Volume : 2 | Issue : 12 | Dec 2013 • ISSN No 2277 - 8160

Research Paper | Economics

Plastic Littering and Ecotourism in Kerala: The Challenges and Remedies

Dr. Roy Scaria

Assistant Professor, Dept. of Economics, Government College Manimalakunnu, Koothattukulam, , Ernakulam District – 686 662. Kerala.

ABSTRACT

The vast development potential of tourism is widely recognized the world over. India in general and Kerala state in Indian union in particular have got an enviable tourism potential. As a sustainable model of tourism ecotourism offers excellent growth prospects for a state like Kerala. In the above context, this paper looks into the challenges to ecotourism in Kerala with a focus on the menace of plastic littering and accordingly offers a few pragmatic suggestions for the sustained growth of ecotourism in the state.

KEYWORDS : Eco tourism, Sustainability, Plastic waste, Waste disposal

INTRODUCTION

Tourism is fast picking up as a tool for economic development and employment generation, particularly among the developing nations like India. In view of the growing apprehensions regarding the long-term sustainability of tourism initiatives because of adverse effects, most prominently the environmental impact, there is high significance for environment-friendly tourism initiatives. In spite of the appreciable growth of Kerala tourism over the last few years, it may be stated that meticulously planned, carefully designed and clearly articulated strategies are essential to maintain and further improve the performance of tourism in the future. The need for adoption of ecotourism strategies need not be over-emphasized in this regard.

The state of Kerala is, a strip of land in the southwest corner of Indian peninsula, best described as '*The God's Own country*' for its beautiful landscape spreading from Western Ghats at the east to a long wide seashore at the west. The sloppy landscape facing the west with full of brooks, rivers, waterfalls, lakes and green covered misty hills makes her more beautiful. Her varied geographical features culminated into tropical forest cover and wildlife and bird sanctuaries in the high land, *condal forest* in the marshy low land and backwaters in the costal areas. Kerala offers a multitude of tourist experience with her cultural tradition, the centuries- old holistic medicine of Ayurveda, the unique boat races that is the largest team sport in the world and the ride through the winding waterways in a cosy houseboat or the colourful and exotic festivals. All these generate unending inspiration of foreign as well as Indian national tourists to visit Kerala.

Bill McKibben, a noted environmentalist rightly remarked, "Kerala stands out as the Mount Everest of Social development". Kerala offers a wide range of tourism possibilities especially in ecotourism. Moreover, Kerala is one of the most important pilgrim centers among the states in south India. Sabarimala, which situates in the mid-forest of Patthanamthitta district is a holy land visited by millions of pilgrims from within country and abroad.

SIGNIFICANCE OF THE STUDY

As already noted the significance of tourism as a tool for faster economic development is well recognized. Kerala has got an enviable tourism potential also. But the adverse effects of tourism are dangerously on the rise in India, particularly Kerala. These adverse effects include the degradation of the environment, fast depletion of natural resources, adverse effect on bio-diversity and ecological balance, and the like. Accordingly, there is an enhanced significance for development of 'nature friendly' tourism or ecotourism.

Though tourism industry in Kerala attracts large number of foreign tourists, during 2009 total visitors stood as 557258, 6.96 percent less than that of the previous year. Foreign exchange earnings from tourism industry also shows similar trend during 2009. It was Rs. 2853.16 crore, recorded a short fall of 6.96 percent over the previous year. Although temporary, the trend is not conducive for the tourism industry in Kerala.

Eco-tourism is a buzzword for sustainable tourism, which is defined as *"responsible travel that conserves the environment and sustains the well - being of local people".* Any tourism program, which is nature oriented, ecologically sustainable, evolves with education and interpretation as a major concept that benefit local people may be called ecotourism. Ecotourism offers considerable potential for integrating conservation with participatory development instead of traditional ineffective enforced protection for environmental conservation. Today, in Kerala, ecotourism is one of the fastest-growing segments of the tourism industry and its potential for growth is virtually unlimited. It is in this context that this paper looks into the menace of plastic debris on sustainable tourism in Kerala.

OBJECTIVES OF THE PAPER

- To make an overall review of the benefits of tourism, and the major trend and pattern of tourism sector with a focus on Kerala tourism;
- To make a case study of the challenges posed by plastic debris to ecotourism in Kerala, including impact on pilgrimage to the state;
- To make suitable remedies for sustained growth of ecotourism in Kerala for its faster development, based on the study findings.

Methodology

The paper is descriptive-analytical in nature. The data required are collected from both primary and secondary sources. Primary data are collected using Questionnaire from two major types of respondents viz. tourists and local residents. Secondary data are collected from authentic publications on tourism, including research journals, and reports published by the state and central governments, tourism departments, tourism promotion councils, etc. The data collected are analyzed using common statistical tools to arrive at meaningful conclusions.

Economic Benefits of Tourism

Tourism, inherently a highly social business, has carved a niche for itself worldwide; and this worldwide phenomenon is growingly recognized as an effective tool for economic development of nations by generating employment, earning revenue and foreign exchange, and acting as a means for upward social mobility of people. The implications of tourism on the society at large, from a social and ecological perspective is generally studied based on the conceptual framework propounded by Brundtland (1987) [4] viz. Ecologically Sustainable Development Framework. Internationally, this framework has been used for managing the key issues related to the tourism development. World over ecologically sustainable tourism (or, 'eco-tourism' in short) is gaining momentum fast. According to Lane (1991) [15], ecologically sustainable tourism should strive for, "providing satisfying jobs without dominating the local community. It must not abuse the natural environment, and should be architecturally respectable. In fact, India may be observed to have "a geographical location, natural resources as well as historical and cultural background which are quite conducive for development of tourism" (Manoj P K) (2008)[16]. India has got excellent potential for being developed as one of the best tourism destinations of the entire world. However, tourism statistics over the years reveal this huge potential of India is underutilized (Manoj P K)(2008) [16] While pointing out the excellent prospects of eco tourism for economic development of India, Manoj P K (2008) [16] has noted a number of negative factors also, those which deter the tourism growth and hence impede its prospects. These include the need for additional infrastructure facilities,

physical and social carrying capacity constraints, not-so-encouraging response of the community, lack of adequate information to the tourists, little benefits to the local community, difficult entry/immigration facilities etc. Referring to the problems faced by Kerala from a wider perspective ('Kerala model of development'), Oommen (2008)[20] has studied Kerala's ecological problems in detail, and has called the current scenario as 'Ecological Overkill'. In his study on the prospects of ecotourism in Kerala Manoj P K (2010) [18] has pointed out the strengths and weaknesses of Kerala tourism. The weaknesses include gross underutilization of the abundant tourism potential of the state in spite of the fact that the state is one among the best ten in respect of foreign tourist arrivals and also one endowed with enviable natural resources that attract the tourists worldwide.

Tourism has got tremendous potential for economic development of a nation. These include contribution to the national GDP, creation of high level of employment opportunities etc. In India tourism has got somewhat high share in the overall GDP of the country, though it is only about half of the global average. Regarding employment generation, the rate of employment offered by Indian tourism is slightly higher than the world average. Thus Indian tourism has got high potential for creating employment opportunities. (Table I).

In respect of the performance of tourism sector in Kerala, it may be noted that there has been an appreciable increase in tourist arrivals over the years, as is evidenced by the positive trend in this regard. (Table II, and Figure I). However, apart from sustaining the above positive trend, there is the need to improve it many fold. Because the relative performance of Kerala is rather poor among the states in India, when we consider the unique and enviable tourism potential of the state. (Manoj P K, 2010)[18].

Plastic littering and its impact on tourism and pilgrimage in kerala

Plastic is the most wonderful and versatile non-biodegradable material man had ever found, produced and used. The penetration and worldwide acceptance of various forms of plastics into the social fabric is so high that it became part of the day-to-day life of every human being as an unavoidable ingredient. Plastic, which belong to the family of polymers, has surpassed metals and ceramics in its usage as packing materials. Low production cost, low weight, high durability, handling convenience and as a final product, its non-toxic characteristics placed plastic at an enviable position among other packing materials. Although plastics are not as strong as metals and they cannot survive extreme temperatures, they outclass all other materials in their low density, strength to weight ratio, low corrosion rate and excellent barrier and surface properties. Though the advocates of plastics consider it be the most eco-friendly material saving natural resources such as timber, the growing mountains of plastic garbage is now assuming nightmarish proportions in many developed societies.

In Kerala, the practice of burying, burning and dumping of plastic waste that the people are mostly habituated has been now growing into a crisis. The very factors, which popularize plastic in the modern life style, are indeed, turn to be a real threat to the survival of humanity and form the basis of an abridged crisis. Clean and healthy environment is a precondition for the growth of tourism industry. Plastics as a threat to environment arose mainly out of its use as packaging materials, particularly with the introduction of carry bags and plastic bottles, which are being indiscriminately used by tourists and local people. People have a common tendency to leave/throw these materials after use. The 'free riding' problem suddenly emerges. The absence of efficient rules and regulations, and efficient cost incentive structure, people will not properly manage the waste. Plastic accounts for about 21 percent of all (paper, glass, tin plate. etc.) packaging materials today. It is quite disappointing. Indiscriminate littering of plastic has far-reaching adverse impacts on the eco-tourism and spiritual tourism industry in Kerala. Some of them are:

- The plastic discards thrown indiscriminately poisons soils and leading to scattering of non-biodegradable materials over and within the soil. Soils, which are saturated with plastic get, disrupted its natural gradients of physico- chemical conditions and its natural process of evolution. This, in turn, upsets the temperature gradient, air circulation and water percolation through different soil strata ultimately leading to the death of soil ecosystem and green cover of the state.
- The plastic waste in landfills slowly decomposes and releases toxic chemicals contaminating soil and groundwater. The burial of red and yellow plastics, which usually contain cadmium as a pigment, leads to groundwater contamination.
- Littering of plastic together with other waste materials vitiates the water sources, dirties every pathway and road and clogs the drainage system. Plastic wastes such as packing containers, bottles and carry bags are receptacles as they store rainwater. Water clogged in these plastic materials becomes the breeding places of mosquitoes that cause the outbreak of epidemics. Thus, people in Kerala and tourists here always live under the threat of outbreak of epidemics, a hanging sward.
- Again, plastic waste dirties the beaches and such materials floating over the coastal waters increases trash and garbage in the marine environment. This causes serious harm to wildlife and sea faring vessels alike, besides, the obvious aesthetic degradation of the coastal waters and coastlines. Thus, plastic deposited in the coastal waters destroys the aesthetic beauty of the costal areas including beaches on the one hand and wipes out many species of fish and aquatic plants on the other.
- Extensive use of plastic without effective management and disposal systems drastically changes the divine atmosphere of major pilgrim centers like Sabarimala in Kerala.
- Many food items including milk are sold in plastic sachets, which use polyvinyl chloride (PVC) is a known carcinogen. PVC uses many heavy metals as stabilizers, including lead, salts and certain phthalates, which are hazardous.
- In urban Kerala, due to its peculiar 'disposable consumption style', the proportion of plastic waste, which accounts for 4-6 percent of total municipal solid waste, is much higher than the national as well as the world average.
- The plastic constitute only 2.4 percent (world average) of the total solid municipal waste. However, in India the plastic waste accounts for only 0.6 percent of the municipal solid waste in 1996. A recent World Bank study shows that this national average has increased to worrisome proportion as 9.2 percent in 2005 (World Bank, 2008). Over 50 percent of this waste comprises used plastic bags and packaging (TERI, 2002). Though the proportion is seemed to be very low, it poses serious threat to the cleanliness and sustainable living of the humans for its long life and lightweight.

REMEDIES - Approaches to Effective Plastic Waste Management

Two principal approaches have been used to deal with the littering and management problems caused by large volume of waste plastic materials. While the first approach aims at reducing the use of plastic bags and materials through consumer incentives such as levies, explicit pricing, and occasionally outright bans on plastic use, the second approach aims at more effective collection and recycling of plastic materials.

Classification of Plastic Waste

Classification of waste materials as biodegradable and non-biodegradable at the source should be a mandate for any effective waste management system. The non-biodegradable waste again should be classified as reusable and recyclable. Separate systems are essential for recycling and reusing. The classification process can be exercised either at the source or collection stage. The policy and action plan for controlling its use and disposal of waste (plastic already used) must take into account the chemical aspects of production and possibility for whether it is reusable or recyclable.

Legal Provision: Ban Plastic Materials

It is difficult to ban the plastic altogether due to its wide acceptance, convenience and widespread use. The Government of Delhi introduced a wide-ranging ban on the use of plastic bags in market places in January 2009. However, the ban was diluted its efficiency of the regulation due to widespread lack of enforcement. About 94 percent of the consumers continue to use plastic bags in blatant violation of rules (Gupta, 2011)[7]. The small stand-alone stores typically owned by a single proprietor located in demarcated market centers still provide plastic bags free of charge even after the ban. Though the thickness of these bags varied significantly with the type of product sold, in most cases, these bags are thin single use below 20-micron.

The Government of Kerala also imposed a ban on the use of plastic carry bags with thickness less than 30 microns in 2003. This policy it-

self is ineffective. The existence of a large informal sector makes the effective enforcement of this law difficult without the buttress of strict peer monitoring. "Informal firms can create severe pollution problems in developing countries and are difficult to regulate" (Blackman, 2000). Hence, in developing countries with little enforcement capacity, a blanket ban may not be the best possible solution (Gupta, 2011)[7] and it is quite ineffective.

'Avoid Plastic Use' - Campaigning through Mass Media and Awareness Programmes

Common people are unaware of the adversities of plastic use and the harm that it creates to the soil, drinking water, the vegetation, and healthy environment. This is evident from the free riding behaviour of the people conveniently litter plastic waste indiscriminately elsewhere. The better way through firms can be persuaded to avoid using plastic packing materials is the consumer response and their demand. Once people start to demand commodities especially food items packed in safe materials other than plastic, firms will resort to other technologies even if it amounts to a higher cost of production. "The literature suggests that the reliance of environmental policy on market-based incentives has led firms to shift from regulation-driven management approaches to proactive strategies involving the voluntary adoption of environmental management systems (EMSs) (Anton et al. 2004; Segerson and Miceli, 1998). Liability threats and pressures from consumers, investors and the public seem to be motivating EMS adoption…". Rivera (2002) [21] in a study on the participation of hotels in the Costa Rican Certification for Sustainable Tourism (CST program) finds that hotels with certified superior environmental performance have differentiation advantages that yield price premiums.

Higher environmental performance is also significantly related to government monitoring, trade association membership and a focus on "green consumers". Arora and Cason (1996) and Khanna and Damon (1998) concluded that firms with more contact with final consumers and greater research and development expenditures were more likely to perform beyond the minimum level of compliance suggested by government regulations. The power of 'sovereign consumers' must be tapped through massive education campaigning in mass media network. 'Demand driven' environmental controls for environmental protection need to be developed.

Reduce Plastic Use: A tax on Plastic

Of course, a tax on plastic theoretically might reduce its consumption. Usually, plastic carry bags with thickness less than the prescribed microns are used by general merchants, vegetable merchants, hotels and restaurants. The items supplied by these enterprises are of daily consumption, with comparatively low price elasticity, of the people. Merchants are unlikely to charge a price for the packing material, say plastic carry bags. Instead, they will raise the price of items, which are being packed. Indeed, the tax will have a 'shifting' effect. The merchants will shift the tax imposed on plastic carry bags, for which they charge no price, to the shoulders of the consumers in the garb of a price hike of such essential items. Hence, the price of essential items increases marginally and consumers may not be aware of all the process that are going on with a price rise. As these commodities are essential items, people will not reduce their purchase at all. Thus, a nominal tax on plastic carry bags is ineffective, unless it surpass the cost advantage and convenience of such items hold.

However, countries such as Denmark and Ireland were successful in reducing the use of plastic carry bags to 70-90 percent by imposing a sizable tax/levy and explicit price. The South African experience gives a clear picture. During September 2002, consumers who purchase plastic carry bags are charged 46 cents for each plastic bag used, which includes an environmental levy of 2 cents per plastic bag. Plastic bag sales went down by 60-90 percent. Although its usage increased significantly in the succeeding year when the price came down to 17 cents per bag, it has remained 20-80 percent below the pre-legislation level (Hassan et al., 2007).

Recycling: Decentralized Efforts at Local Self-Government Level

An alternative solution is to establish plastic refining plants at the jurisdiction of local self-governments such as panchayats, municipalities and corporations for producing other useful products. In India, Solid Waste Management is a 'Muncipal' (Local self-government) subject. In rural areas, where plastic waste is comparatively less, a group of Panchayats together can initiate the venture.

The Green Deposit Refund System for Effective Collection of Plastic Waste

Efficient disposal and recycling of plastic materials require their proper collection. The local self-government authorities can arrange for collecting plastic waste at the source, the household and shop level. Littering public tourist places such as forests, valleys, hillsides, pastures, beaches etc. with plastic containers of food and bottles of soft drinks remains insurmountable. Many of these tourist places, the services of which are having public goods characteristics, are not effectively managed by a specific/statutory authority, even if such an authority does exist. What is required is to create an appropriate cost/ incentive system for enabling the complete collection of unwanted litter in the public places. The state government can introduce a green deposit-refund system for effective collection of bottles and other plastic materials from public places including tourist centers.

Formally, the system envisages that the retailers have to deposit a specified amount of money per unit of the commodities, which are being sold in such containers and bottles. The retailers can charge this 'deposits' from customers. The 'deposits' will be paid back when empty containers and bottles are returned to the retailers and retailers to the wholesalers or distributors. This system has two fold advantages.

- It discourages the purchase of food and soft drink items, which are being packed in plastic containers and bottles by those people who are unable to return them. For a consumer, who behave just as described above, 'Deposits' have the same effect of an explicit price or a tax, both raise the price.
- The refund system is an incentive for waste collection.

The deposit refund system could be more generalized into a 'Green Deposit Refund System' with slight modification, keeping the basic principle, for efficient plastic waste collection.

- Include more items under the purview of this system and list them.
- The price tag of commodities must contain information about the actual price and deposits to be made.
- The 'deposits' must be a significant amount; the price differential of items packed with plastic containers and without it should be a sizable amount. It should perform both a disincentive for buyers and an incentive for waste collectors.
- Start special collection/refund centers wherever necessary. This facilitates any person to collect the waste material from any place and to obtain the refund specified in the price tag from any collection/refund centre of any waste item listed.

The modifications suggested will create a group of waste collectors with due rewards, and will ultimately result in more effective waste disposal.

intensity of plastic waste problem and Effective method of Plastic Waste Management: case studies

Here, two case studies have been done. Firstly, a micro-level study that seeks to analyze the extent to which plastic waste is creating problems to sustained tourism development is done. The perceptions of the tourists and local people are collected and analyzed. Secondly, how effective wastage management can be done, by way of recycling of wastage. For this, a case study of *Chembilodu* Panchayat in Kerala is analyzed closely, and the extent of its replicability is studied.

Extent of Plastic Debris Problem

The how chronic is studied by making a micro level and empirical study at Fort Kochi beach – a place of historical importance and a prominent tourism destination for both domestic and foreign tourists. A sample 40 tourists (20 domestic and 20 foreign) are randomly selected and their feedback on the negative aspects of this tourism destination has been collected using a Questionnaire. Similarly, a sample of 30 local residents (including shop owners, retail merchants etc.) are also selected and their feedback is collected as above.

It is noted that the most chronic problem associated with a prominent tourism destination like Fort Kochi beach is that of plastic and other garbage. This is the opinion of both tourists and local residents. Fifty percentage or more of both the types of respondents have perceived

the above as the most chronic problem, underscoring the seriousness of the problem. The average percentage of the parameter among the two groups being 52.86 percent – the highest of all the four different problems. The next serious problem is also quite related to the above viz. lack of cleanliness and safety (17.14 percent, average score). In short, garbage problem is very chronic.

Successful Wastage Management through Recycling: Case of Chembilodu Panchayat

Here, the success of *Chembilodu* Panchayat in wastage disposal through recycling is studied. The plastic waste refining plant established by the *Chembilodu* Panchayat in Kerala is embracing. Union Ministry for Panchayati Raj Institutions selected *Chembilodu* as a model Panchayat for it implementing waste recycling models to be accepted for the whole nation. The project became a functioning reality with the cost of Rs.18 lakhs for constructing buildings, purchasing equipments and goods auto-rickshaw. The plant has the capacity to refine plastic waste of nearby Panchayats also.

The plant in *Chembilodu* Panchayat employs Kudumbashree women for collecting plastic waste and processing them for making granules, its value added product. There is also provision for plastic waste collectors besides the collecting agents appointed by the plant to gather waste plastic and sell them to the plant at a price. The plant could be improved by installing new equipments for producing other value added products such as pipes, switchboards, plastic twine etc. using the granules. Selling these products earn revenue for the plant. Thus, the waste turns to be an asset, which generates income and employment for the poor women. The running cost of the plant - salary and transportation- is met from a fund, consists of three items, constituted by the Panchayat.

- The Panchayat charges a nominal fee (Rs.5) per month for collecting the waste from each household.
- The Panchayat set apart the same amount (Rs.5) collected as fee per household per month and contributes to the fund.
- The sale proceeds of the plant.

The decentralized plastic refining plants operates just as any commercial enterprise purely based on cost revenue principles. Even though the enterprise is assumed to generate zero profit, the revenues must cover at least labour cost, transportation cost and overhead charges. This poses a serious limitation in collecting waste from far off places where the waste is scattered over a wide area and collection of waste is not economically viable.

Another limitation of recycling technology is that in India it is almost standardized and crude. It is incredibly polluting and hazardous to the workers, the environment and often to the users of the recycled material. Therefore, stringent control measures have to be enforced. At present, the recycling of plastic constitutes barely 1 percent of total plastic waste in the country. Hence, the country has to go far ahead in improving the technology as well as the quantity of recycling plastic waste.

CONCLUDING REMARKS

Excessive use of plastic and the disposable consumption style of the people is really a threat to the growing eco-tourism industry in Kerala. Nature gifted tourist places should be kept intact, free of waste especially plastic littering with participation of local people. The state government should initiate a leading role in effectively managing the plastic waste in order to get rid of its adversities. Any one measure is quite ineffective and incomplete. Item specific and integrated policy mix is more viable and suitable for effective waste management in countries like India where a large chunk of economic activity is being carried out in the unorganized sector. What is required is to create an appropriate cost/price/incentive system to reduce production and use of plastic, to establish mechanisms for reuse and recycling, and to provide mass education for generating demand driven controls.

Table I: Economic Benefits of Tourism – An Overview

Indicators	Year	India	World
Contribution of Tourism to GDP*	FY 2003	05.83 %	10.00 % (2002)
	FY 2004	05.90 %	10.20 % (2003)
	FY 2005	06.11 %	10.40 % (2004)
	FY 2006	NA	10.60 % (2005)
Employment in Tourism Sector*	FY 2003	38.6 million (8.27 %)	198.098 million (7.8 %) (2002)
	FY 2004	41.8 million (8.78%)	194.562 million (7.6 %) (2003)
	FY 2005	NA	214.697 million (8.1 %)
	FY 2006	NA	221.568 million (8.3 %)

(Source: *Tourism Statistics 2006 at a Glance*, Ministry of Tourism, Govt. of India, Sept. 2007).
[* Direct as well as indirect contribution of tourism.]
[Figures in bracket for employment shows the percentage share in total employment].
[World figures shown above are drawn from World Tourism & Travel Council (WTTC)].

Table II: Trend of Tourist Arrivals into Kerala

Year	Domestic Tourist	Percentage Change	Foreign Tourists	Percentage Change
2000	5013221	2.6	209533	3.8
2001	5239692	4.5	208830	-0.5
2002	5568256	6.3	232564	11.3
2003	5871228	5.4	294621	26.7
2004	5972182	1.7	345546	17.3
2005	5946423	-4.3	346499	.27
2006	6271724	5.47	428534	23.7
2007	6642941	5.92	515808	20.37
2008	7591250	14.28	598928	16.11
2009	7913537	4.25	557258	-6.96
2010	8595075	8.61	659265	18.31

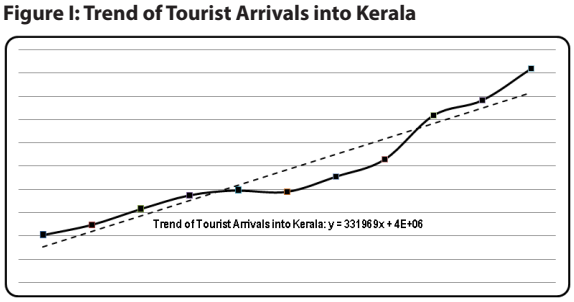
Source: *Economic Survey 2011*, Kerala State Planning Board, Government of Kerala).

Table III: Opinion of the Tourists regarding Negative Factors of Tourism

Opinions	Tourists		Local Residents		Total	
	No.	Percent	No.	Percent	No.	Percent
Poor infrastructure facilities	8	20	6	20	14	20.00
Poor publicity and advertisements	4	10	3	10	07	10.00
Lack of cleanliness and safety	6	15	6	20	12	17.14
Poor Disposal of Plastic / other garbage	22	55	15	50	37	52.86
Total	40	100	30	100	70	100.00

(Source: Field Survey)

Figure I: Trend of Tourist Arrivals into Kerala



REFERENCES

(1) Anton, WRQ; Deltas, G; Khanna, M (2004), 'Incentives for environmental self-regulation and implications for toxic releases', Journal of Environmental Economics and Management 48 (1): 632-654 | (2) Blackman, A (2008), 'Can voluntary environmental regulation work in developing countries: lessons from case studies',Policy Studies Journal 36(1): 119-141. | (3) Bhardwaj, D.S, Kandari, O.P et. al. (1998), Domestic Tourism in India, Indus Publishing Company, New Delhi., First Edition. | (4) Brundtland G.H. (1987), The Brundtland Report, World Commission on Environment and Development, Oxford University Press. | (5) Chatak, G.R. (2007), Sustainable Tourism Codes and Guidelines, Cyber-Tech Publications, Daryaganj, New Delhi, First Ed. | (6) Economic Review, Kerala State Planning Board, Government of Kerala, for the years 2008 to 2012. | (7) Gupta Kanupriya (2011), 'Consumer Responses to Incentives to Reduce Plastic Bag Use: Evidence from a Field Experiment in Urban India',SANDEE Working Paper, 65-11. | (8) Jayasinghe Udith -Mudalige and Menuka Udugama (2011), 'Motives for Firms to Adopt Solid Waste Management Controls: The Case of Food Processing Sector in Sri Lanka', SANDEE Working Paper, 60–11. | (9) Jayasinghe-Mudalige, UK; Henson, S (2006a) 'Economic incentives for firms to implement enhanced food safety controls: case of the Canadian red meat and poultry processing sector', Review of Agricultural Economics 28(4): 494-514. | (10) Jayasinghe-Mudalige, UK; Henson, S (2006b) 'Use of confirmatory factor analysis techniques to overcome the problems of subjectivity & unobservability of incentives', Sri Lankan Journal of Applied Statistics 7: 71-89. | (11) Kabia, Sunil K. (2005), Tourism and Environment, Mohit Publications, New Delhi, First Edition. | (12) Khanna, M. (2001), 'Economic analysis of non-mandatory approaches to environmental protection', Journal of Economic Surveys 15(3): 291-324. | (13) Khanna, M. and W. R. Q. Anton (2002), 'Corporate environmental management: regulatory and market-based pressures', Land Economics 78: 539 – 558. | (14) Khanna, M; Damon, LA (1998), 'EPA's voluntary 33/50 program: impact on toxic releases and economic performance of firms', Journal of Environmental Economics and Management 37: 1-25. | (15) Lane, B. (1991), "Sustainable Tourism, a new culture for the Interpreter", Interpretation Journal, Vol. 49. | (16) Manoj, P K, (2008), "Sustainable Tourism in India: A Study from a Global Perspective with Focus on Tourism Prospects of Kerala", Proceedings of Second International Conference on Responsible Tourism in Destinations, 21-24 March, 2008, p.7. Also available online in the Official website of Responsible Tourism Conferences at: http://www.artyforum.info/documents/MicrosoftWord-MANOJ-Poster.pdf | (17) Manoj, P. K., (2009), "Environment Friendly Tourism for Sustainable Economic Development in India", International Journal of Commerce and Business Management (IJCBM), pp.139-147. | (18) Manoj, P. K., (2010), "Tourism in Kerala: A Study of the Imperatives and Impediments with Focus on Ecotourism", Saaransh RKG Journal of Management, Vol. 1, No. 2, Jan. 2010, pp.78-82. | (19) Nigam, Satish C. (2006), Ecotourism and Sustainable Development, Rajat Publications, New Delhi, First Edition. | (20) Oommen, M. A., (2008), "Reforms and the Kerala Model", Economic & Political Weekly, Vol. XLIII, No.2, Jan. 12-18, 2008, pp. 22-25. | (21) Rivera, J (2002), 'Assessing a voluntary environmental initiative in the developing world: The Costa Rican certification for sustainable tourism', Policy Sciences, 35: 333–60. | (22) UNEP (2006), 'Policy instruments for the management of plastic bags in Nairobi', Report prepared by Kenya National Cleaner Production Centre, Nairobi | (23) World Bank Institute (2008), Improving Municipal Solid Waste Management in India: A Source-book for Policy Makers and Practitioners, Washington, D.C.: World Bank. | (24) White Paper on Ecotourism Policy (Draft), ATREE, April, pp 4-5. (2006). | (25) Official websites of World Tourism Organisation (WTO), World Travel and Tourism Council (WTTC), Kerala Tourism (Government of Kerala), and Incredible India (Government of India). |