

# Impact of Tourism on Vembanadlake System in Alappuzha District

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## ABSTRACT

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*Vembanadwetland is the largest wetland system in India which is the official site of the Ramsar convention on Wetlands. Human Intervention on the lake is severe which affects the function, structure and entire composition of the Vembanadwetland system. There is a drastic growth in tourism sector in and around Vembanad Lake for the past two decades. The paper focuses on the impact of tourism on Vembanadlake system as a result of the tremendous growth of Backwater tourism in and around the VembanadLake. Data from both primary and secondary sources are used for the study and analysis. Even though the Lake flows through three districts of Kerala the study area is limited to Alappuzha district only. Recommendations are found out for the sustainable development of tourism on Vembanad Lake system.*

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**Keywords:** Vembanad Lake, Alappuzha, Tourism, economy, Socio-cultural, Environment and Ecosystem

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for the tourism where the nature beauty is at the peak among the Ramsar site (KA

## INDRODUCTION

Vembanad Lake spreads in Alappuzha Kottayam and Ernakulum districts of Kerala which forms Vembanad wetland system of an area of 2033.02km<sup>2</sup>. In the past twenty years the growth of tourism sector in and around the Vembanad Lake is spectacular. Backwater tourism as emerged as the backbone of the tourism sector of Kerala state which leads to the tremendous increase of Houseboats in addition to many resorts which developed recently around the shore of lake. Kerala comes under the list of 50 places of Life time published by National Geographic Traveller<sup>3</sup> scenic beauty of the region attracts the domestic as well as the foreign tourists. Kuttanad wetland system including Vembanad Lake which is now receiving global attention because of its unique feature which is below MSL permits the cropping of Rice in large quantity and permits the harvest of fish and an area which is thriving



Sreejith, 2013).

Percentage of increase of foreign exchange earning from tourism in Kerala in last decade is 689%<sup>4</sup>. Rise of tourism sector in Alappuzha district results into shift of employment. one or two member from each house of Kuttanad area which is known as the rice bowl of Kerala is now engaged in tourism industry as houseboat operators or other employment related to house boat and

<sup>3</sup>. National Geographic, Editor's Letter: *50 Places of a Lifetime*:  
[http://intelligenttravel.nationalgeographic.com/2009/09/17/50\\_places\\_of\\_a\\_lifetime\\_1/](http://intelligenttravel.nationalgeographic.com/2009/09/17/50_places_of_a_lifetime_1/). Retrieved on 30 May 2013.

<sup>4</sup>. Report on Tourism statistics 2011 : Page No:2  
Foreign Exchange Earnings (Rs. In Crores) 2001 is 535 and 2011 is 4221.99

backwater tourism<sup>5</sup>. This shift in employment sector from agricultural to the service sector is caused as a result of change in attitude and perception to the traditional occupation like agriculture (Narayanan, 2003). Shift of employment itself indirectly affects the agricultural production of the region. Uncontrolled growth in the number of the houseboat in Vembanad wetland system affects the environment system of lake. Paper focuses on the adverse effect of the backwater tourism growth in the Alappuzha on the environment system of wetland and Livelihood of the area around the lake and to find out the recommendation for the sustainable development of backwater tourism in the region.

## TOURISM AND ECONOMY

According to state Planning Board Report Tourism contributes about 9% of total of the gross domestic product and thus Tourism plays an important role in the development of Kerala's economic growth. An investment of Rs12 lakh can create 89 jobs in Tourism, whereas in agriculture it is 45

jobs and in manufacturing it is 13 jobs for the same investment<sup>6</sup>. According to the Kerala Tourists statistics 2013 Foreign exchange from Tourism for the year 2013 is Rs: 5560.77crore which is an increase of 21.63 % over the previous year and Foreign Tourist arrival to Kerala during the year 2013 is 8, 58,143 It shows an increase of 8.12 % over the previous year's figure of 7, 93,696. Total Revenue (including direct & indirect) from Tourism during 2013 is Rs: 22,926.55crore, which is an increase of 12.22% over the last year. Tourism in Kerala provides direct and indirect employment for 1 million people in Kerala and contributes Rs1000crore every year to the investment pool of the economy (Vijayakumar, 2009: 5). House boat Tourism in Kerala is the main destination for the foreign Tourists coming to Kerala. For house boat Tourism in Vembanad Lake Alappuzha (population: 174,164, capital of Alappuzha district) and Kumarakom (population: 25,000, Kottayam District) act as the two major destinations.

In Alappuzha district alone the total domestic tourist arrival for the year 2013 is 211749 which is 6.29% increase of previous

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<sup>5</sup>Data from the primary survey done in Kainakary Panchayath of sample size 100 household for Un published PG Dissertation " *Planning for Integrated development of Inland waterways in Alappuzha District Kerala*" by Safoorabevi K H , MURP ,IIT Roorkee .

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<sup>6</sup>WTTC. 2003. *Kerala: the impact of travel and tourism on jobs and the economy*. World Travel and Tourism Council, United Kingdom.

years and International tourist arrival in Alappuzha district for the year 2013 is 50760 which is an increase of 9.07% of previous year<sup>7</sup>. Domestic House boat tourism in Alappuzha district is increasing for the past decade and it contributes about 70% of the House boat Tourism in Alappuzha district (Corinne Karlaganis / N. C. Narayanan, 2014). In Alappuzha and Kottayam districts the total number of registered house boat number exceeds 1000 . This indicates the tremendous growth of House boat industry which is started 20 years back with 20 boats. From the primary survey done in Kainakary Panchayath which is surrounded by the Vembanadkayal found that from each house hold at least one member is directly or indirectly involved in the Houseboat Tourism.14% of the total population of the Kainakary region of sample size of 100 households is involved directly and indirectly in the Houseboat Tourism industry. The houseboat Industry can provide the direct employment of 3 persons per boat (a captain, a guide/helper and a cook- work on each house boat), the rise in number of houseboats which is now above 1000 boats can provide 4500 direct employment and indirect employment of about 5000 including the fish and vegetable

suppliers, washing and cleaning of boats, autoriksha and taxi drivers, travel agents and others. By combining direct and indirect employment it can provide job for 10,000 persons.

## **SOCIAL AND CULTURAL IMPACTS**

According to Ratz (2000) tourism can affect Socio-cultural of host community which includes changes in traditional lifestyles, value systems, family relationships, individual behavior and community structure. Even though the tourism sector in the region has greater economic benefits which are employment income and foreign generations there are also negative socio-environmental impacts(Vijayakumar, 2009:5). Houseboat tourism activities are affecting the privacy of livelihood of people living in the region around the VembanadLake. Enormous photography by tourists is affecting the privacy of the people whose daily life is closely linked with the backwater system<sup>8</sup>. Some NGOs of the region also mentioned about the increasing of fish price and prostitution taking place in some Houseboats (Corinne Karlaganis / N. C. Narayanan, 2014).

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<sup>7</sup>The report on kerala tourism statistics 2013

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<sup>8</sup> Interviews done among the local people of the Vembanad lake region mainly Kainakary Panchayath

Socio cultural impacts of tourism are effects on host communities with direct or indirect connection with tourist and tourism industry. These are subjective, not always apparent, and are often difficult to measure as to large extent they are indirect (Ratz, 2000). From the household survey done in Kainakary panchayath of sample size hundred it is found that the 52% of the total respondent's opinion were their privacy is highly affecting by the Houseboat tourism, 29% were of opinion that it is slightly affecting and 19% were of opinion that it is not affecting. This shows the Negative impact of tourism on the privacy of the livelihood of people living around the VembanadLake.

A shift in employment sector is noticed in the region. The Kuttanad wetland region around the VembanadLake was deeply rooted in Paddy cultivation. The land covered by paddy cultivation in Alappuzha district is 25% more than the state average<sup>9</sup>. Now there is a decline in the agricultural production in the region due to the lack of availability of labors. Wages for women and men from the construction works related to tourism is higher than the wages from the paddy cultivation. High wages from the tourism attracts people more towards the

occupation related to tourism sector and this causes the lack of availability of labors for the paddy cultivation. This acts indirectly as the cause for the decline of paddy production in the region.

## **BACK WATER TOURISM AND ENVIRONMENT**

Environmental impact's measurement is important because people's support for tourism development depends upon their attitudes towards environmental changes (Jurowski, et al. 1997). 'Most of the natural resources used in tourism are either common or public property. Unplanned and reckless use of these resources with profit motive will ultimately bring home what is labeled as "The Tragedy of the Commons"' (Vijayakumar, 2009: 3). Livelihood of people around the Vembanad Lake is very much related to water, the agricultural fishing activities depends on the quality of the water.

Houseboat tourism is affecting the environment and ecosystem of the VembanadLake. The pollution from the houseboats is the sewage from toilets, oil from engines, plastic wastes and food wastes. Pollution caused by the sewage can be measured by the number of total coliform bacteria in water. In the report of Kerala

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<sup>9</sup> Statistics Alappuzha Panchayath level 2013.

state pollution board 2009 it is indicated that total

Coliform bacteria MPN/100ml of 1012, and faecal coliform of 744(ibid). The total coliform Bacteria are 30% higher in Houseboat jetty than in the remaining area. This is not alarming if the water is not using for drinking purpose. But it is found that the people living around the lake are using the lake water for household purposes because the drinking water supply to the region by government is not sufficient. Even houseboat workers have admitted that they are using the lake water for the cooking purpose in the Houseboat. The problem is that main houseboat jetty in Alappuzha has only one tap which supply drinking water which is not sufficient to provide the water for hundreds of Houseboats.

From the household survey done in the region it is found that 4% of the sample population is affected by the skin diseases, 3% by cholera, 2% jaundice and .5% cancer. The risk of waterborne disease in the region is high due to the presence of coliform bacteria in the lake in high amount. People living in Villages around Vembanad Lake are still using the lake water for drinking purposes<sup>10</sup> due to the poor water supply.

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<sup>10</sup> Interview done on the local people of Kainakary Panchayath on December 2013.

Plastic wastes are tremendous around the jetty points due to the lack of proper waste disposal. Also the chemical fertilizers using for the agricultural fields in Kuttanad region also affects the backwater environment. The acid leachate from Paddy fields in the region and effluents from industries, affects the lake quality very badly over the past ten years (Padmakumar, 2006: 589). Kuttanad region which is not Rice Bowl of Kerala because of it is large quantity of rice cultivation is consuming about 20,000 tons of fertilizers per year, in addition to a large quantity of agrochemicals and pesticides (Kerala State Pollution Control Board, 2010b: 21). This amount itself shows that the amount of fertilizers which are using in the paddy fields of Kuttanad region is in alarming rate and it is directly effecting the environment of Vembanad Lake.

### **EFFECT OF BACKWATER TOURISM ON VEMBANAD LAKE ECOSYSTEM**

The people of different villages around Vembanad Lake are highly depended on the Vembanad ecosystem. The ecosystem has different functions and economic value because most of the people in the region are engaged in water related activities like fishing, clam collection. The various human

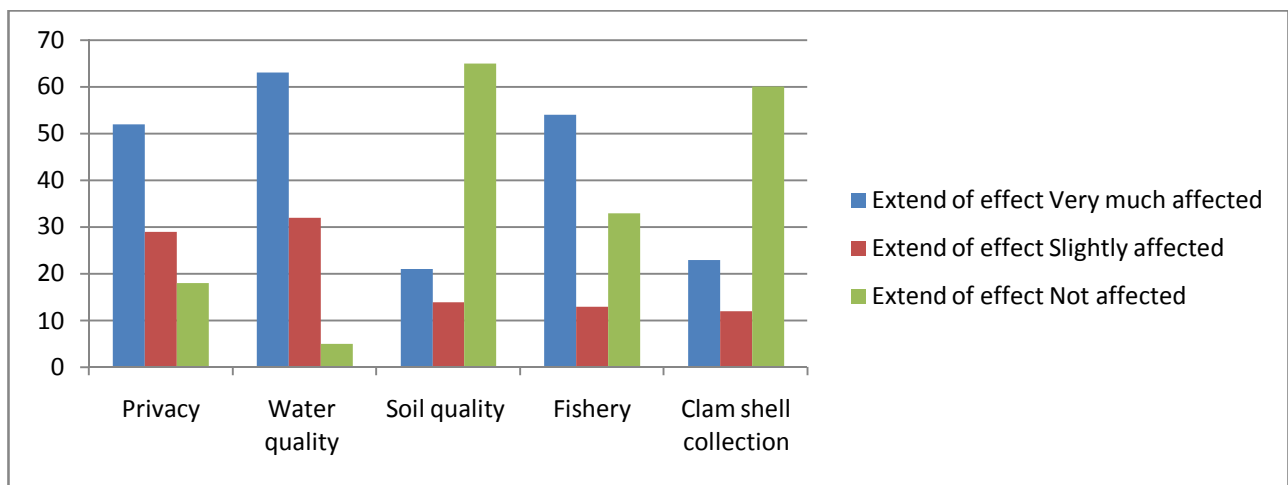
interventions have adversely affected the ecosystem of lake. The construction of Thanneermukkam barrage across the lake to prevent the intrusion of salt water from the sea has destroyed the ecosystem of Vembanad Lake and thus resulted into damage of fish variety of the lake. The increased number of number houseboats in lake adversely affected the lake ecosystem. The oil leakage from the house boats causes the water pollution and affects the various species of Lake Ecosystem.

### ANALYSIS OF PRIMARY DATA

Primary household survey of sample size 100 has done in the Kainakary Panchayath of Kuttanad region which lies around the Vembanad Lake. Livelihood of people of the region depends on the activities related to the waterways. The major occupation of the region is paddy cultivation and a trend in the shift of job pattern can be observed from the agricultural sector to Tourism sector. The field study was done in the month of December 2013.

#### Findings from the study

	Extend of effect		
	Very much affected	Slightly affected	Not affected
Privacy	52	29	19
Water quality	63	32	5
Soil quality	21	14	65
Fishery	54	13	33
Clam shell collection	23	12	60





Among 100 household survey 52% of the population were opinion that the privacy of people is very much affected by the tourism and 29 % population were of the opinion is it is slightly affected. Large percentage of the people has the opinion that water is quality and soil quality is affected because of the backwater tourism. Also 54% of the people have the opinion that tourism has very much affected the fishery. An urgent measure has to be taken for the increasing pollution of Vembanad Lake which directly affects the ecosystem of the lake.

## CONCLUSION

Tourism Industry is the one of the fast growing sector in the world which gives foreign exchange and employment opportunity. Even though the backwater tourism in and around Vembanad Lake have the positive impact on the economy it has several negative impacts also. Number of houseboats as a part of backwater tourism is increasing tremendously. The waste from the houseboats which includes toilet wastes and kitchen wastes without the proper waste treatment mechanism is directly disposing into the lake is affecting the environment and ecology of the lake. Livelihood of people living around the Vembanad Lake is

affected because of the water pollution. The decrease in the fish species due to the water pollution affects the people who earn through fishery. Major problems due to the backwater tourism are solid and liquid wastes, oil leakage from house boats and unplanned construction around the lake. The Vembanad wetland system comes under the Ramsar site which is highly fragile and required the protection and construction. The mangrove swamps are affected because of the construction of resorts and hotels for tourism around the Vembanad Lake. Mangrove swaps are the breeding site for many fish species and birds. Due to the declining of mangrove forest in the region there is a great decline of many species in the region.

The proper Infrastructure has to be provided for solid and liquid wastes and sewage treatment plant has to be implemented in major boat jetty stations. Awareness program has to be done to reduce the direct disposal of waste into the lake. A proper administration from the governance should be there for the conservation of Vembanad wetland system and to achieve the long term sustainability of environment.



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