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Sustainable Development Strategies for Erumeli - A Base Camp of Sabarimala

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Abstract

Erumeli Panchayat in Kottayam district has an inevitable role in Sabarimala pilgrimage as it hosts Pettathullal which is an important ritual for kanni Ayyappas. The traditional trek route to Sabarimala starts from here, thus Erumeli is a major center for Sabarimala pilgrims. Sabarimala master plan also identifies Erumeli to be developed as a major base camp. The present study focuses on the developmental strategies of Erumeli in two perspectives-as a Local Self Government and a pilgrimage base camp. Developments in this area have to be interlinked with the pilgrim activities and local needs without disturbing both. Study aims at identifying regional issues of native population as well as pilgrims and also addresses the impact of Sabarimala pilgrimage and a perspective planning solution to bring out a balanced condition of pilgrim and local population development involving residential participation in pilgrim management.

Keywords: *Erumeli, Sabarimala Pilgrimage, Sustainable Development, Population Development*

INTRODUCTION

Erumeli holds a unique place in the Sree Ayyappa mythology and it hosts the famous 'Pettakettu' or 'Pettathullal' in memory of the journey of Lord Ayyappa and Vavar to Sabarimala after killing Mahishi and hence the name 'Erumakolli' further modified to 'Erumeli'.

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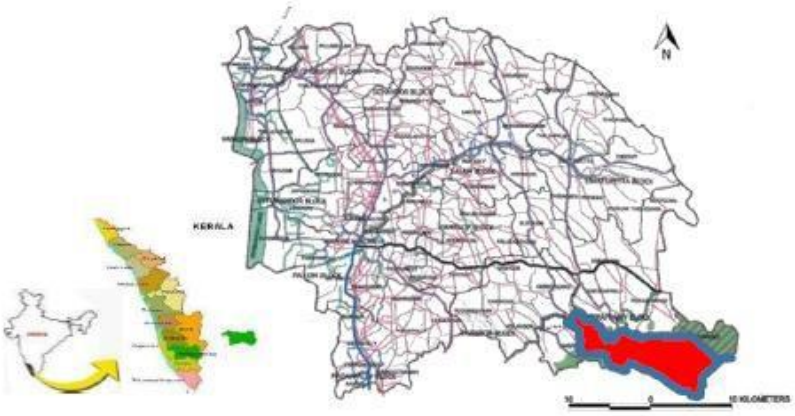

Figure 1: Location of Erumeli Panchayat

Source: Author generated from Google map 2015

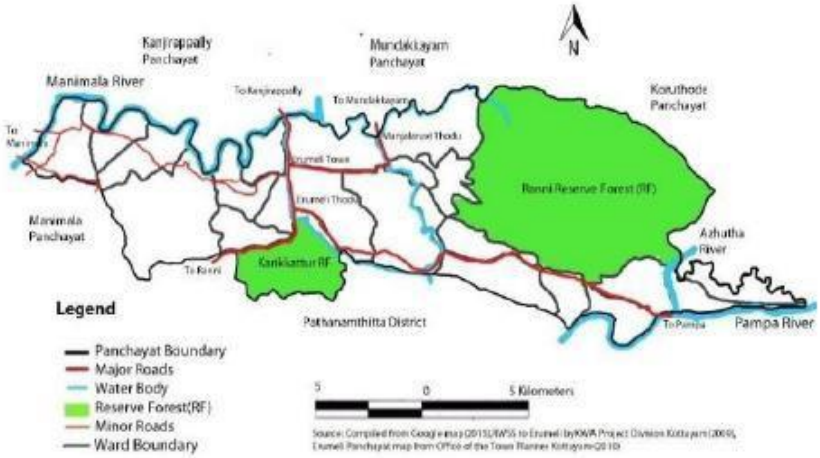

Figure 2: Study area - Erumeli Panchayat Source: Author generated

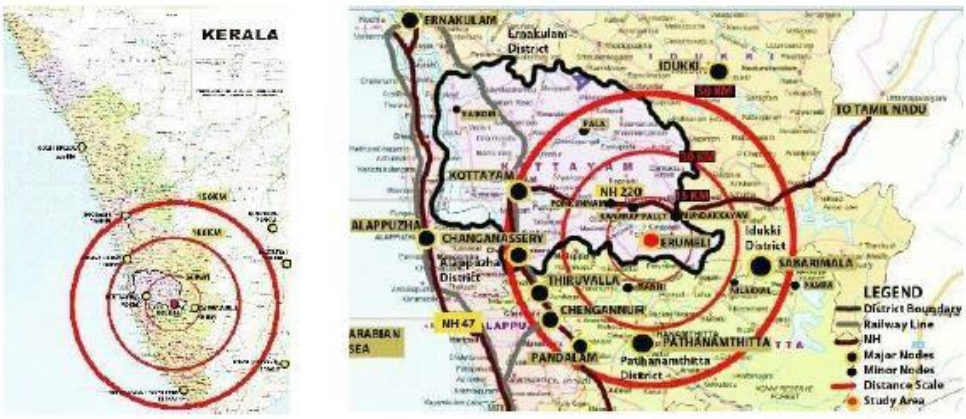

Figure 3: Regional linkages of Erumeli

Source: Author generated from Google map 2015

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Erumely Panchayat is situated at the boundary of Kottayam and Pathanamthitta districts and is 49 km south East of Kottayam. It is a major halt point on the way at 48 km away from Sabarimala. The nearest airport is Ernakulam 106km away and rail heads are at Kottayam, Chengannur, Changanachery, & Thiruvalla. NH220 passes 10 km near to Erumely. See figure 2 & 3.

Majority of the pilgrims visiting Sabarimala also visit Erumeli every year during the seasonal span of 67 days from first of Vrischikam and first five days of every Malayalam month. The magnitude in number shows the necessity to develop Erumeli as a center (Base camp) with all requirements for pilgrims as envisaged in Sabarimala Master Plan by Travancore Devaswom Board (TDB). [7] Erumeli being an active town different from Nilakkal forest base camp, needs a development strategy catering pilgrim demand and local needs which will be benefiting local population from both ends.

METHODOLOGY

For preparation of a development plan for Erumeli panchayat catering needs of both pilgrim as well as local population initial basic data collection was done from secondary sources as well as reconnaissance survey, observation and interview with officials. The current profile of the panchayat was understood from the compilation of these initial data. The real impact of pilgrimage on the panchayat both positive as well as negative was studied from questionnaire survey conducted among local population, traders, officials and various service providers. Difficulties and requirements of pilgrims were also studied through questionnaire survey among pilgrims. Results obtained from primary survey were analyzed in detail for finding out the real issues in Erumeli. Then a sustainable solution was found out for the entire issues and opinion survey was conducted among pilgrims and local population to check the feasibility of the given proposal. Participatory planning solution is suggested with various phases of interventions to be undertaken.

STUDIES

Key sectors of the study area are analyzed in the background of primary and secondary data for identifying the existing conditions and issues. Extensive studies were carried out to identify the existing conditions, statistics and proposals in Erumeli from various reports and Sabarimala Master Plan 2006.[1][2][7]

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i. Demographic profile

Population in Erumeli Panchayat is 43273 with average density 472 per sq.km and a decadal growth rate of 9.6% in 2011. Population density varies widely among wards from 200 to 2500. [4]. See figure 4.

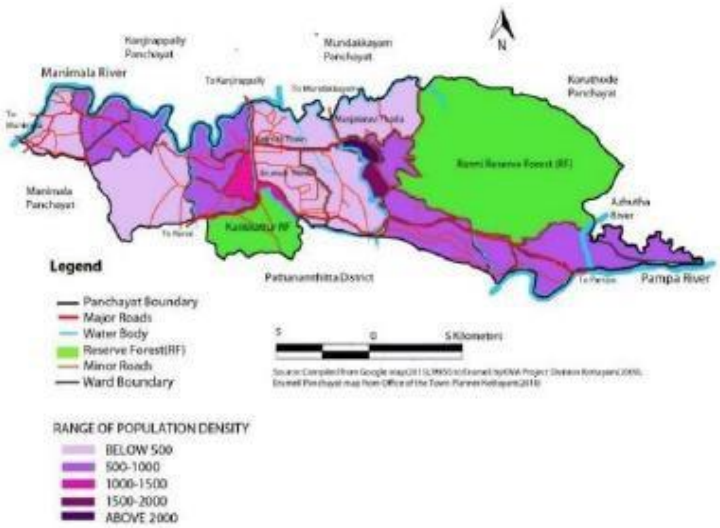

Figure 4: Population density distribution 2011

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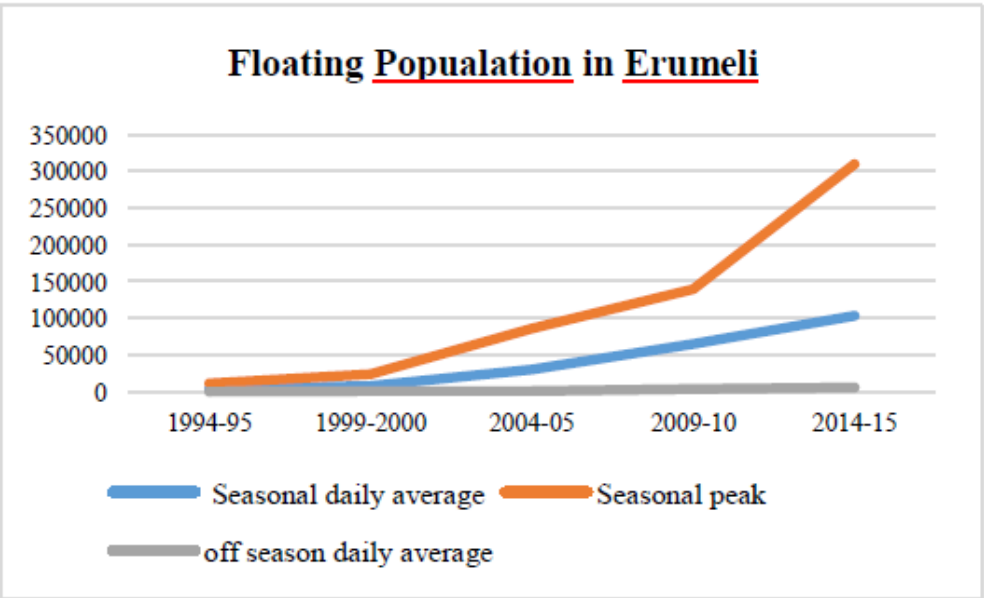

Figure 5: Floating population in Erumeli

Source: Compiled from Carrying capacity based development plan of Sabarimala 2002 [1]

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The floating population in Erumeli is increasing at a rate of 30% every year [7] with 3 lakh persons per day in 2014-15 season. The average daily demand during pilgrim season is 8 times the normal demand in Erumeli. See figure 5.

The population projections show that in 2030, the average floating population will be 5 lakh per day for a native population of 58228.

ii. *Land Use*

Forest and plantation areas constitute 85.5% of total land use and there are no paddy fields or wetlands. Residential land use forms only 1.53% with an average population density of 472 persons per sq.km which is much less than district average of 896 and state average of 859 persons per sq.km.[4]. See figure 6.

iii. *Socio Economic Conditions*

Major work force is engaged in agricultural sector, but it shows a decreasing trend year by year while the marginal workers are increasing. Work participation is increasing at a rate of 3% per annum. Large no of women and children are engaging in the seasonal pilgrim business activities.

There is a large shift in occupational structure during the pilgrim season since majority of population engage in seasonal activities. See figure 7.

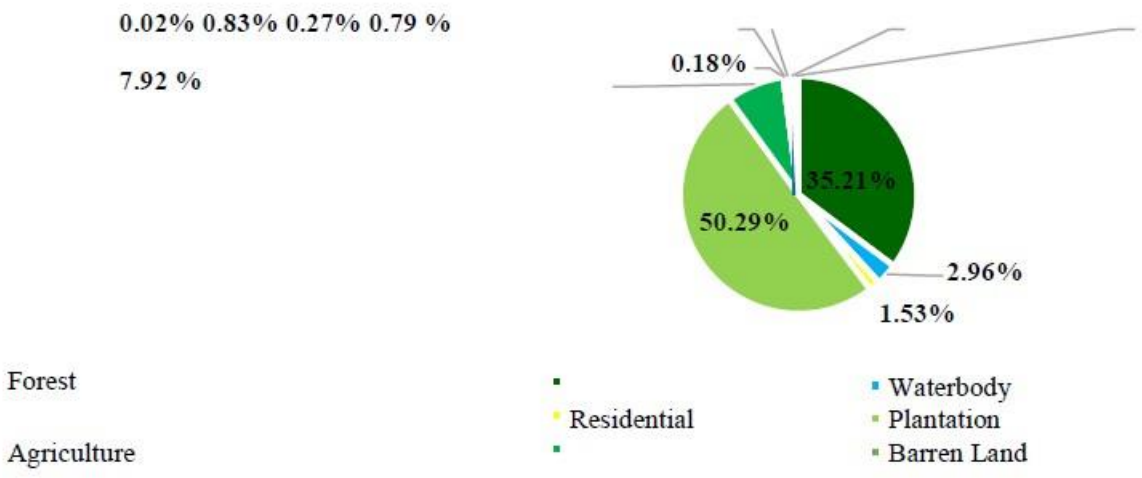

Figure 6: Existing Land use split up

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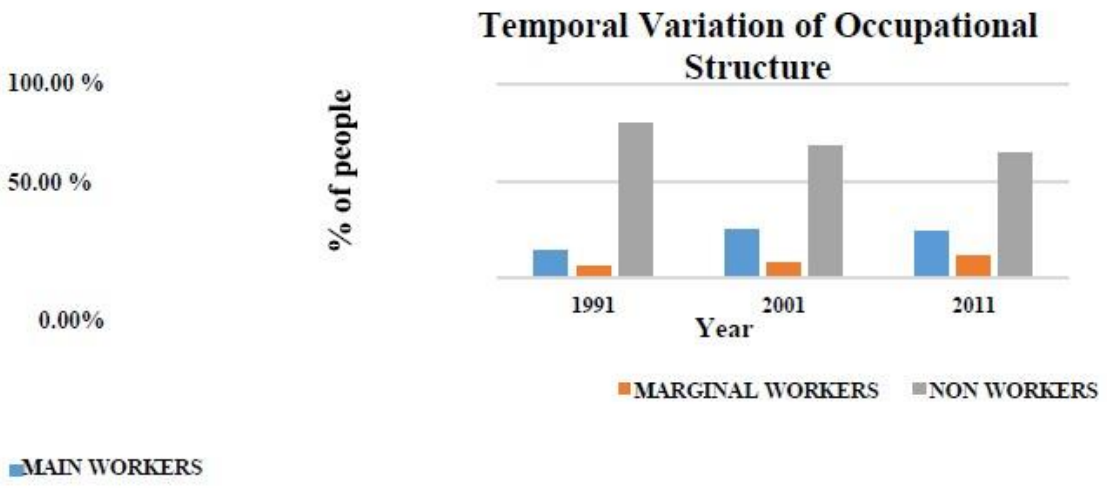

Figure 7: Temporal variation of occupational structure

Source: Panchayat Level Statistics Kottayam District 2011[4]

PRIMARY SURVEY

Primary surveys were conducted among pilgrims, local population, seasonal traders, pilgrimage agencies, experts and officials, staff and service providers to identify demands and perceptions of them through a participatory approach. A pilot study was conducted to determine the questionnaire parameters for survey such as socio economic conditions, evaluation of pilgrim infrastructure, impact of pilgrimage on local population, issues and benefits of pilgrimage on local population and seasonal traders.

i. Respondent Groups

- Pilgrims – Questionnaire survey
- Local Population – Questionnaire survey
- Others – Interview
- Temporary/Permanent commercial establishments
- People's representatives, Government officials
- Social/religious organisations in Erumeli
- Staff and service providers

ii. Sampling

A sample 300 pilgrims visiting Erumeli on a representative day during season were surveyed after random sampling and household survey was conducted after multi stage sampling technique. The entire study area was divided into 3 zones such as Zone 1-High Influence Zone (HIZ) with wards near to both Sabarimala main roads and trek route, Zone 2-Medium Influence Zone (MIZ) with wards near to either main road or trek route and Zone 3-Least

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Influence Zone (LIZ) with wards do not having main road or trek route. One ward was selected at random from each of these 3 zones and a total of 143 households were surveyed. Interviews were conducted for other participants.

Issues in various sectors like traffic & transportation, infrastructure, accommodation and sanitation of various respondents were identified from primary survey. See Figure 8.

iii. Issues identified from primary survey

a) Traffic & Transportation

Pilgrim-vehicle conflicts and lack of parking space is due to the inflow of thousands of additional vehicles into the region. Pettathullal between Kochambalam and Vavar mosque on both sides on the main road at Erumeli junction creates intense traffic block and it disturbs both Pettathullal as well as movement of local people. There are no active mechanisms for bypassing the traffic from the Pettathullal route. See figure 9.

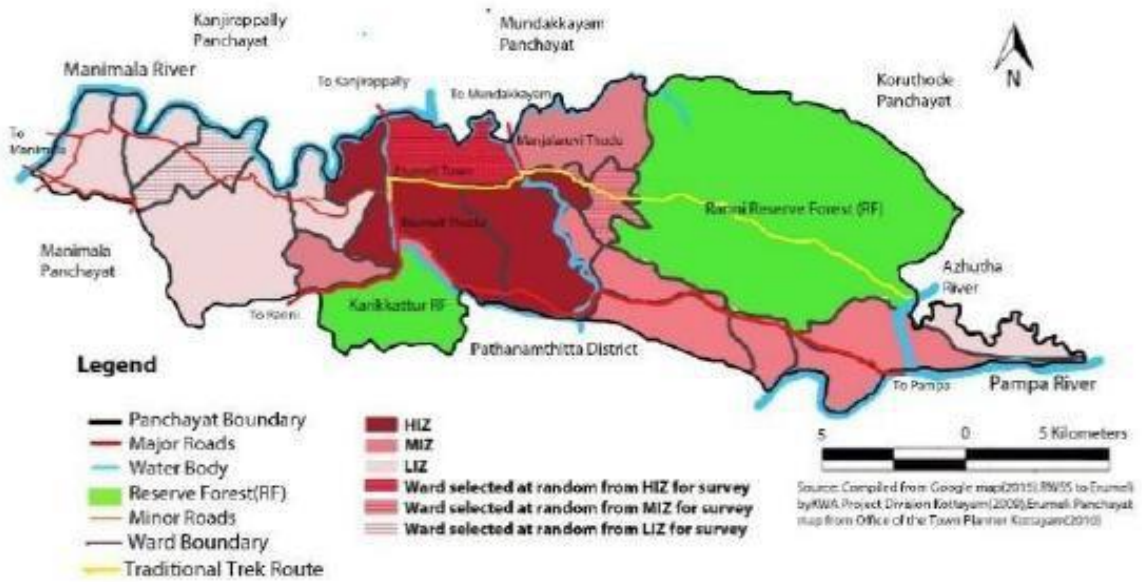

Figure 8: Wards selected for study

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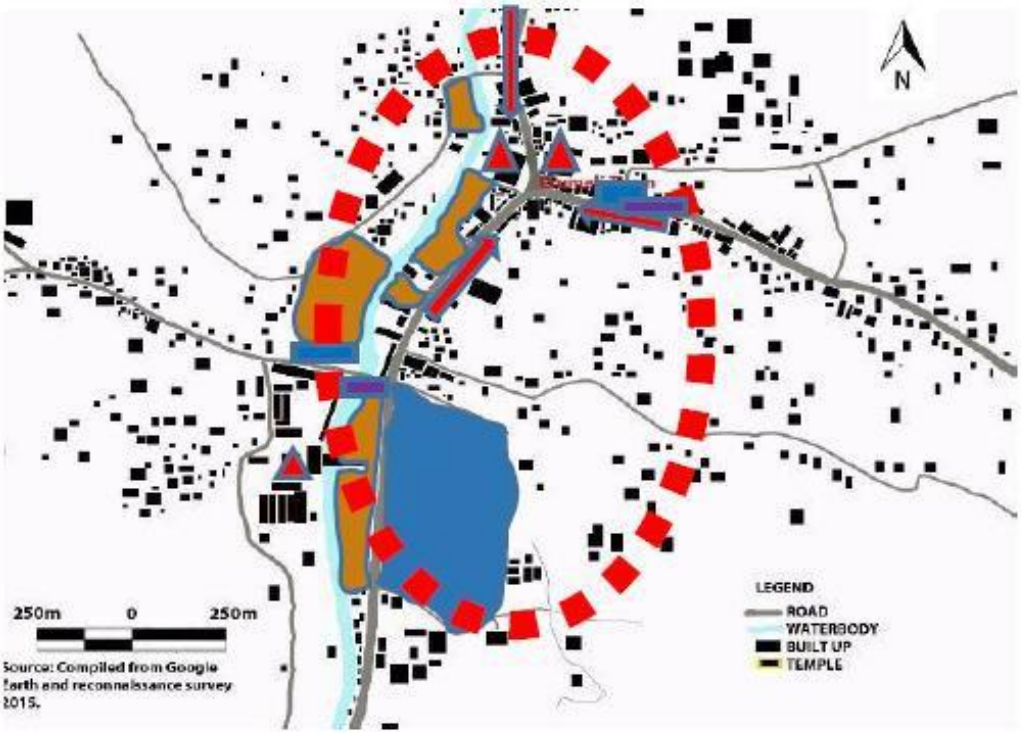

Figure 9: Parking grounds concentrated in town centre

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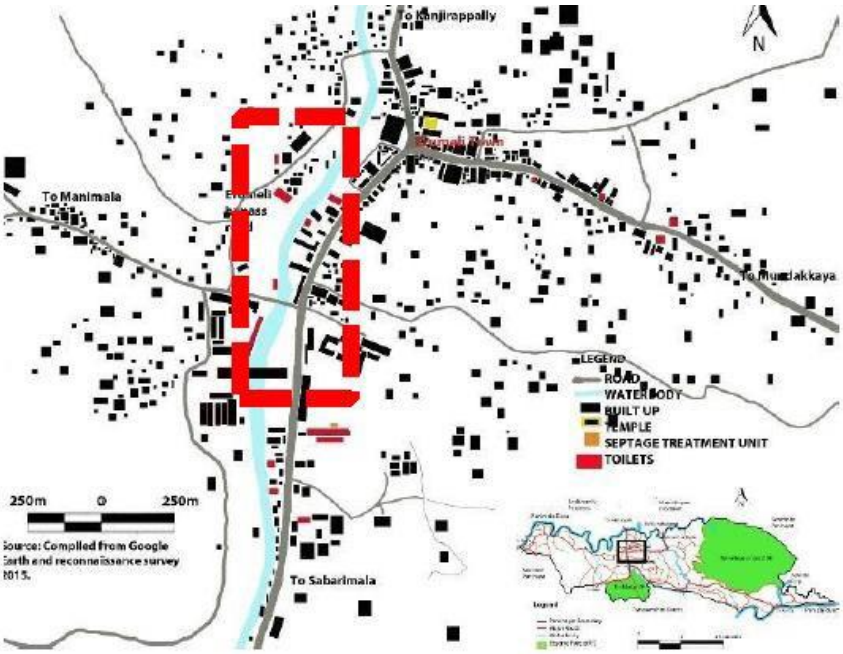

Figure 10: Toilets discharging septage into water body

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b) Infrastructure

Existing water supply scheme for Erumeli from Manimala River is old and inadequate. Lack of adequate water supply scheme for meeting the pilgrim demand forces them to use untreated water from Manimala River directly. Usage of plastic bottles and lack of waste treatment plant result in the open dumping of waste in public places, forest areas and waterbodies resulting in odor, mosquitoes and there by epidemics.

a) Pilgrim Accommodation & Sanitation

Accommodation facilities for a total of 7695 persons are only available from all sectors in Erumeli which is inadequate to meet the current demand of 65000 and projected demand of 100000 for 2030. See figure 10.

b) Environmental Issues

Lack of septic tank for these toilets leads to direct discharge of setage into Erumeli Thodu resulting in an Ecoli content of 12100 per 100 ml of water, where the permissible limit is only 500 per 100ml of water and causes epidemics and other health issues in banks of river Manimala. Sindhooram used in Pettathullal creates asthmatic issues as well as its discharge into waterbody creates pollution by coloring and intoxication of water..

iv. Inferences

Pilgrim amenities and infrastructure in Erumeli is not increasing with the increasing demand of pilgrims.

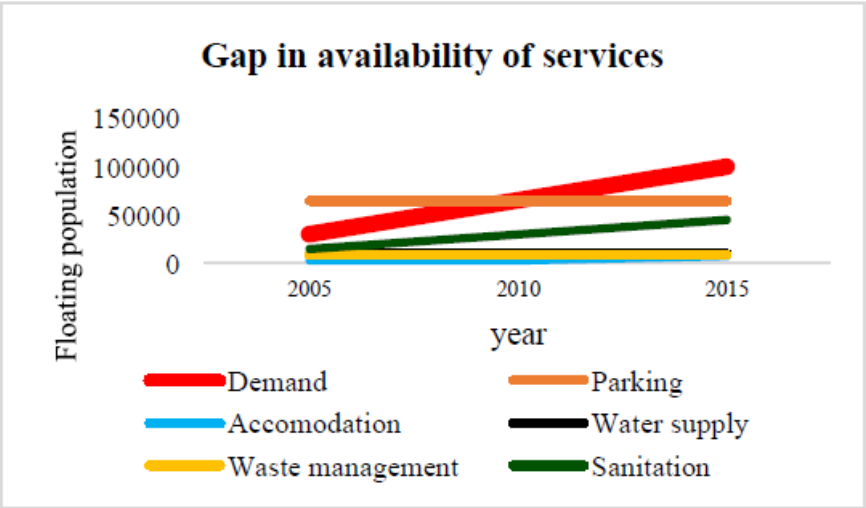

Figure 11 Gap in availability of services for pilgrims

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Permanent structures to meet the current or projected demand are not advisable since the pilgrimage is seasonal and will be left unused continuously for 9 months in a year. It may create damages & intense maintenance cost, space for anti-social activities etc. There is lack of public land for developing infrastructure as per demand. Large capacity solid waste treatment plant is not suitable since the machineries will be subjected to damage during the off season. Increasing the quantity of current facilities magnifies the existing issues also. Thus sustainable system is needed for meeting the excess demand. Therefore a distributed system for providing amenities to pilgrims is recommended here with enough public participation.

SUSTAINABLE DEVELOPMENT CONCEPT

Erumeli panchayat is unique in its characteristics with its own potentials and issues quite different from any other panchayats. A sustainable development concept meeting the excess seasonal pilgrim demand with minimum environmental impact is essential for its systematic and planned development. The excess demand during season can be met by providing amenities at household level with incentives from agencies or government ensuring large scale participation of the local population within the panchayat which benefits both local population and the pilgrims. Solid waste composting, rain water harvesting, biogas plants etc. can also be promoted in residential level for decentralizing facilities. The congestion and environmental pollution within the city core area can be distributed and diffused completely at residential level in a sustainable way. Opinion surveys of both pilgrims as well as local population give well supportive responses for the residential participation program.

PROPOSALS

Pilgrim amenities at residential level

Among the wards surveyed 6 households are providing pilgrim amenities like accommodation, toilet, water supply, parking and annadaanam facilities at their residence. Opinion surveys results among pilgrims exclusively prefer residential level provision of services rather than in bulk due to lack of rush, distributed facilities, neat, calm and quiet environment etc. Local residents also prefer in providing pilgrim amenities at local level because of economic as well as other benefits.

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Residential participation can therefore be increased with incentives and government support. Sustainable practices like biogas plant, composting, rain water harvesting etc. are to be adopted in each unit with capacity of accommodating nearly 300 pilgrims at a time. Services provided by various agencies like annadaanam can also be incorporated with residential units. Centralised treatment plant can be erected for treating plastic waste collected from each unit.

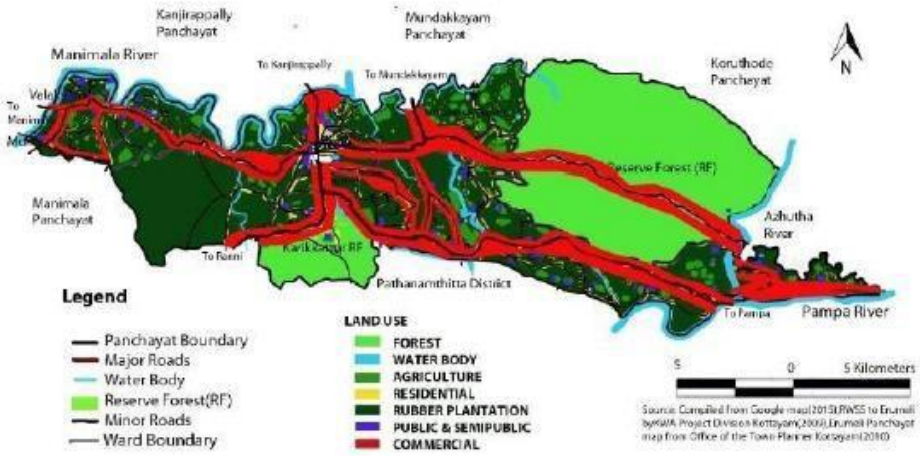

Figure 12: Potential areas for residential level pilgrim amenities

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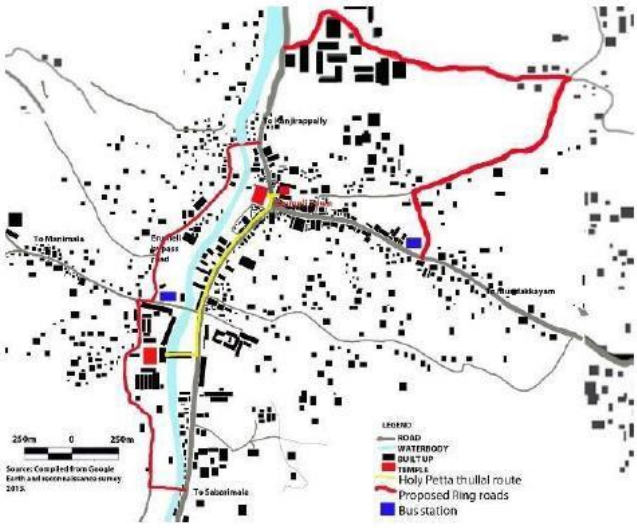

Figure 13: Ring roads for Erumeli town

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Proposals are given for the 3 zones divided for primary survey (HIZ, MIZ & LIZ) in 3 stages of 5 years each from 2015 to 2030.

i. Phase I Interventions (Short term) 2015-20

Ensure sufficient higher education facilities and plus two schools which can also be used for pilgrim accommodation and parking during season.

Zone 1: Improvement and maintenance of existing pilgrim amenities in the town area and declaration of Pettathullal route from Kochambalam to Valiambalam as pedestrian friendly 'sacred path' excluding traffic. Traffic in town center can be bypassed through ring roads. See figure 13.

Zone 2

Provide incentives to existing residential participants to adopt sustainable technologies.Engage Kudumbasree and other self-help group in seasonal activities like trading, tailoring and off seasonal activities like cultivation of crops needed for pilgrim season, manufacturing ritual articles for Pettathullal, food products etc.

Zone 3

Encourage direct or indirect residential participation in providing pilgrim amenities through awareness programs. Promote residential collection of local agricultural products having seasonal demand.

ii. Phase II Interventions(Medium term)2021-25

Conduct training programs and job guaranteed courses for the youth in the Panchayat. Better education ensures better jobs for the young generation and it ensures more local level employment for the uneducated elders.

Zone 1:

A licensing system or authorizing system needs to be established to avoid anti-social activities.

Zone 2:

Traffic rerouting through ring roads can ensure more residential participation in provision of pilgrim amenities.

Zone 3:

Households without having land near roadside can involve the same in rented land or forest trek route.Production of manure from waste can be effectively used in the seasonal cultivation of crops.

iii. Phase III Interventions (Long term)

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Development of markets for trading local products and a general hospital in the panchayat which can be upgraded to multispecialty during pilgrim season.

Zone 1:

Limit unauthorized participation through efficient policing, excise and voluntary agencies in diffusing anti-social activities.

Zone 2:

Provide proper signage and street lights in all the roads and temporary units with basic amenities like viri, toilet, parking, water & shower bath for accommodating specific number of pilgrims at a time can be provided in each plot along with sustainable waste management and rain water harvesting programs under government support.

Zone 3:

Promote waste collection and treatment for producing manure by self-help groups, kudumbasree etc. by incentives and support from government.

CONCLUSION

Pilgrimage in Sabarimala is seasonal and providing facilities for a bulk demand of 10 times the normal population in a short span of time is the major difficulty in Erumeli. Also Erumeli has to perform two functions at the same time-as a local body and a base camp. This study was an attempt to identify the impact of Sabarimala pilgrimage and issues of native as well as floating population in Erumeli. A sustainable development concept of providing pilgrim amenities at household level in a distributed manner was derived from the identified issues which simultaneously benefit both ends. Zone wise proposals were given to bring out a balanced condition of pilgrim and local population development involving residential participation. Effective implementation of the phase wise proposals in the 15 year development plan can bring out Erumeli as a sustainable base camp for Sabariamala.

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