

International Journal of Advance Research in Computer Science and Management Studies

Research Article / Survey Paper / Case Study

Available online at: www.ijarcsms.com

Impact of Rural Tourism on the Environment and Society: Evidence from Kumbalangi in Kerala, India

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Abstract: It is widely recognized that tourism is a sector with immense potential economic development and employment generation. Hence, tourism is seriously encouraged by the Governments the world over, particularly in the developing nations. International agencies like World Tourism Organization (WTO) estimate that nations like India and China would become the superpowers in the global tourism map by the year 2020. In spite of the excellent tourism resources in India, the country could not utilize its vast potential because only during the last two decades tourism has been getting due attention in India. While China has already attained a prominent position in global tourism, the progress of India has been slower. India has to traverse a long way to catch up with the top players, including China. In respect of Kerala state in particular – one of the states with the highest tourism resources in India – the situation is more chronic as Kerala's performance in tourism has not at all been commensurate with its enviable tourism resources. A recent study of the present author has revealed the vast prospects of rural tourism for employment creation and economic development in the context of 'Kumbalangi' – a rural tourism destination in Ernakulam district of central Kerala and the first model tourism village in India. As a continuation of the earlier study, this paper makes an empirical study of the effects of rural tourism on the environment and local community.

Keywords: Tourism Competitiveness, Rural Tourism, Local Community, Environmental Sustainability, ICT.

I. INTRODUCTION

Tourism is widely recognized as a vital industry with immense potential for employment generation and economic development. Hence, it is an effective means for faster development of nations, particularly the developing nations like India. Globally, tourism is ranked second highest in terms of income generation, next to the oil industry. World over, tourism has transformed considerably from its earlier motivation i.e. religion and business to being a part of one's life style, even within research of classes other than aristocracy. Tourism is one of the world largest and most rapidly growing industries. Increased leisure and higher purchasing power have combined to enable more people take into tourism. Thus it has become an accepted part of life style of a number of people. Hence every country has a decisive role to play in tourism, and tourism industry projected as very valuable particularly for the development of international transport and communication. Of late, tourism industry is receiving good attention as a foreign exchange earner and in most parts of the world it is promoted today primarily for the purpose of earning of foreign exchange. The disbursement of tourist expenditure on accommodation, food, transport, recreation and so on has a linkage effect leading to the overall development of a country. The percentage of receipts from international tourists in relation to gross national product is an indicator of the importance of tourism. After independence the focus of attention of the Government of India was on development of the key areas like agriculture, industry, infrastructure etc. So tourism was never seen as a potential business in India and it was growing at its own space. Only since the last two decades or more, tourism is being seriously promoted by the Government of India. Hence, Indian tourism could not exploit the vast tourism potential of the country. Kerala state too has been very late in tourism promotion, and in spite of its enviable tourism

resources the state is lagging far behind many other states in India mostly with much lower level of endowments in tourism. Rural tourism has got an excellent market potential in India, particularly in states like Kerala, because of the huge demand from foreign tourists. However, rural tourism has not yet developed in India as the Government has not taken up any systematic initiative to attract the foreign tourists. Although tourism has been getting added attention since the last two decades, rural tourism is never accorded any priority in India, and Kerala is no exception.

II. RELEVANCE AND SIGNIFICANCE ON THE STUDY

In rural areas various products of diverse nature viz. historical, heritages, natural-based, medication-based, cultural-based and man-made – all having great tourism development potential are available. If the existing constraints are removed this huge potential could be utilized to their fullest extent. There are some classic examples whereby some countries have exploited their rural tourism potential for economic development; all being religious and historical types of rural tourism products which offer great space for rural development. In the context of Kerala – the state with an enviable level of tourism resources in the whole of India – it is relevant to study of the prospects of rural tourism particularly at ‘Kumbalangi’ – the first model tourism village in India. A recent study of the author, Manoj P K. (2015) [19] has revealed the vast development potential of rural tourism at Kumbalangi. This paper studies the adverse effects of rural tourism on the environment and society and suggests strategies for its long-term sustainability.

III. OBJECTIVES OF THE STUDY

- (i) To make an overall study of the present status of Indian tourism in the global tourism, that of Kerala tourism in the Indian tourism, and the salient features of ‘Kumbalangi’ – a major rural tourism destination in the Ernakulam district of central Kerala and also the first model tourism village in the whole of India;
- (ii) To make a field-based study of the adverse effects of rural tourism to the environment and local community with respect to study area viz. ‘Kumbalangi’ village in central Kerala; and
- (iii) To suggest strategies for the sustainable development of rural tourism and hence faster economic development of the whole region by mitigating the adverse effects of rural tourism on the environment and local community.

IV. METHODOLOGY OF THE STUDY

The paper is structured as a descriptive-analytical study and is exploratory too. Both primary and secondary data are used. Primary data are collected by conducting a sample survey at Kumbalangi. A representative sample of 60 members of the local community cutting across all categories and of very diverse demographic and socio-economic profile is selected for this study. Sampling is done using random sampling technique. Data are collected using a pre-tested, well structured questionnaire. Secondary data are also used. These are collected from the publications of World Tourism Organization (WTO), World Travel and Tourism Council (WTTC), World Economic Forum (WEF), Kerala Tourism Development Corporation (KTDC), Kerala State Planning Board, and other research publications including journals. Popular statistical tools are used for data analysis.

V. LITERATURE REVIEW AND RESEARCH GAP

From the review of the existing literature on tourism it is noted that globally there has been an increasing focus on the adverse impact of tourism on the ecology and environment. Worldwide, the Governments have initiated tourism for developmental needs, with greater attention on preserving the environment. This trend is very clear since the mid-1980s. The implications of tourism initiatives on the society at large is often studied from a socio-ecological perspective and the conceptual model suggested by Brundtland (1987) [2] called ‘Ecologically Sustainable Development Framework’ is employed for the above purpose. This framework is being used globally for managing various crucial tourism-related development issues. ‘Ecotourism’ (ecologically sustainable tourism) and its variants like rural tourism and responsible tourism are fast gaining popularity worldwide.

Norton G. (1987) [19] opined that many people who travel to natural areas do so specifically to indulge in experience with nature, regardless of what activities they choose to do. Lane (1991) [12], has noted that such eco-tourism projects should strive for providing satisfying jobs to the local community without adversely affecting the environment. Mc Neely et. al. [14] and Brandon (1996) [7] hope that tourism may instill a sense of local pride to villagers and may promote or strength cultural heritage. Bhatia (1993) [3] in his book 'Tourist Development – Principles and Practices' has noted that the underdeveloped region of a country can greatly be benefited from tourism development. Many of the economically backward regions contain areas of high scenic beauty and of cultural attraction. These areas if developed for the use by tourists can bring in prosperity to the local people. This tourism development process reduces regional imbalances by creating more income and employment in the less developed and depressed areas. Healy, Robert G. (1994) [10] has noted that most constituents of the tourism commons are subject to tourists and locals as 'free riders'; the most vulnerable being BTEs (Basic Tourism Elements), the natural environment and infrastructure. However everything depends on the power of government to restrict "free riding" incidents through various mechanisms such as resources use regulation and pricing. The lack of rules and/or their inadequate implementation in several countries victimize many components of the tourism commons. Lindberg and Enriquez (1994) [13] cited several examples of local earnings from tourism related employment surrounding protected areas in Belize, Nepal, Costa Rica and Australia. For example, in Nepal, two thirds of Sagarmatha national parks resident's families receive income from guiding, selling local goods and cloths and providing accommodation for tourists. In addition to economic benefits tourism may also contribute to improve inter cultural appreciation and understanding both for host communities and tourists. Coccossis, Harry. & Nijkamp, Peter. (1995) [6] have noted that the extension of tourism has affected multitude of tourism destinations and several activities from transporting to nourishing people. The social, economic and environmental impact of tourism are numerous and diverse. Clark (1991) [5] discerns a shift in the understanding of eco tourism. He argues that there has been a paradigm shift from the original understanding of ecotourism as being small scale, educative and minority interests towards an understanding of sustainable tourism that requires best practice by tourism operations of all sizes in terms of minimizing their impacts on environment. Ajith Kumar (1998) [1] has studied the psycho graphic, demographic and life style characteristics of tourists visiting Kerala. It is stated that spending pattern is a part of the life style characteristics of tourists since spending is determined by demographic factors, income group and psycho graphic factors like purpose of visit and especially the motivations to visit Kerala.

Ferhan (2006) [8] has observed that the rapid development and high concentration of tourism activities cause negative effects on the natural and cultural environment, and when investment of locals is minimal or lacking, the outcomes would be especially unacceptable to the host community. Singh, Ratandeep (2008) [24] in his book 'Tourism Marketing – Principles, Policies and Strategies' has discussed in detail the various dimensions of tourism marketing. It is pointed out that as tourism industry is mainly services-oriented and labour intensive, it is a major source of employment. It generates wide range economic activities and hence provides direct socio-economic benefits through enhanced employment opportunities.

Manoj P K (2008) [15] in his research paper, 'Sustainable Tourism in India: A Study from a Global Perspective with Focus on Tourism Prospects of Kerala' has made a macro level study of the prospects of sustainable tourism in Kerala from an international perspective and offered some strategies for the faster growth of sustainable tourism initiatives in Kerala. Oommen M. A. (2008) [21] has pointed out the danger of overlooking the environmental sustainability in development initiatives in the context of Kerala state in India. The author while referring to the growing environmental problems in Kerala from the broader perspective of the development of the state (viz. Kerala model of development) he has specifically noted in detail various environmental and ecological issues that the state faces at present. The present scenario is referred to as 'Ecological Overkill' in his paper and four major dangers emanating from this situation have been pointed out as (i) serious damage of the hydrological cycle, (ii) high distortion of the vast coastal system of the state of 580 km, (iii) high destruction of the unique, extremely distinguished, rich and diverse natural resources as well as bio-diversity which together constitute a beautiful agro-eco system; and (iv) highly consumerist society that throws out heavy solid, liquid and medical wastes. This growingly worsening situation

has adversely affected the sustainability and future prospects of rural tourism and its variants like responsible tourism in Kerala. Manoj, P. K., (2009) [16] in his research paper 'Environment Friendly Tourism for Sustainable Economic Development in India' has studied the vital significance of tourism for faster economic development of India and has suggested strategies for environment-friendly and sustainable tourism development in India. In another research paper by this author viz. Manoj, P. K. (2010) [17] entitled 'Tourism in Kerala: A Study of the Imperatives and Impediments with Focus on Ecotourism; the case of tourism sector in Kerala state in India is studied along with its strengths, weaknesses, opportunities and threats. Strategies for faster and sustainable growth of tourism in Kerala are suggested by the author. In another study by the author Manoj P. K (2015)(a) [18], entitled 'Prospects of Eco tourism in Kerala: Evidence from Kumarakam in Kottayam District' an empirical study of ecotourism is made and a few suggestions for sustainable development of ecotourism based on the findings of his study. Yet another study by the present author Manoj P. K (2015)(b) [19], entitled 'Employment Generation from Rural Tourism: A Field Study of the Local Community at Kumbalangi, Kerala' makes an empirical study of the response of the local community regarding the employment prospects arising from rural tourism, their expectations regarding the Governmental initiatives required etc. The high prospects of employment generation and economic development and at the same time the need for enhancing the tourism infrastructure, primarily through Governmental initiatives, is highlighted in this paper.

World Economic Forum (2015) [30] in its report 'The Travel and Tourism Competitiveness Report' makes a detailed study of the competitiveness of individual countries in the travel and tourism front at the regional and global levels in respect of various parameters. According to this report, the competitiveness of India at the global level is only 52 while China is ranked in the 17th slot, thus showing a wide gap between the two neighboring developing nations. At the regional level (viz. Asia Pacific region) too, there is large difference in competitiveness, because India is ranked in the 12th position while China is in the sixth position. In spite of the vast natural resources (17th rank), cultural resources (10th), unique intangible heritage (8th) etc. India's overall position 52th is very low because of poor rankings in respect of tourism-specific infrastructure (109th), health and hygiene (106th), ICT readiness (114th), safety and security (97th), desperately low level of environmental sustainability (139th) and so on. The report underscores the need for enhancing the tourism infrastructure in India, and more importantly ensuring the long-term sustainability of tourism in India through preserving its environment and ecology. WTO (2015) [31] in its latest report, 'UNWTO Tourism Highlights 2015 Edition', has pointed out that China has been the fastest growing source market for tourism in the recent years. China has been ranked first in international tourism expenditure, third in international tourism receipts, fourth in international tourism arrivals. The four major players in global tourism have been United States, Spain, China and France. The growth of tourism in India has been 11 per cent as against 20 per cent for Sri Lanka. India has been one among the source markets that showed double digit growth in expenditure, though it is not one among the best 10 markets in terms of growth in expenditure. WTTC (2015) [32] in its latest report, 'Economic Impact of Travel & Tourism 2015 – Annual Update' has made an elaborate account of the relative performance of various countries of the world in the tourism front, including region-wise performance and future projections. WTTC has reported that South Asia, led by India and the Middle East, were the fastest growing regions globally in terms of Travel & Tourism's total contribution to GDP. Accordingly, India is one among the bigger, fast growth markets along with China, Indonesia, South Korea and Turkey. Besides, WTTC has reported that South Asia will be the fastest growing sub-region for total Travel & Tourism GDP long-run growth to 2025 (7.0 per cent) as India outpaces China.

It is noted that there are many studies on Indian tourism and a few on Kerala tourism, including some studies by the present author himself, viz. Manoj P K 2008 [15], 2009 [16], 2010 [17], 2015 (a) [18] and 2015 (b) [19]. It is noticed, however, that empirical studies on the impact of rural tourism on the environment and society in the Kerala context are very scarce. This is the research gap identified for this paper. As a continuation of the previous study of the author, Manoj P K. (2015) (b) [19], which covered the employment aspects of tourism, the governmental initiatives required for further expanding the infrastructure facilities at Kumbalangi and other allied aspects, this study seeks to make an empirical study of the effects of rural tourism on

environment and society in view of the growing apprehensions regarding the environmental sustainability of tourism initiatives in India, especially those based in Kerala.

VI. STATUS OF THE INDIAN TOURISM IN GLOBAL TOURISM AND THAT OF KERALA TOURISM IN INDIAN TOURISM

The status of Indian tourism, in terms of international tourism receipts, has been steadily on the rise over the years though at a slow pace. At the global level its position has improved from 37th rank in 2002 to 15th in 2014. At the regional (Asia Pacific) level the country's competitive position has improved from 13th in 2002 to 07th in 2014. Table I is self-explanatory in this regard.

Table I: Share of India in International Tourism Receipts, at the Global and Regional (Asia-Pacific) Levels (2002-2014)

Year	International Tourism Receipts (USD Billion)		FEE in India (in USD Million)	Percentage Share and Rank of India in the World		Percentage Share and Rank of India in the Asia-Pacific Region	
	World	Asia-Pacific		Percentage Share	Rank	Percentage Share	Rank
2002	481.90	96.50	3103	0.64	37 th	03.22	13 th
2003	529.30	93.70	4463	0.84	37 th	04.76	09 th
2004	633.20	124.10	6170	0.97	26 th	04.97	08 th
2005	679.60	135.00	7493	1.10	22 nd	05.55	07 th
2006	744.00	156.90	8634	1.16	22 nd	05.50	07 th
2007	857.00	187.00	10729	1.25	22 nd	05.74	06 th
2008	939.00	208.60	11832	1.26	22 nd	05.67	06 th
2009	853.00	204.20	11136	1.31	20 th	05.45	07 th
2010	927.00	255.30	14193	1.53	17 th	05.56	07 th
2011	1042.00	289.40	16564	1.59	17 th	05.72	08 th
2012	1078.00	329.10	17737	1.65	16 th	05.39	07 th
2013	1197.00	360.70	18445	1.54	16 th	05.11	08 th
2014	1245.00 (P)	376.90 (P)	20236	1.58	15 th	05.22	07 th

Source: Ministry of Tourism, Government of India

[P – Provisional, FEE – Foreign Exchange Earnings] [Data retrieved through www.indiastat.com on Feb. 25, 2016]

As already noted, as per the latest report of WEF (2015) [30], the overall position (global) of India in terms of competitiveness is only 52 as against 17 for China. Thus, in spite of the gradually improving relative position (rank) of India year after year, further enhancing its competitive position is of utmost importance. Because, as of now, India's vast natural resources (17th rank), cultural resources (10th), unique intangible heritage (8th) etc. are not reflected in its rankings in respect of various competitiveness parameters. Rather they are very poor, e.g. tourism-specific infrastructure (109th), health and hygiene (106th), ICT readiness (114th), safety and security (97th) etc. In respect of environmental sustainability it is desperately poor (139th) among the world nations. So, it is noted that maximum focus is required to ensure environmental sustainability of tourism projects in India. Other main concerns (health and hygiene, ICT readiness etc.) are complementary or closely related to the first viz. environment.

Table II: Tourist Arrivals and Earnings from Tourism – the Case of Kerala State (2002-2014)

Year	Tourists Arrivals – Domestic & Foreign				Earnings from Tourism			
	Domestic Tourists	Percentage Change	Foreign Tourists	Percentage Change	FEE (Rs. in Crores)	Percentage Change	Total revenue (Rs in Crore)	Percentage Change
2002	5568256	06.30	232564	11.30	705.67	31.90	4931	20.82
2003	5871228	05.40	294621	26.70	983.37	39.35	5938	12.83
2004	5972182	01.70	345546	17.30	1266.77	28.82	6829	15.01
2005	5946423	-04.30	346499	00.27	1552.31	22.54	7738	13.31
2006	6271724	05.47	428534	23.70	1988.40	28.09	9126	17.94
2007	6642941	05.92	515808	20.37	2640.94	32.82	11432	25.28
2008	7591250	14.28	598928	16.11	3066.52	16.11	13130	14.84
2009	7913537	04.25	557258	-06.96	2853.16	-06.96	13231	00.77
2010	8595075	08.61	659265	18.31	3797.37	33.09	17348	31.12
2011	9381455	09.15	732985	11.18	4221.99	11.18	19037	09.74
2012	10076854	07.41	793696	08.28	4571.69	08.28	20430	07.32
2013	10857811	07.75	858143	08.12	5560.77	21.63	22926.55	12.22
2014	11695411	07.71	923366	07.60	6398.93	15.07	24885.44	12.11

Source: Compiled from Kerala Tourism Statistics (for the respective years), Ministry of Tourism, Government of Kerala

Regarding the relative position of Kerala among the various states in India, it is noted that Kerala's position in respect of foreign tourist visits as of 2014 is rather poor as it is only in the seventh rank. Kerala's position needs to be improved further, as the excellent tourism resources of Kerala are not reflected in its relative position (seventh) as above. Table III is self-explanatory in this regard. It is noted that Kerala's share is only 4.1 per cent of the total foreign tourists in the top ten states in India.(Table III).

Table III: Top Ten States / UTs of India in Number of Foreign Tourist Visits (as of 2014)

Rank	Name of the State / Union Territory (UT)	Foreign Tourist Visits in 2014	
		Number	Percentage Share (%)
1	Tamil Nadu	4657630	20.6
2	Maharashtra	4389098	19.4
3	Uttar Pradesh	2909735	12.9
4	Delhi	2319046	10.3
5	Rajasthan	1525574	06.8
6	West Bengal	1375740	06.1
7	Kerala	923366	04.1
8	Bihar	829508	03.7
9	Karnataka	561870	02.5
10	Haryana	547367	02.4
Total of the Top Ten States / UTs		20038934	88.8
All Other States / UTs put together		2528716	11.2
Total		22567650	100.0

Source: Government of India, *India Tourism Statistics at a Glance 2014*, Ministry of Tourism, New Delhi

In short, whether it is India as a whole at the global level or Kerala state in the Indian union in particular at the national level, the relative performance is below the deserving level, going by the resource endowments in tourism. The slow progress in both cases needs to be scaled up several times to catch up with the rest of the world or rest of the country as the case may be.

VII. KUMBALANGI RURAL TOURISM DESTINATION IN KERALA – A BRIEF PROFILE

Kumbalangi is a well-known spot in the tourist map of India. Every year it serves a huge number of domestic and foreign tourists. A small island by nature it is surrounded by backwaters. It is chosen as the first Model Tourism Village in India. Profile of Kumbalangi is shown in Table IV.

Table IV: Profile of 'Kumbalangi' Model Tourism Village (Rural Tourism)

➤	Population: Over 30,000 and Area: 7 sq.km
➤	Attitude: Sea level
➤	Revenue status: Panchayat
➤	Revenue source: Tourism and Fishing
➤	One of the 32 global village selected by the United Nations Development Program (UNDP)
➤	The first among the 15 villages selected by the Government of India as Model Tourism Villages across the country.
➤	Vast stretch of backwaters connected by interlocking waterways to the whole of Kerala.
➤	Calm, quite and tranquil landscape with warm inhabitants
➤	Rich with exotic local cuisines, boat building and masonry, manual operated coir looms, fish farms etc.
➤	More than 100 Chinese fishing nets
➤	The The first Panchayat in the state to set up a waste management system

Source: Compiled from the Official records of 'Kumabalangi' Grama Panchayat

Kumbalangi offers high potential for house boat cruise, traditional boat race, fishing, adventurous water sports, swimming and various cultural programs. More than 100 Chinese nets are there in the backwaters that face the village. It gives a veritable

treat to the visitors. Kumbalangi Rural Tourism Project is aimed at the promotion of preservation and conservation of environment. Mangrove conservation is an example. The mangroves, which separate the land from the sea, act as a breeding ground for prawns, oysters, crabs, small fish etc. 'Pokkali' farming is being revived in full swing at Kumbalangi. Pokkali farming is a cropping pattern wherein rice is cultivated for the first 6 months followed by fish farming for the subsequent 6 months. Under Kumbalangi Project an artists' village ('Kalagraamam') is set up. It stands on 4 acres of land inside Kumbalangi. It showcases the traditional fish equipment and handicrafts of this region. Kumbalangi Project seeks to save its magnificent culture, traditional occupation such as Crab Farming ('Njandu Krish'), various fishing methods, coir production etc. Kumbalangi once was the centre for the production of 'Vykom Coir'. This model village seeks to become more eco-friendly – as part of the eco-initiative of the Kerala tourism called 'Eco-Kerala'. The beauty Kumalangi is that all the works undertaken here are environment friendly.

The village is the first in the state to have its own waste management system with about 600 biogas plants. Another important contribution of the village is home stay for tourist. Home stay means, to put in simple words, a home away from home, that makes stay comfortable, adventurous, delicious and above all economical. The Panchayat is implementing the project in tie up with the Kerala Government. The state government has invested Rs 75 lakh to develop the roads of Kumbalangi. Also, the Ministry of Tourism has helped the State Tourism Department with a financial assistance of Rs 50 lakh to initiate the development of the Model Tourism Village of Kerala and the Panchayat is actively cooperating with this. The primary objective of this project is to involve the rural people in developing tourism, so that they can reap the socio-economic benefits through increase in their income along with more job opportunities for them.

VIII. RURAL TOURISM – BEHAVIOR OF TOURIST TO THE LOCAL PEOPLE AND PERCEIVED BENEFITS TO THE SOCIETY

From Table V, it is noted that out of the 60 local people in the sample, majority are males i.e. 42 (70 per cent) and the rest 18 (30 per cent) alone are females. It is also noted that out of the 60 respondents 20 (33.33 per cent) are in the age group 31-40. There are 14 local people (23.33 per cent) in the two age group of 41-50 while 11 local people (18.33 per cent) belong to the 21-30 age-group. Of the remaining 15 local people (out of the total 60 members), 9 people (15 per cent) are in the 51-60 age bracket while the rest 6 people (10 percent) are in the 'above 60' age group. Thus, as high as 75 per cent or three-fourth of the local people are upto 50 years of age and the remaining 25 per cent or one-fourth alone have 50 years or more age. (Table V).

Table V: Distribution of Local People based on Age and Sex

Age Group	Female	Percentage	Male	Percentage	Total	Percentage
21-30	3	16.67	8	19.05	11	18.33
31-40	6	33.33	14	33.33	20	33.33
41-50	4	22.22	10	23.81	14	23.33
51-60	3	16.67	6	14.29	9	15.00
Above 60	2	11.11	4	9.52	6	10.00
Total	18	100.00	42	100.00	60	100.00

Source: Field Survey

Table VI: Behavior of Tourists towards the Local People (Is the behavior of tourists to local people quite good?)

Particulars	Female	Percentage	Male	Percentage	Total	Percentage
Strongly agree	8	44.44	15	35.71	23	38.33
Agree	9	50.00	26	61.90	35	58.33
Disagree	1	05.56	0	00.00	1	01.67
Strongly disagree	0	00.00	1	02.38	1	01.67
Total	18	100.00	42	100.00	60	100.00

Source: Field Survey

Regarding the behavior of tourists towards the local people it is noted that it has been quite positive and encouraging. As is evident from Table VI, as high as 58 local people under study (96.67 per cent) either strongly agree or just agree with the positive behavior of the tourists towards them. Only the rest 2 persons (3.33 per cent) comprising of one male and one female, have some disagreement in this regard. Hence, for the vast majority of the local people the tourists' behavior is very encouraging and they are trying to attract more and more tourists. Regarding the perceived benefit of tourism to the local

community and the rural society as high as 57 people (95 per cent) have a very positive opinion whereas 3 people (5 per cent) have some difference of opinion in this regard (Table VII).

Table VII: Tourism Benefits the Rural Society / Local Community?

Beneficial to the Society	Female	Percentage	Male	Percentage	Total	Percentage
Yes	17	94.44	40	95.24	57	95.00
No	01	05.56	02	04.76	03	05.00
Total	18	100.00	42	100.00	60	100.00

Source: Field Survey

From the foregoing discussions, it may be noted that there are obvious benefits to the society because of rural tourism because vast majority of the local people perceive that rural tourism benefits the society. The behavior of the tourists to the local community is also very encouraging for majority of them (Tables VI and VII). However, long-term sustainability of tourism depends on environmental sustainability. That is, the adverse effects of rural tourism on the environment should be controlled so that degradation of the environment is prevented and hence sustainability of rural tourism is ensured in the long run. This aspect is dealt in the next paragraph of this paper.

IX. EFFECTS OF RURAL TOURISM - NATURE AND EXTENT OF DEGRADATION OF NATURAL ENVIRONMENT

Table VIII: Rural Tourism and Degradation of Natural Environment – Perception of the Local People

Degradation of the Environment by Rural Tourism	Female	Per cent	Male	Per cent	Total	Per cent
Yes; Rural Tourism degrades the environment	12	66.67	25	59.52	37	61.67
No; Rural Tourism doesn't degrades the environment	6	33.33	17	40.48	23	38.33
Total	18	100.00	42	100.00	60	100.00

Source: Field Survey

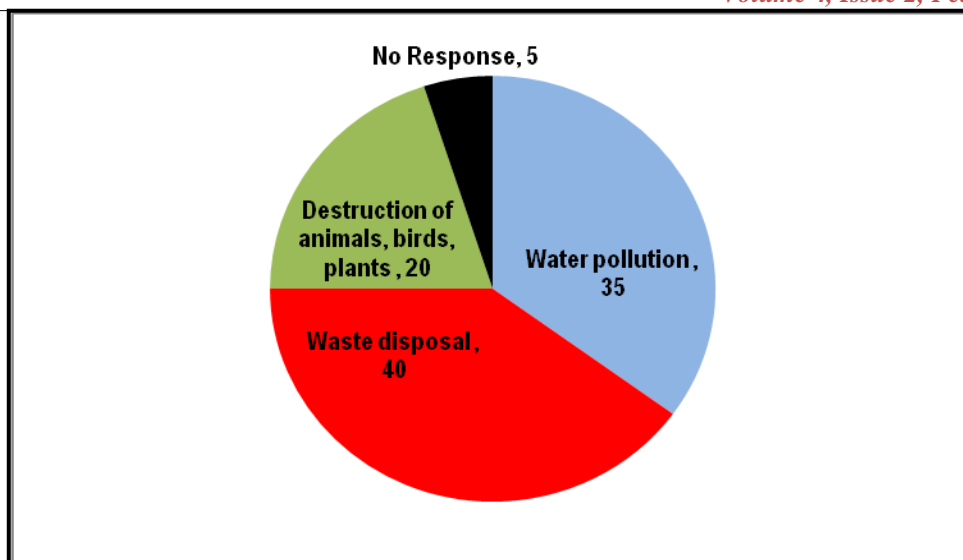
Opinion of the local community regarding the degradation of natural environment at Kumbalangi is given in Table VIII. As high as 61.67 per cent of the local community (comprising of 66.67 per cent among the female respondents and 59.52 per cent among the males) responded that rural tourism degraded the natural environment. The balance 38.33 per cent (comprising of 33.33 per cent among the female respondents and 40.48 per cent among the males) felt that no degradation of natural environment was caused because of rural tourism. It is noted that greater proportion females compared to males felt that environment degradation was caused because of tourism. On the other hand greater proportion of males than females felt no such environmental degradation. But, the fact that as high as 61.67 per cent of locals felt environmental degradation is a matter of concern, and warrants immediate and meticulous remedial efforts from the part of the authorities to prevent further environmental degradation.

Table IX: Nature of Degradation of Natural Environment because of Rural Tourism as Perceived by the Local People

Nature of degradation	Female	Per cent	Male	Per cent	Total	Per cent
Water pollution	5	27.78	16	38.10	21	35.00
Waste disposal	8	44.44	16	38.10	24	40.00
Destruction of animals, birds, plants	4	22.22	8	19.05	12	20.00
No Response / No Comments	1	5.56	2	4.76	3	5.00
Total	18	100.00	42	100.00	60	100.00

Source: Field Survey

Figure I: Major Types of Environmental Degradation because of Rural Tourism



Source: Based on Field Survey Data given in Table IX

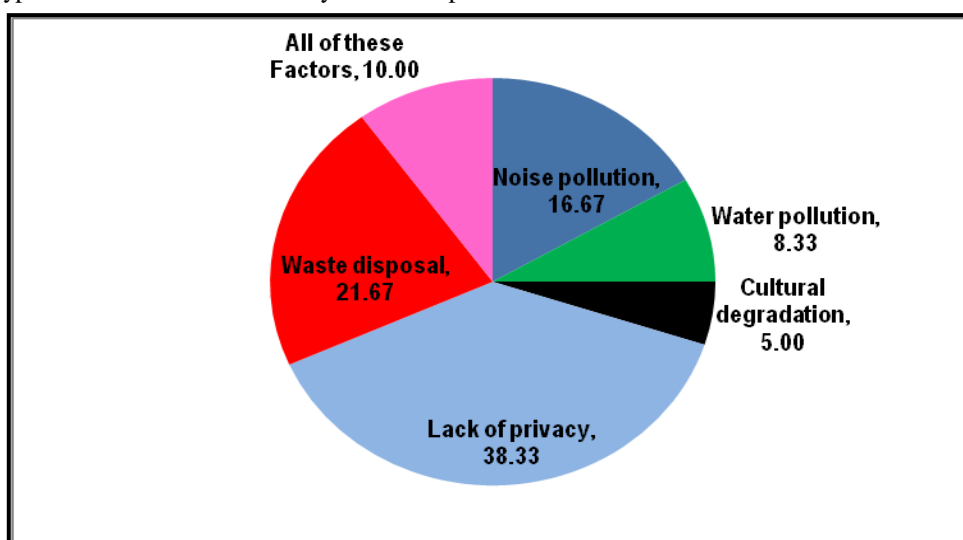
Investigations regarding the nature and causes of environmental degradation revealed that waste disposal by the tourists as the most common type of degradation of the environment; and as high as 40 per cent of the sample of local people comprising of 44.44 per cent of the females and 38.10 per cent males opined accordingly. After wastage disposal, the problem with the next highest level of adverse implications was water pollution caused because of tourism; and as high as 35 per cent of the respondents perceived as above. Thirdly comes environmental degradation in the form of destruction of animals, birds and plants arising out of heightened tourism activities or excessive use of resources or the like; and 20 per cent of the local people felt as above. (Table IX). The major types of environmental degradation as noted above and their relative significance are shown in Figure I.

Table X: Inconvenience Caused to the Local People because of Rural Tourism as per their Feedback.

Types of inconveniences caused	Female	Per cent	Male	Per cent	Total	Per cent
Noise pollution	4	22.22	6	14.29	10	16.67
Water pollution	2	11.11	3	7.14	5	8.33
Cultural degradation	1	5.56	2	4.76	3	5.00
Lack of privacy	6	33.33	17	40.48	23	38.33
Waste disposal	3	16.67	10	23.81	13	21.67
All of the above	2	11.11	4	9.52	6	10.00
Total	18	100.00	42	100.00	60	100.00

Source: Field Survey

Figure II: Major Types of Inconveniences Felt by Local People because of Rural Tourism



Source: Based on Field Survey Data given in Table X

Regarding the various inconveniences caused to the local community because of due to tourism activities, the most commonly cited one is lack of privacy, and as high as 38.33 per cent of the local people experienced this problem. Second in the gravity of the problem is the nuisances because of improper waste disposal by the tourists, and as high as 21.67 per cent of the local community faced this problem. Thirdly comes the noise problem which was faced by 16.67 per cent of the local people, and is followed by the cultural degradation problem faced by 5 per cent of them. One-tenth of the local people experienced all the above problems. Table X is self-explanatory regarding the various inconveniences faced by the local people. The major types of inconveniences experienced by the local people as detailed above and their relative significance are shown in Figure II.

X. SCOPE FOR FURTHER EXPLORATION OF THE PRESENT STUDY

The present study coupled with the previous study of the present author viz. Manoj P K. (2015) [19], together have addressed the issues like (i) employment prospects of rural tourism, (ii) governmental initiatives required, (iii) problems faced by the tourists / their expectations regarding various facilities and services in tourism spots, (iv) degradation to the environment, (v) inconveniences to the local community etc. Thus, almost all the major aspects from the perspective of the local community have already been covered in the above two studies.

However, other relevant aspects relating to the sustainability of rural tourism as perceived by the tourists themselves (not local people), like the following typical ones, may be further explored as a continuation of the present study and the earlier study viz. Manoj P K. (2015) [19]: (1) Assessment of the facilities provided (like, accommodation, transportation, communication etc.) at the Rural Tourism destination (2) Reasonability of the rent structure, (3) Level of co-operation and support from the local people, (4) Level of satisfaction from the tourism trip, (5) Most impressive items observed in the rural tourism trip, (6) Factors influencing the selection of the rural tourism destination by the tourists etc. The above aspects from the perspective of the tourists, if done, would make the findings more meaningful. Because, holistic policy decisions on investment in tourism destinations may be made using the findings of these studies, both completed and proposed, as noted above.

XI. SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION REMARKS

In view of the foregoing discussions, it may be pointed out that from the perspective of the local community members there are obvious benefits to the local community because of rural tourism, and further that the behavior of tourists to the local people has been quite encouraging. However, it is equally important to note the fact there are adverse effects of rural tourism on the society and environment which in turn may adversely affect the sustainability of tourism projects in the long run. As high as 61.67 per cent of the local community members have felt that rural tourism would definitely degrade the natural environment. This fact points to the utmost need for remedial measures for mitigating the environmental harm because of rural tourism and for preserving the environmental quality. Regarding the nature of environmental degradation arising from rural tourism, it is noted that waste disposal by the tourists creates the highest amount of degradation and is followed by other major problems like pollution of water bodies and destruction of animals, birds and plants. Notwithstanding the fact that rural tourism benefits the society and its members, there are some inconveniences and nuisances that the local people have to face because of rural tourism. Of these inconveniences, the most common one as perceived by the local people is that rural tourism affects their privacy. Other major inconveniences include, waste disposal issues, noise and water pollution. As high as one-tenth of the local people feel that they experience all the above sorts of inconveniences. The following suggestions are made in order to ensure sustainable growth of rural tourism, based on the findings of this study.

- Deliberate efforts by the Government are required for better promotion of rural tourism, by showcasing the customs, traditions, cuisines, fairs and festivals etc. of specific spots. Various traditional tourism products should be promoted along with rural tourism.
- Tourists destinations, including rural tourism spots, be kept clean and hygienic always. Scientific and sustainable ways of waste disposal should be ensured in all tourism destinations, particularly rural tourism destinations like Kumbalangi.

Because, lack of proper waste disposal or unscientific means of waste disposal may adversely affect the long term sustainability of rural tourism destinations like Kumbalangi.

- Pollution of the water bodies as well as noise pollution because of rural tourism initiatives should be controlled. Strict measures to prevent the use of plastics and such other inorganic materials, strict directives to invariably use the waste bins specifically installed for waste disposal by the authorities, and adherence to various accepted standards are of cardinal significance.
- Strict measures are required to prevent the destruction of plants, birds and animals because of rural tourism initiatives. Because, otherwise the bio-diversity and ecology may be affected and so also the long-term sustainability of the destinations. Besides, the very attraction of rural tourism is in the presence of diverse types of such flora and fauna in the respective destinations.
- Ensure maximum participation and involvement of the local people in all rural tourism activities for the overall development. Such a participation is essential for the creation of better tourism environment, well-being of tourists and hence the expansion of tourism. The local community be motivated to get more involved in tourism services, like, provision of handicrafts, conducting cultural programmes, providing local cuisines etc. As part of promoting farm tourism (e.g. Pokkali farming) financial assistance be provided for its production and cultivation.
- Government should recognize the importance of rural tourism and should create added infrastructural facilities like transportation, eco-friendly cottages, etc. Added thrust on the use of ICT (information and communication technologies) and communication networks is essential to attract the tourists of modern days. Wayside amenities on national highways should be setup for the convenience of tourists, particularly the foreign tourists.
- District Tourism Promotion Council (DTPC), Local Self Government Department (LSGD) and Government undertakings like Kerala Tourism Development Board (KTDC) should co-ordinate their activities towards providing better services to the tourists. Various departments like DTPC, KTDC etc. should take the responsibility of ensuring proper working of tourism information centres at Kumbalangi and other tourism spots.
- The services of tourist guides should be ensured at all times.
- Last, but not the least, heavy investment is required to improve the present tourism infrastructure in Kerala. Participation of private sector is an imperative in the Kerala context, because of the severe paucity of the governmental resources. A Public Private Partnership (PPP) model wherein the Government plays the roles of both an enabler and regulator is advisable. As an enabler, the Government should provide the licenses to private agencies who fulfil the laid down norms and agree to comply with pre-fixed norms of service quality, use of natural resources, pollution control norms etc. Secondly, as a regulator, the Government ensures strict adherence to the pollution control, use of resources, service quality etc. by the private agencies and takes remedial / corrective action in case of defaults.

In spite of various handicaps like paucity of finance and other resources, of late, Government of Kerala has accorded added thrust on the development of tourism, particularly responsible tourism, rural tourism etc. There is enhanced participation by the Governmental initiatives like 'Kudumbasree' in tourism related activities, particularly in responsible tourism, organic farming etc. Of late, greater emphasis is accorded by the Government in using ICT-enabled services and in adoption of E-governance as against manual systems. In view of the excellent potential of the tourism sector in bringing about faster economic development for a highly 'tourism resource rich' state like Kerala, rural tourism and similar sustainable models like responsible tourism have got tremendous growth prospects in this state. Let us hope that the Government will initiate more measures in the future to promote rural tourism and make its rural tourism initiative at 'Kumbalangi' a role model not only in India, but the world as a whole.

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