Matrix**

<p style="text-align: center;"><b>INTERNAL FACTORS(IFAS)</b></p> <p style="text-align: center;"><b>EXTERNAL FACTORS (EFAS)</b></p>	<p style="text-align: center;"><b>Strengths (S)</b></p> <p>S1. Natural features with rich biodiversity and rare species  S2. Strong partnership with the private sector  S3. Attractive and dynamic website using innovative forms of Information Technology  S4. Rural village rich and diverse with unique attractions</p>	<p style="text-align: center;"><b>Weaknesses (W)</b></p> <p>W1. Various schemes put less stress on local employment and conflicts with Panchayat rights  W2. Lack of links and search engines within the ecotourism website  W3. Ecotourism projects have increased pollution in nature related destinations  W4. Lack of proper utilization of experts while preparing ecotourism projects</p>
<p style="text-align: center;"><b>Opportunities (O)</b></p> <p>O1. Highly interested private sector to invest in developing activities and tourism from India and abroad  O2. Increase in tourist arrivals  O3..Availability of funds from various financial institutions  O4. New IT policy document that gives more emphasis on collaboration between IT and tourism  O5. Availability of experts in several areas of tourism</p>	<p style="text-align: center;"><b>SO Strategies</b></p> <ul style="list-style-type: none"> <li>• Proper signing/signboards that help tourists find the destinations along the route and at entrance will avoid more costly manpower (S1, O2, O3).</li> <li>• Website should provide detailed descriptions of all trails and code of conduct in various languages in eco destinations, along with a clickable image map to locate trail data, and a PDF map for download (S3, O4).</li> <li>• Developers should consider integrating a permanent cultural venue within a site to create a year round draw of foreign and domestic tourists. In addition to enjoying great scenic beauty and outdoor activities, eco tourists would like to learn about local people, cultures, authentic crafts and traditional cultural performances (S1, S2, S4, O2).</li> <li>• The state government should ensure that unplanned construction over-population and overcrowding does not take place in nature related destinations (S1, S4, O3).</li> <li>• The state government should invite best in the field like house-boat builders or owners of Kashmir to create similar house boats and facilities in the backwaters of Kerala so as to give an added appeal (S2, O3).</li> <li>• The tourism website should be</li> </ul>	<p style="text-align: center;"><b>WO Strategies</b></p> <ul style="list-style-type: none"> <li>• Expert consultation to investigate potential impacts before firming up a particular site is a must (W3, O5).</li> <li>• There should be feedback mechanism between tourists and government in tourism website through published newsletters and blogs. (W2, O2, O4).</li> <li>• The experts can train employees working in ecotourism sector in environmental regulations, policies, monitoring methods, marketing strategies, hospitality, first aid, sanitation, waste management policies, guest profiling and visitor education (W4, O4).</li> <li>• Collective experience of a number of experts can be used in an expert system that has ability to solve all problems related to ecotourism (W4, O4).</li> <li>• Funds from various financial institutions could be utilized for treatment of solid and liquid wastes (W2, O3).</li> <li>• Provide visitor information and interpretation services covering particularly (i) what to see (ii) how to see it (iii) when to see and how to behave environmental friendly by way of brochures/ ecotourism websites (W4, O3).</li> <li>• The government should remove or reduce subsidies on those enterprises or projects that do not</li> </ul>

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| <p>expanded and enhanced so as to make it a full-fledged regional tourism destination database to enable e-marketing with private partnership (S3, O1, O4).</p> <ul style="list-style-type: none"> <li>• Expert systems, in websites or touch screen kiosks to provide 24/7 recommendation based on time/money availability and interest of the tourists, can avoid costly manpower (S3, O4).</li> <li>• Value for money can be ensured through certifying ecotourism destinations (S1, S4, O1,O5).</li> <li>• Mobile and computer network services are to be used for ecotourism marketing in today's competitive environment (S1, S3, S4, O2, O4).</li> <li>• Tourists should be encouraged to take a proactive role in the conservation of wildlife, wilderness areas and cultural resources (S1, O2).</li> <li>• Develop more opportunities for wildlife observation with the help of knowledgeable protected area guides for tourists (S1, O2, O3).</li> <li>• In cooperation with local villages, activities should be arranged which allow tourists to experience different aspects of village life (S4, O2).</li> <li>• Broad wooden hanging pathways will help in protecting rare species of flora and fauna from direct human interference (S1, S2, O3).</li> <li>• Local owners in rural villages could be provided with monetary benefits to promote agri-ecotourism among tourists as done in Ireland (S1, S4, O3).</li> <li>• Private hotels could be motivated to use solar power or indigenized traditional stoves called "chulhas" with back boilers so as to save energy and reduce pollution in the nature related destinations (S1, O1).</li> <li>• Government could come up with a policy where in it becomes mandatory for private tour operators to provide tourists with battery used cars or cycle rentals so as to reduce fossil fuel</li> </ul> | <p>meet sustainable development objectives (W4, O1).</p> <p>Panchayats if allowed to select one or two specialist tour operators who has ample experience in the field of ecotourism could result in acquainting the community with the experience of handling guests (W1, O1, O5).</p> <p>Ecotourism website by the government should be linked to various other ecotourism websites floated by private tour operator like Tour India and Air Travel Enterprise (ATE) to promote ecotourism in the state (W1, W2, O1).</p> <p>A network of all ecotourism projects in the state could develop e-marketing promoting quality standards, training and financial assistance (W3, O1, O4, O5).</p> <p>Incorporation of more agents like Travel Router that computes shortest routes between two nature related destinations could be incorporated in the website to make browsing a pleasant experience (W3, O4).</p> <p>Local people should be motivated to participate in planning in ecotourism and they should be appointed as guides later to ensure sustainability of local flora and fauna (W1, O3).</p> <p>Blogs on experiences of ecotourists who enjoy seeing natural and local culture, could be posted in the website so as to attract more tourists (W2, O1).</p> <p>Various types of traditional transportation like bullock cart rides, horse cart rides and cycle rickshaws adds to excite the tourist (W3, O2).</p> |
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<b>Threats (T)</b>	<b>ST Strategies</b>	<b>WT strategies</b>
<p>T1. Unplanned growth will lead to pollution, environmental ecological hazards and cultural degradation</p> <p>T2. Opening up of more Forest areas</p> <p>T3. Transformation from nature friendly activities to mass tourism</p> <p>T4. Poor understanding of nature while planning ecotourism projects</p> <p>T5. Forgetting limits of growth and carrying capacity</p>	<p>pollution and noise pollution (S1, O1, O2).</p> <ul style="list-style-type: none"> <li>• Rather than posting a long list of “shall not” on the information boards at the entrance of nature related destinations, it would be better to post signs on specific issues which has a better chance of reading (S1, S4, T1).</li> <li>• Point out special species that can be sighted at each site with probable time of the day and month (S1, T5).</li> <li>• State policies and guidelines should be drawn for ecotourism in line with the purview of International Environmental Treaties and related Indian legislations, incorporating equity and or trade principles. These can protect, ecological and cultural integrity (S1, S4, T3).</li> <li>• Traditional construction having thatched roof using locally available biodegradable materials should be used wherever possible for accommodating tourists in nature related destinations to avoid pollution (S1, S2, T1, T3, T4).</li> <li>• Construct paths or walkways that do not interfere with habitats or life styles of local residents or wild life. Use low impact techniques such as board walks, instead of paved or unpaved trails wherever possible (S1, S2, S4, T3, T4).</li> <li>• Represent a tourist location with variety of attractions to spread the load while presenting variety to tourists (S1, T5).</li> <li>• More forest areas could be declared as sanctuaries for conservation of animals so like tigers, deer, elephants and crocodiles (S1, T2).</li> <li>• The state government should be aware of protected species within the eco destinations. Undertake landscape enhancements wherever possible (S1, T2, T4).</li> <li>• A management structure needs to</li> </ul>	<ul style="list-style-type: none"> <li>• Protected area guards may be appointed to help overall conservation of the protected area rather than protecting the intact vegetation near trails alone (W3, T1).</li> <li>• Extensive decision making powers of Panchayat Raj Institutions under schedule XI of constitution could be made use of to ensure realization of important aspects of Ecotourism, nature and culture conservation, at the same time generating livelihood opportunities (W1, T4).</li> <li>• The state ecotourism directorate can correct the imbalance by setting broad basic operational guidelines for all ecotourism ventures through the utilization of experts (W4, T3, T4).</li> <li>• A proposal format for ecotourism projects will help avoid unplanned growth of these projects (W3, T1).</li> <li>• The ecotourism department should facilitate participatory monitoring and suggest periodic revisions in regulations to prevent biopiracy and cultural invasion (W4, T5).</li> <li>• Government should draw up integrated Master plan for their respective areas, using the services of world class area planners, architects and landscape artists. These eco-development agencies would also be responsible for the creation of essential infrastructure, pathways, waste to energy plants and the like (W3, T1).</li> <li>• Impact monitoring related to stated goals in ecotourism projects can help to measure the scale of both positive and negative effects and can be used to predict future conditions. (W3, T1).</li> <li>• Action should be taken, at the development stage and at the operational stage, to reduce consumption of water and energy,</li> </ul>

	<p>be established which evaluates the resources available in the state. Such evaluation will lead towards implementation of sustainable practices (S1, S4, T4).</p> <ul style="list-style-type: none"> <li>• It is best to define maximum visitor numbers per day or for any given moment (number of people who are simultaneously in a given area) or for a certain period of time (e.g. breeding season of birds) rather than for an entire year to protect natural resources from destruction (S1, T1, T3, T5).</li> <li>• Focus on high quality nature tourism with low infrastructure requirements (S1, T3, T4).</li> <li>• A network of regional and local information and reservation through websites should be set up to offer tourists with choices to visit different places, so as to control and spread of misdirected and uncontrolled tourists to sensitive destinations. (S3, T5).</li> <li>• Battery driven buses, house boats in backwaters using solar panels, shuttle buses to key tourist destinations, wide bodied aircraft that can accommodate more tourists, cycling and walking in nature related destinations are some of the methods that will not only help in conserving energy but also will reduce pollution and travel costs for tourists (S1, T1).</li> <li>• Remote camera or satellite surveillance can monitor the activities of tourists and help reduce their number if it exceeded the carrying capacity of the ecotourism destination to prevent mass tourism in ecotourism. (S1, S2, T3, T5).</li> <li>• More number of shuttle buses in collaboration with the private sector could be provided to key nature related destinations so as to avoid plying of individual cars. It will help in the reduction of traffic congestion and pollution (S1, S2, T1, T4).</li> </ul>	<p>waste and pollution (W1, W3, T1).</p> <ul style="list-style-type: none"> <li>• Environmentally appropriate technologies and facilities for the treatment of organic wastes should be considered such as composting, septic tanks and biogas tanks in eco destinations (W2, T1).</li> <li>• Provision should be made for trash storage until removal from the site, solar panels or other appropriate energy sources, maintenance of buildings and sites for treatment of grey water in newly opened forest areas (W3, T2).</li> <li>• Minimize vehicular access and use only electric/hybrid vehicles or animals to transport supplies from the main road in order to reduce noise, water and air pollution (W3, T3).</li> <li>• An ecotourism site has a responsibility to identify and use renewable sources of energy and educate visitors about environmentally responsible energy consumption (W3, W4, T1, T3).</li> <li>• Reforestation, water resource enhancements, soil enrichments and wildlife protection and restoration programmes should be planned from the very beginning of development of ecotourism projects (W3, T4).</li> <li>• The architectural programme for ecotourism projects should include controlled access points, roads, self guided nature trails, transportation options, interpretation centers, signs, observation towers and adequate but unpretentious lodging and dining facilities, docks, garbage disposal facilities and other utilities as needed (W3, T1, T2).</li> <li>• Exclude developments in geologically unstable zones and define development of buffer zones after proper Environmental Impact Assessments (W3, T1).</li> <li>• Conduct Environmental Impact Assessments (EIA) for all new projects and periodic</li> </ul>
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environmental audits for all ongoing activities leading to development of environmental improvement programmes (W3, T2).

- It is necessary to understand the links between the environment and tourism development to make correct choices that will be economically efficient, socially equitable and environmentally sound (W3, T4).
- Environmental costs should be made clearly visible to producers and consumers by providing external links in ecotourism website. The fees should reflect the relative scarcity and total value of resources, like energy, transportation, agriculture, tourism, forestry, water, wastes and health (W2, T5).
- An integrated short term course on environmental management should be provided to government officials, entrepreneurs and representatives of the local people for proper implementation of ecotourism projects (W3, T4).
- Tourism if brought under Grama Panchayat, Block Panchayat and District Panchayat with more decision making power will help stop degradation of the rich biodiversity and rare species (W1, T3).
- License should be given to only those house boats which have provision of eco friendly practices like proper mechanism for decomposing solid and liquid wastes so as to avoid pollution (W3, T1).
- Protected areas could hire new guides, guards, researchers or managers to meet ecotourism demands from local communities as they are good candidates for such jobs. This will help stop transformation of nature to mass tourism (W1, T3).
- Before the sanctioning of any ecotourism projects more practical approach would be to identify the limits of acceptable change (W3, T5).

It can be said that if the above strategies are properly implemented, the state will be positioned as one of the ideal ecotourism destination in the country. These strategies will not only increase tourist arrivals to the state but will also enhance the quality of experience to the tourists.

### **General constraints to ecotourism in Kerala**

- Quality standards are yet to evolve in this field;
- Land available for ecotourism is shrinking;
- Changing priorities from government to government;
- Impact assessment fails as baseline data about many ecotourism destinations are absent;
- Absence of state-of-the-art online marketing of customized ecotourism products;
- Ecotourism research & training are neglected;
- Customer expectations are rarely met affecting value for money;
- Policy making and enforcement are to be ensured;
- Delays occur in unified decision making by centre and state in developing certain ecotourism projects;
- Economic importance of ecotourism is underestimated while finalizing alternate uses of land.

### **SOME RECOMMENDATIONS FOR SUSTAINABLE ECOTOURISM IN KERALA**

As not much of authentic studies have been carried out in developing strategies for the sustainability of ecotourism in Kerala, guidelines developed elsewhere adapted to suit its sustainability in Kerala. along with the results got from the SWOT analysis were used in formulating the following recommendations (Elvis 1997, Isabella, 2004).

- Ecotourists and other stakeholders must be made aware of the effects of various types of pollution which can occur at various ecotourism destinations;
- Tour operators who strictly abide by conservation guidelines must be chosen;
- Private Sector must work hand in hand in making the ecotourism ecofriendly;
- Website should provide detailed descriptions of all trails and codes of conduct in various languages in eco destinations, along with a clickable image map to locate trail data, and a PDF map for download. It should support blogs and interaction with the tourism department. 24/7 online booking facility and customized tour package development must be made possible with online billing & payment;
- Appropriate studies must be conducted from time to time to monitor the impact on culture and environment at the ecotourism destination;

- Develop and maintain baseline data of each ecotourism destination;
- Formulate quality standards and strictly adhere to it;
- Include ecotourism in land use planning;
- Carrying capacity of each destination must be known to all stakeholders and should never be violated;
- Tour guides chosen from locality can be helpful in developing appropriate sustainable ecotourism measures;
- Expert opinion must be made use of in planning and execution of ecotourism projects;
- Representatives starting with members from Panchayat onwards can be helpful in effective ecotourism planning;
- Better private sector involvement, with a will to abide by standards developed, can really make every ecotourism destination really sustainable;
- Following locally available traditional methods of construction and low tech design can solve many problems;
- Smoking and the use of non biodegradable materials are to be banned completely at the ecotourism destinations;
- Even talking loudly which can create ecological imbalance are to be avoided in sensitive areas where it can affect the wild life;
- Trails must be strictly followed to minimize disturbance;
- Traditional methods of transport using animal and battery driven carriages can reduce air pollution and sound pollution;
- National ecotourism product development can improve relations between the state and the centre in addition to promoting ecotourism across state borders where the wild life and ecotourism mainly exist in Kerala.

## CONCLUSIONS

Kerala needs a long term strategy to ensure sustainable ecotourism by resorting to new marketing techniques which will attract tourists throughout the year by mixing cultural exchange with tourism. Security to ecotourist must be of primary concern. Medium term strategy should aim at improving professional tourism knowledge for using it as a method for earning revenue to the state. Developing and using code of conduct is very important and must adhered to for the sustenance of ecotourism in the state. At the short term level, State/centre collaboration and public sector/private sector relations should not stand in the way of harmonious experience expected by the ecotourist. The state's success as a tourist destination is based on the attractiveness of natural and cultural environment. Ecological restoration has increasingly become a hot topic of discussion among administrators and tourists alike. Kerala is one of the

states where benefits due to tourism are percolating to the state's economy thereby benefiting the local population (Kang, 2002). If these environmental and cultural features are not conserved, Kerala's tourism sector and ecotourism, in particular, would cease to be an engine of growth. Accordingly, all segments in the tourism sector needs to be promoted in a sustainable manner. There is a serious need for development of ecotourism using the latest technologies available in Information Technology so that the state is able to provide tourist with maximum of quality experience.

This paper could be considered as a preliminary **SWOT** study to stress the need for sustainable ecotourism in Kerala. Further, the study also stresses on the need for the development of IT tools for the incorporation of the same in websites or enterprise software to reap additional benefits from tourism, which will help the state to attain and maintain competitive advantage among other states in the country and abroad.

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