

MASTER PLAN MODULES**INFRASTRUCTURE MODULE****Other Amenities and Services**

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1. BACKGROUND OF THE PROJECT

1.1 Introduction and Relevance

Sabarimala, being the most sought out pilgrim destination in South India is experiencing increasing demand for the need for amenities and facilities year after year. Hence it is important for the Master Plan, to look into the supply and demand side characteristics for such amenities and facilities. In this context, it is noteworthy that till date, the provision of such amenities and facilities had not been systematic or planned. Such a situation has resulted in wasteful resources and operational inefficiency in almost all levels of service provision. Majority of pilgrims are left as non-recipients of major facilities either due to lack of facilities or lack of physical or social accessibility. In addition the service agencies find it difficult to render their services due to lack of facilities for operation and stay. Planning for such essential amenities and services in advance would support the pilgrimage to a great extent by doing away with eleventh hour adjustments and resultant wastage of useful resources such as land and cost.

This module describes the existing / available amenities and facilities at Sabarimala and associated areas, lists out the preferences of the pilgrims and discusses the strategies for future action. Major services and amenities such as Water Supply, Sanitation, Solid Waste Management, Traffic and Transport facilities, have been detailed out in the Infrastructure Module. The sectors included herein are facilities for accommodation and shopping and services such as health, power, communications, fire, police and postal services etc.

1.2 Aims and Objectives

The study is aimed at devising strategies for provision of various amenities and facilities for the pilgrims while safeguarding the fragile environment.

Objectives of the study are:

- To understand the available accommodation, commercial, health, energy, communications, police and fire fighting services and other infrastructure in the region
- To evaluate the requirements with respect to these infrastructure and amenities associated with the pilgrimage
- To provide essential infrastructure and pilgrim facilities across the region to support the pilgrimage
- To suggest strategies to ensure effective utilisation of these infrastructure

1.3 Methodology

The methodology followed for the study is depicted in the Figure 1 below:

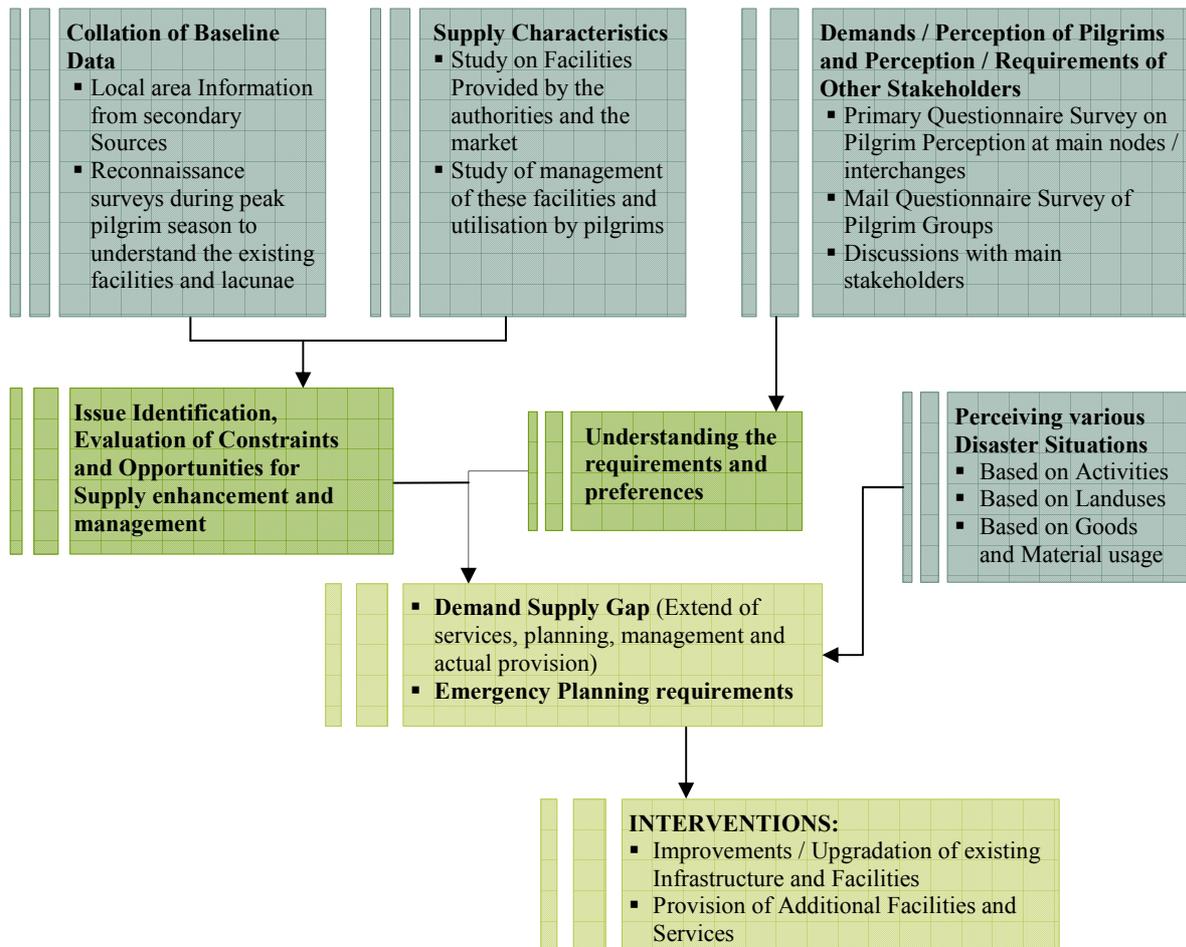


Figure 1: Methodology Adopted for the Study

1.4 Scope of the Study

The study covers the available infrastructure for health care, fire fighting, energy (including electric power and fuels), police and fire services, and communications in the region with specific reference to Sabarimala sub-region. It covers in detail the demand and supply characteristics of accommodation and commercial / shopping facilities. The study is primarily conducted with the aim to provide better facilities for the pilgrims and to respond effectively in emergency situations.

1.5 Structure of the Report

Chapter 1 gives a brief overview of the need for a module on amenities and services, aims and objectives of the study, methodology and scope of this study undertaken to prepare the said module, subsequent sections discuss the status of supply and demand for infrastructure and the interventions and guidelines to achieve the set aim and objectives by year 2015 and policies / guidelines for the year 2050.

Chapter 2 discusses the available accommodation and commercial facilities, health care, fire fighting, energy and communications and other infrastructure in the region and its appropriateness. It also presents the demand for infrastructure and preferences.

Chapter 3 outlines the proposed interventions and strategies to ensure provision of essential services for the pilgrims in the region.

2. EXISTING INFRASTRUCTURE AND PROJECTED DEMAND

Kerala has a geographic area of 38,863 sq. km. (1.2percent of country's geographic area) comprising of the Western Ghats and agriculturally fertile coastal plains. The total population of the state is 31.84 million (3.1percent of the country population) of which urban population is 26percent and rural population 74percent. The population density which is the highest recorded in the country stands at 819 persons per sqkm. Around 1.1percent of the total population is constituted by Scheduled Tribes. Sabarimala pilgrimage generates socio-cultural, economic and environmental effects throughout Kerala especially in Idukki, Kottayam and Pathanamthitta Districts. In addition, the wider region including Thrissur, Ernakulam, Alleppey, Kollam and Thiruvananthapuram also have parts of few pilgrim circuits and interchange points, while the major movement corridors all over the State are influenced by the regional travel. Infrastructure facilities and services are almost uniformly distributed in the region, with efficient delivery mechanisms for social infrastructure and constrained physical infrastructure.

2.1 Health Care

2.1.1 General Description

Kerala State has built up a vast health care infrastructure under Allopathy, Ayurveda and Homoeopathy systems of medicine. Around 91 percent of beds and 48percent of institutions are in Allopathy. There are 3032 medical officers under Department of Health Services (DHS), Government of Kerala (GoK). Of this, 1.7percent of the officers holding administrative positions and another 29percent serves in PHCs. The strength of medical officers available for secondary health care service is 69.3percent, of which nearly 58percent are specialists. Paramedical staff consists of 7581 senior/junior nurses. Data collected from 202 medical institutions under DHS shows that 154 medical equipments costing Rs.5000 and above remain idle or unused. Total value of the idle equipments is estimated at Rs.53 lakh.

Standardization of facilities has been one of the major objectives of the Tenth Five Year Plan. As part of this, DHS Kerala constituted a committee to recommend standards in service delivery, infrastructure, equipment and staff pattern at various health care institutions under health services department. The committee submitted its report during 2002. Presented below are some of the highlights of the report.

- Each Grama Panchayat may have a Primary Health Centre with focus on curative service limited to out-patient services.
- Community Health Centre shall provide specialist care in General Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology, Anaesthesiology and Public Health / Family medicine.
- Taluk Hospital shall provide all major and minor specialty services viz, Medicine, Surgery, Obstetrics and Gynaecology Paediatrics, Anaesthesiology, Ortho, ENT, Ophthalmology, Psychiatry, Dermatology, Respiratory Medicine, Orthodontics and Maxilo-facial Surgery.
- District Hospital shall provide tertiary care in addition to services provided in Taluk Hospitals.

2.1.2 Infrastructure Available in the Region

According to the inventory prepared by KSPCB, there are 5095 medical institutions (mostly hospitals and clinics) in the State. They together have 105152 beds for accommodating in-patients. Kerala is a State having a good number of health care institutions in public sector. There are 6 medical colleges and hospitals functioning in the State in the public sector. These are listed in Table 1.

Table 1 : District Wise details of Health Care Institutions

District	Total No. of Medical Institutions	No: of Medical Institutions in public sector		Total Number of beds	No. of beds in Public sector Hospitals
		No. of Medical Colleges	No. of Hospitals		
Alappuzha	343	1	95	8835	5585
Ernakulam	546	0	127	15819	4515
Idukki	194	0	68	4096	1060
Kannur	392	1	107	5149	2271
Kasaragod	209	0	64	2107	687
Kollam	704	0	121	7530	2476
Kottayam	440	1	91	9323	3063
Kozhikode	342	1	105	9034	5442
Malappuram	327	0	140	5030	2240
Palakkad	316	0	126	4925	2514
Pathanamthitta	310	0	69	5096	1260
Thiruvananthapuram	411	1	124	12910	6762
Thrissur	434	1	145	12991	4913
Wayanad	127	0	45	2307	1029
Total	5095	6	1427	105152	43817

Source: KSPCB (2003) Draft Vision Document on Bio Medical Waste Management, GoK

On an average, in Kerala 1.3 HCU exists per 10 sq km. or 330 beds per lakh of population. However, in Pathanamthitta, Kottayam and Idukki districts, hospital density per 10 sq.km. is 1.2, 2 and 0.45 respectively. Table 2 shows district-wise availability of Vehicles under DHS - 2003

Table 2: District-wise Availability of Vehicles under DHS (2003)

Sl No	District	Vehicles in Running Condition	Vehicles in Workshop / repair	Irrepairable	Total
1	Alappuzha	54	3	23	80
2	Ernakulam	53	5	16	74
3	Idukki	45	2	23	70
4	Kannur	58	6	2	66
5	Kasaragod	31	3	11	45
6	Kollam	42	7	22	71
7	Kottayam	58	9	3	70
8	Kozhikode	66	3	14	83
9	Malappuram	75	6	31	112
10	Palakkad	76	7	33	116
11	Pathanamthitta	38	7	6	51
12	Thiruvananthapuram	172	7	105	284

<i>Sl No</i>	<i>District</i>	<i>Vehicles in Running Condition</i>	<i>Vehicles in Workshop / repair</i>	<i>Irrepairable</i>	<i>Total</i>
13	Thrissur	51	2	24	77
14	Wayanad	48	3	27	78
	Total	867	70	340	1277

It could be seen from the analysis that HCUs are available within around 5 km radius in Kerala and hence in case of casualties it would not be difficult for pilgrims to access medical health. However, number of professionals engaged in public sector, emergency transporting and support infrastructure is meagre.

2.1.3 Infrastructure Available at Sabarimala

Of particular importance in Sabarimala context is the health infrastructure, considering the physical exertion during the pilgrim treks, the age of the pilgrims, lack of health quality-checks, inadequate transportation infrastructure and emergency facilities, and hardships caused to the pilgrims due to undulating terrain.

Allopathy, Ayurveda and Homoeopathy clinics are located at Sabarimala. At Sannidhanam there is an Allopathic hospital and a Cardiology unit. Cardiology centres function during the peak pilgrim season at Appachimedu and Neelimala along the trek route from Pampa to Sannidhanam. Equipped with sufficient facilities and equipment, cardiology centres offer treatment to many pilgrims a year during the peak pilgrim season. Serious cases are referred to medical colleges at Kottayam or Thiruvananthapuram. At Pampa there is an Allopathic Hospital with 4 doctors, 10 nurses, 2 pharmacists and more than ten supporting staff. In addition, the Ayurveda Hospital at Pampa has 2 doctors and 4 other staff, while at Sannidhanam, the Ayurveda hospital has 3 doctors and other staff during the peak pilgrim season. No inpatient facilities are available in the Ayurveda Hospitals.

Homoeopathy Hospitals at Pampa and Sannidhanam also treat the pilgrims during the peak pilgrim season. These hospitals have 2 doctors and 4 other staff including pharmacist. In addition there are oxygen parlours to support the pilgrims during their climb. Table 3 shows details of allopathic hospitals and facilities available

Table 3: Details of Allopathic Hospitals and Facilities Available

<i>Name of the Hospital and location</i>	<i>Management</i>	<i>No. of Beds</i>
Sahas Hospital at Sannidhanam	NGO	30
Government Hospital at Sannidhanam	GoK	12
Cardiology Centre at Appachimedu	GoK	6
Hospital at Pampa	GoK	12

Serious cases are referred to Pathanamthitta District Hospital or Medical College Kottayam and ambulance is provided at Pampa to facilitate their speedy transfer. In spite of Cardiac Care units and oxygen parlours set up at Pampa, Neelimala, Appachimedu and Sannidhanam, casualties during the pilgrim seasons are many. The casualties during the peak pilgrim season are as follows:

Table 4: Casualties at Sabarimala during the past years

<i>Dates</i>	<i>Loss of Lives at Sabarimala</i>
Mandala - Makaravilakku Session Ending	
20th January 2002	22
20th January 2003	24
20th January 2004	28
20th January 2005	30
20th January 2006	31

Cardiac problems were the main cause for almost 99 percent of these cases. Most of the pilgrims, including the old are found unaware of their own cardiac conditions, and realise this only during the strenuous trek.

Of the 31 persons whose lives were lost during 2005-06 season, only two were in the age group of 50 years and above. Among the fatalities reported, 29 were pilgrims of 25 to 49 years of age. Diabetes and Hypertension have been identified as the causes for sudden heart attacks.

2.1.4 Health Staff Deployment and Other Arrangements during Season

During the peak season, the Health Department, time press into service 1200 staff including doctors, paramedical staff, medical officers and cardiac specialists in seven batches at Sabarimala. Ambulance service is arranged at Pampa. For the season 2006-2007 arrangements for 20 ambulances were made, out of which, only 11 are operated during *Mandalapuja* season and additional 9 for *Makaravilakku* season. Temporary hospital arrangements are also provided in addition to the existing facilities at Sannidhanam and Pampa. Special wards are also opened in Kottayam Medical College, Pathanamthitta General Hospital and Ranni Taluk Hospital specifically to cater to the pilgrims. Along with this, special medical teams are provided to enhance accessibility of treatment facilities to pilgrims. Before the commencement of each season, the Health Department also draws up an action plan for improving health facilities in Sannidhanam, Pampa, Appachimedu, Neelimala, Pathanamthitta, Kottayam, Idukki and Alappuzha.

2.1.5 Issues and Deficiencies

Following are the major issues associated with health sector related to Sabarimala pilgrimage:

- Lack of speciality hospitals at Pampa, Sannidhanam, trek routes, Base Camps;
- Lack of health support arrangements at Jyothi viewing areas;
- Lack of adequate facilities and medical personnel at nearby hospitals, dispensaries and PHCs;
- Lack of adequate access and faster modes for evacuation of patients from Sannidhanam and/or trek routes between Pampa to Sannidhanam during emergency;
- Transportation bottlenecks due to poor road conditions and considerable distance between Pampa and major towns with good hospital facilities;
- Lack of planned development of hospital network and institutional arrangements; and
- Lack of awareness among the pilgrims regarding their health status and the hardships which may occur during the trek.

Major ailments suffered by the pilgrims include cardiac arrests and breathing problems while climbing up the route to Sannidhanam through Neelimala from Pampa and during the trek from Erumely to Pampa through Karimala, and dysentery and related ailments due to food and water contamination. In addition, road accidents, slippage during the trek, minor accidents and other emergencies are also common.

The nearest hospital is the community health centre which is upgraded for the peak season, near the Ranni Perunad Panchayat office. This lacks basic medical facilities and staff. Erumely and Vandiperiyar have some medical facilities. Usually, during an emergency situation, due to the lack of specialized hospitals, patients are transported to Pathanamthitta, Kottayam or Thiruvalla. During the peak pilgrim season, due to traffic bottlenecks, poor road condition and inefficient road geometry, it takes around 5 to 8 hours to transport the diseased to these hospitals. It is also difficult to bring the patients down from Sannidhanam to Pampa in case of emergencies, as they have to be transported through the same route as used by the pilgrims without any system to ensure control over pilgrim movement.

Major ailments suffered by the pilgrims include cardiac arrests and breathing problems while climbing up the arduous route to Sannidhanam through Neelimala/Appachimedu from Pampa. Several fatalities due to cardiac arrests have been reported every season. Some temporary facilities are being provided which are inadequate to house expensive and sophisticated equipments and instruments. Inpatient facilities are also currently lacking. In addition adequate bays for pilgrims to rest are lacking especially at places where steep climb is necessitated by the terrain conditions.

2.1.6 Demand and Preferences of the Pilgrims

On evaluation of the responses received during the questionnaire survey, almost 21percent of the pilgrims stated that there is lack of medical facilities at Sabarimala (56percent of pilgrims trekking down from Erumely and almost 90percent from Uppupara side stated that the medical facilities were 'very poor' or 'not there' or 'not easily accessible'), 8percent stated that health facilities were good enough and 71percent had neutral standing / chose not to respond to the query. But almost all were of the opinion that the hygiene level at Sabarimala is very poor and the people are at high risk of contacting diseases.

At the following places specific demands has been identified (though discussions and reconnaissance);

1. Better cardiac care facilities at Pampa and Sannidhanam
2. Resting areas for pilgrims to halt amidst the trek
3. More facilities in the form of doctors or trained volunteers at Mukkuzhi and Karimala;
4. Cardiology centres and Oxygen parlours at Vellaramchetta and Kallidamkunnu; and
5. Medical facilities in the form of first aid centre and oxygen parlours at Uppupara and services of trained volunteers to help ailing pilgrims.
6. Health checkup for staff and all categories of workers need to be enforced in view of increasing incidences of skin diseases and other communicable diseases at Sabarimala.

2.2 Fire Fighting Services

2.2.1 Infrastructure Available at Sabarimala

Fire stations function at Sabarimala during the peak season from 15th November to 20th January. Five fire force camps are arranged in and around Sabarimala at Sannidhanam, Pampa, Plappally, Nilakkal and Perunad.

There is one emergency tanker, one mobile tank unit, one ambulance and one jeep stationed at Pampa. There are six fire points at Pampa along Thriveni to Pampa temple. Many fire hydrants fed by river Pampa are laid along Pampa. (Maps 1 and 2). At Sannidhanam ten fire pumps are established. At Plappally, one tanker and one mobile tank unit are established. At Nilakkal one recovery vehicle, one mobile tank unit are established while at Perunad one mobile tank unit functions. The fire stations at all the five locations are in temporary locations. The accommodation facilities and other amenities for staff are also quite inadequate. In total there are 250 staff deployed at Pampa, Sannidhanam, Plappally, Nilakkal and Perunad.

2.2.2 Issues and Deficiencies

The main deficiency as perceived by the fire department is that they operate from temporary make shift camps with very limited facilities for accommodation and parking facilities for their vehicles. In addition service lanes in the area are not demarcated resulting in less vehicle manoeuvrability during emergencies.

2.2.3 Demand and Preferences

The basic demand of the fire department, which is involved in safety and security aspects of pilgrims at Sabarimala, is that proper accommodation facilities along with a permanent base station/camp site at Sabarimala be provided to support efficient functioning.

2.3 Energy (Including Electric Power and Fuels)

2.3.1 Infrastructure Available in the Region

The growth of power system in Kerala during the last few decades has been remarkable. The lion's share of energy requirement of the State was being met, till recent past, by generation from the 20 hydel power plants of the Kerala State Electricity Board (KSEB). After the promulgation of Forest Conservation Act 1980, taking up of new hydel projects has been affected. Though Kerala has a total hydel generation potential of about 4,333 MW, only 1,834 MW could be harnessed so far. KSEB currently has diesel power plants at Kochi and Kozhikode. Naphtha based thermal power plants by NTPC functions at Kayamkulam (360 MW), by BKPL (157 MW) at Kochi and by M/s. KPCL (20 MW) at Kasargode. The State purchases more power from central generating stations as well. The hydel - thermal energy mix, which was 67:33 in 1998-99, is now estimated at 34:66. Overall power situation is grim as the State purchases more electricity at very high costs from thermal based units to meet additional demand. Transmission losses and staff costs are also high.

All the villages are electrified in the State, except few habitations. More than 84 per cent of households are electrified. Strengthening the infrastructure to match the generation capacity is given prime importance in the plan programmes of KSEB.

2.3.2 Electric Power

2.3.2.1 Infrastructure Available at Sabarimala

Electric power is supplied to Sabarimala by the KSEB. Till recently before the commissioning of Pampa substation on October 2005, there was no permanent power supply system at Sabarimala. Main power supply to Pampa substation is from Angamoozhy i.e. Moozhiyar which is only a few kilometers away. This 60 KV substation is presently providing permanent power supply to the forest shrine (Maps 3 and 4). Details of power supply arrangements by KSEB at Sabarimala are provided in Table 5 below.

Table 5: Details of Power Supply arrangements by KSEB at Sabarimala

<i>Electrical Division</i>		<i>Adoor</i>
Connections	Pampa	122 Permanent and 300 temporary
	Sannidhanam	
	Nilakkal	5 permanent and 100 (expected next season) temporary
<i>Power Generating Stations</i>		
<i>Name of the Station</i>	<i>Capacity</i>	
Sabarigiri	300 MW	
Kakkadu	50 MW	
Maniyar(Pvt)	7 MW	
<i>Substations</i>		
<i>Name of the Sub Station</i>	<i>Voltage</i>	<i>Capacity</i>
Kochu	66KV	8MVA
Pampa	60 KV	

Prior to October 2005, power supply to Sannidhanam and Pampa was through the single circuit 11 KV feeder from KochuSub station. As the 11 KV feeder passes through thick forest, there were frequent interruptions due to the forces beyond general technical control. In case of fault on this 11 KV feeder, there was no alternative feeding arrangement to Pampa and Sannidhanam. The supply to Kochu substation is tapped from the Pallom Peerumedu-Moozhiyar 66 KV feeder. A total of 19 transformers were used for regulating power supply. During the season, power supply to the feeder was enhanced through load shedding at the sub stations of Pampady, Peerumedu, Mundakkayam, Kanjirapally and Vandiperiyar. This line runs along 101 kms through forests and hills. A fault on this 66KV would demand considerable time for rectification. During emergencies 11KV line from Kakkad sub station was used to supply power to KochuPampa substation.

There are 19 numbers of transformers located in Pampa and Sannidhanam having the following capacities shown in Table 6.

Table 6: Details on Transformers at Sabarimala

<i>S.No</i>	<i>Capacity</i>	<i>Numbers</i>	<i>Total capacity (KVA)</i>	<i>Ownership</i>
1	315 KVA	1	315	KSEB
2	160 KVA	3	480	KSEB
3	250 KVA	3	750	KSEB
4	100 KVA	4	400	KSEB
5	250 KVA	4	1000	KSEB
6	250 KVA	4	1000	TDB
			3945 KVA	

Source: KSEB (2005)

Prior to 2005, power supply arrangement was insufficient. Disruption in power supply even for a short duration creates panic at the holy hillock of Sabarimala. It affects water supply, sewage disposal, prasadam preparation and the lighting arrangements at Pampa, Sannidhanam and along the trekking path. Disruption of water supply to latrines leads to a situation where pilgrims are forced to resort to open defecation.

Sabarimala has been witnessing frequent power failures during 2003 and 2004 season reportedly owing to certain technical snags in the 220 KV sub-station in Moozhiyar. A 36-hour power supply disruption on the first two days of the five-day monthly pooja at Sabarimala in October, 2004 had caused panic at the holy hillock and at Pampa.

During the 2005-06 seasons, KSEB made back up power supply arrangements at the 66-KV sub-station at Kochu Pampa in anticipation of probable technical snag in power supply to Sabarimala. Double bridging of the Kochu Pampa-Sabarimala transmission lines has been carried out. Moreover, arrangements were made to provide electricity directly from the Kakkad powerhouse to Sabarimala in the event of any technical problems in the Moozhiyar-Kochu Pampa feeder. KSEB had taken steps to install 3900 fluorescent tubelights at Sabarimala and Nilakkal for the season. Fluorescent lamps were installed at all parking grounds, Pampa Manalppuram, Valiyanavattom, Cheriyanavattom, Sannidhanam, along the trekking path and the base camp at Nilakkal. Lighting along the trek path from Pampa to Sannidhanam is by means of fluorescent lamps supported on wooden poles. Though the structures erected for light provision during the season are supposed to be temporary (only for the peak season), it remains in place more or less throughout the year (i.e structure are not removed after the season). At Pampa Manalppuram, lighting which uses fluorescent lamps over wooden poles is a visual discord.

The electricity connection to Nilakkal using underground cable from Kakkad sub station was established during 2005 – 06 season. Prior to this, lighting was provided by means of generators. The Bharat Sanchar Nigam Limited (BSNL) operated telephone exchange at Nilakkal uses solar power.

The staffing strength at various locations in Sabarimala of electricity department during the season is as presented in Table 7.

Table 7: KSEB Staffing Pattern (Permanent and Temporary) at Sabarimala

<i>During Off Season</i>		
1	Sannidhanam	1
2	Pampa	1
3	Nilakkal	Nil
	Total	2
<i>During Peak Season</i>		
1	Sannidhanam	20
2	Pampa	20
3	Nilakkal	Nil
	Total	40

2.3.2.2 Demand and Preferences

Presented below are the two main demands that were raised from various quarters during discussions and surveys:

1. Provision of an underground cable supply line rather than depending on overhead line in Sabarimala (where frequent disruptions of supply occur due to breaking of lines as it goes through thick forest area). Moreover, a ground supply network is more secure and safe.
2. At present, supply to Nilakkal from Kakkad Sub Station is very limited. In the perspective of the proposed development of Nilakkal base camp, additional power demand can be catered to by laying underground supply line from the New Pampa sub station.

2.3.3 Fuel

Various types of fuels/energy (other than electricity and solar power) used for various purposes at Sabarimala, Nilakkal, Erumely, Vandiperiyar, Uppupara and Trek routes are presented as Table 8.

Table 8: Types of Fuels used

<i>Location</i>	<i>Main Types of Fuels / Energy used</i>	<i>Main Purposes</i>	<i>Observations</i>
Sannidhanam and routes from Pampa to Sannidhanam	Fire Wood	Religious purposes, Cooking by pilgrims, Hotels	Necessitates storage of fire wood in large quantities- stacking and chance of fire are issues Sometimes, cutting of nearby forests has been reported
	Diesel	Individual generators, incinerator	Incinerator consumes huge quantity of diesel as wastes of less calorific value are burned. Storage (diesel tank) near the Sannidhanam poses safety hazards
	LPG	Prasadam making, Hotels, Pilgrims and staff - cooking	LPG cylinders are transported by head load or tractors (mostly prior to season) Storage in large numbers in thickly populated area, in unsafe situation
	Oil	Religious purposes, cooking	Less quantity

Location	Main Types of Fuels / Energy used	Main Purposes	Observations
	Kerosene	Hotels, pilgrims for cooking, lighting petro-max	Less quantity as most have shifted to other fuels
Pampa	Fire wood	Religious purposes, Cooking by pilgrims, Hotels	Necessitates storage of fire wood in large quantities – stacking and chance of fire are issues Sometimes, cutting of nearby forests has been reported
	Diesel	Individual generators, Incinerator	Incinerator consumes huge quantity of diesel as wastes of less calorific value are burned
	LPG	Hotels, Pilgrims and staff – for cooking	Storage in large numbers in thickly populated area, in unsafe situation
	Petrol	Vehicles	Only one with limited capacity not enough for all vehicles – with less area for vehicle manoeuvrability around
	Oil	Religious purposes, cooking	Less quantity used. However, during Pampa vilakku, oiled / lit lamps are let into the river on floats, risking oil spills
	Kerosene	Hotels, pilgrims for cooking, lighting petro-max	Less quantity as most have shifted to other fuels
Nilakkal	Diesel	Individual generators	Till the establishment of electric supply, this was the only source for lighting, pumping etc
	Fire wood	Religious purposes, Cooking by pilgrims, Hotels	Necessitates storage of fire wood in large quantities – stacking and chance of fire are issues Sometimes, cutting of nearby forests has been reported
	Kerosene	Hotels, pilgrims for cooking, lighting petro-max	Less quantity as most have shifted to other fuels
	LPG	Hotels, Pilgrims	Storage issues
	Oil	Religious purposes, cooking	Less quantity used.
Trek Routes from Erumely, Uppupara	Fire wood	Religious purposes, Cooking by pilgrims, Hotels	Necessitates storage of fire wood in large quantities – stacking and chance of fire are issues Sometimes, cutting of nearby forests has been reported
	LPG	Hotels, Pilgrims for cooking	Storage in large numbers in thickly populated area, in unsafe situation Access to LPG at points like Karimala is less
	Kerosene	Hotels, pilgrims for cooking, lighting petro-max	Less quantity as most have shifted to other fuels

The Petrol Pump operated by Indian Oil Corporation Ltd (IOC) at Pampa serves the fuelling needs of all vehicles reaching Pampa. The next proximal fuelling station is located at Vadasserikkara.

Fuel wood is supplied by Forest Department in an attempt to minimise cutting of fuel wood from surrounding forests.

2.3.3.1 Issues and Deficiencies

The major issue is the safety aspect related to storage of gas cylinders, which are stacked in the most unsecured way at Sannidhanam and Pampa. The excessive stock of the Liquefied Petroleum Gas (LPG) without ensuring adequate fire-safety measures at various hotels and shops in Sabarimala is a major cause of concern here. Random inspection conducted by a Fire Force team revealed that at various hotels, 30 to 60 LPG Cylinders were stocked in unsafe conditions. In many instances, hotels stock 60 cylinders in a small room with a small fire extinguisher, so as to evade objection or criticism from the safety point of view. It was observed during the field survey, that a restaurant at Sannidhanam was found with a stock of 30 cylinders in its 'godown'. According to Fire Norms specified, the hotels and restaurants in Sabarimala are only permitted to stock up to 100 kg of LPG (seven 14.5 kg cylinders), but in the present context most of them stock more than the prescribed number, posing danger to the pilgrim centre itself. None of these hotels were found to have complied with even the basic fire-safety norms while stocking such a large volume of LPG. An outbreak of fire in the vicinity may be expected to lead to horrifying spread of fire and high casualties. Hence, alternate fuels and / or systems of supply and / or storage have to be formulated and strictly implemented.

The other major issue is the lack of availability of fuel for vehicles reaching and parked at Pampa basically due to limited capacity of petrol storage capacity at the fuel station here. Due to this, usually during the season a rationing system is followed here. It has been reported during last peak pilgrim season, KSRTC faced problem of shortage of fuel supply which in turn affected their services.

If the Nilakkal Base Camp materialises and the chain service system from Nilakkal to Pampa is initiated then KSRTC / operator would require large quantities of fuel at Pampa or Nilakkal to cater to the increased fuel demand which may be 2 to 3 times the present demand.

Most of the pilgrims who cook by themselves use firewood or kerosene stove for cooking. Kerosene is not readily available at Sabarimala and most of them carry it along, which again is a point of concern with respect to safety. In this respect though the fire wood use is safe but the extensive use of wood extracted from forest and easy access to forest wood have severely effected the flora here which have shown rapid deterioration in vegetated fringes abutting pilgrim activity areas in Sabarimala.

2.3.3.2 Demand and Preferences

The following are the demands with respect to fuels:

- Provisions for safe storage of gas;
- Petrol station at Nilakkal to cater to the demand;
- Need to look into alternate sources of energy like solar power;

- Prevent pilgrims from cutting trees for firewood through awareness raising, supply of food and wood, preventing them from carrying sharp tools into forest areas; and
- Minimise fuel carriage and use by pilgrims for cooking at all possible locations.

2.4 Communications

2.4.1 Infrastructure Available in the Region

2.4.1.1 Postal Service

Kerala postal circle has a postal network of 5077 post offices. Postal service duly supported by a technology-based network form an important component of the modern and efficient information and communication system. The information technology revolution has a vast potential for the development of postal sector both in terms of its coverage as well as quality of services.

Table 9: Postal System in Kerala

Post offices functioned during 2002-03	5077
Head post offices	51
Sub post offices	1463
Extra departmental sub post offices	527
Branch offices	3036
Speed post centers	44
Other postal services	90
Rural post offices	4197
Urban post offices	880
Area served by one post office (sq.km)	7.67
Population served by one post office	6288

2.4.1.2 Telecommunications

Kerala Telecom circle serves the whole of Kerala State, the Union Territory of Lakshadweep and part of Union Territory of Pondichery (Mahe). The circle has ten major Secondary Switching Areas (SSA), one major Telecom District and one minor S.S.A of Lakshadweep. Kerala has an impressive record of performance in telecom sector. BSNL has become the premier cellular service provider in Kerala. The cellular mobile services in Kerala were launched on 23-10-2002 covering 128 cities and towns and 2112 kms of Highways. The State has a telephone density of 94.88 per 1000 population and 101 per 1000 population inclusive of BSNL cellular mobile connections as on 31-3-2003.

Mobile connections in Kerala continued to increase and the phone connection in the State has crossed the one million mark. At the end of December 2003, the state had 10.23 lakh mobile owners as against roughly 33 lakh phones in the state. All mobile companies operating out of the state showed healthy growth during December 2003. The growth during 2003 is as high as 93percent, with the total mobile ownership number growing from 5.31 lakhs in December 2002 to 10.23 lakhs in December 2003.

Telephone density in Kerala as on August 2003 is 105.9 per 1000 population or 77.65 telephones per sq km

2.4.2 Infrastructure Available at Sabarimala

2.4.2.1 Postal Service

Pathanamthitta post office is the district / head post office connected with Sabarimala. Two sub post offices function at Sabarimala: one at Sannidhanam, which functions only during the peak pilgrim season and the other at Pampa which works throughout the year. Pathanamthitta head post office undertakes Appam Aravana prasadam distribution over post to devotees elsewhere.

2.4.2.2 Telecommunications

Telephone exchanges have been functioning at Pampa and Sannidhanam from 1979 onwards. Initially exchanges were of 25 lines Max III grade and the same were expanded to 50 lines in 1985. In the year 1995 exchange were converted to C.dot-256 port with a capacity of 176 telephones. The microwave station at Sharamkuthy connects Sabarimala to Thiruvalla station.

Till 1990 there were just two STD booths at Pampa and Sannidhanam, but now BSNL has provided carpet mobile phone coverage in Sabarimala as well as Nilakkal. As of now, during the season BSNL sanctions 32 private telephone booths at the Sannidhanam, 28 booths in Pampa and 16 booths in Nilakkal Base Camp with a view to meeting the telecommunication needs of the multitude of pilgrims visiting the shrine during the annual pilgrim season. This is in addition to the 12 public telephone booths attached to the Customer Service Centre (CSC) at the Sannidhanam, six at the Pampa CSC and two at the Nilakkal telephone exchange. Apart from this, BSNL provides a mobile public telephone booth at Karimala on the Erumely-Sabarimala trekking route. A mobile booth functions from the Akhila Bharatha Ayyappa Seva Sanghom (ABASS) camp at Karimala. BSNL-ABASS joint venture had been envisaged for the utmost benefit of the pilgrims who undertake the annual Sabarimala pilgrimage through the Karimala forest path. The ABASS authorities are also exploring the possibility of setting up public telephone booths at its camps at Pampa, Sannidhanam, Marakkootam, Sharamkuthy, etc., during the season. The services of the ABASS volunteers are made available to operate the public phone booths that are set up at the Sanghom camps or pilgrim amenity centres at Sabarimala. There is also a proposal to open a second customer service centre at the Telephone Bhavan at Sannidhanam. Apart from this, full-fledged seasonal customer service centres are to be opened at Lahai and Nilakkal.

The BSNL had set up a new Base Transmitting Station (BTS) at Plappally on the Mannarakulanji-Pampa main trunk road to Sabarimala. The BTS at the Sannidhanam and Pampa facilitate approximately 75,000 calls per day. However, during the season the telecommunication traffic at both these stations has been recorded at below 60,000 calls a day during the previous pilgrim season. To meet any eventualities BSNL has also kept two additional BTS equipment at the Sannidhanam and Pampa as standby. These would be used on the peak days of the pilgrim season, if required.

Nilakkal boasts of the first solar-powered telephone exchange in the whole State. The telephone exchange here not only serves the purpose during the season but would also be beneficial to the people residing at the nearby Attathode tribal settlement, Plappaly, Chalakkayam, etc. Telephone connections at Sannidhanam are given in Table 10.

Table 10: Telephone Connections at Sannidhanam

<i>Location</i>	<i>Type of Connection</i>	<i>Number of connections</i>
Pampa	Permanent	126
	Temporary (during season)	32
Nilakkal	Permanent	79
	Temporary (during season)	17
Sannidhanam	Permanent	267
	Temporary (during season)	35
Appachimedu	Temporary (during season)	2
Marakkoottam	Temporary (during season)	2

Apart from these, temporary connections are provided to various departments such as Excise department, Fire Department, etc.

Only BSNL provides cellular / mobile service at Sabarimala and Nilakkal. A pilot scheme was tried out here for issuing temporary connections to pilgrims, but was later abandoned due to non-popularity with pilgrims as they visit here only for a day or two and access to telephone is excellent in other parts of Kerala through which they need to traverse enroute the pilgrimage. In addition, other service providers such as Reliance, Airtel, etc. have initiated their effort to set up their own services there. However, from the safety perspective and growing terrorism in the world, it may be unsafe to encourage so many uncontrolled communication services here than required. In addition, frequent teleconversations would affect the tranquility of the place. The High Court of Kerala has through an order banned the use of mobiles phones at Sannidhanam.

Necessary infrastructure for providing broad band connectivity to Sabarimala is available here.

2.4.3 Issues and Deficiencies

2.4.3.1 Postal Service

The main issue is that of transportation of postal materials from Pampa to Sannidhanam which is presently manual. This becomes difficult during the season when huge quantity of Appam Aravana prasadam is to be carried down which is sent out by post to devotees elsewhere.

2.4.3.2 Telecommunications

During the questionnaire survey, almost 36percent of the pilgrims stated that the communication arrangements, specifically telephone connectivity (both land and mobile connectivity) was deficient in Sabarimala. The main concern was that for the pilgrims from outside Kerala it was difficult to resort to only BSNL connection as other service providers are not having permission to operate here. After Erumely or Vadasserikkara, cellular / mobile service by other operators is non-existent. Many of the pilgrims stated that the number of public telephone booths were very less resulting in long queues to avail the facilities. Telephone booths are missing at points where pilgrims would queue up, stay or wait.

2.4.4 Demand and Preferences

2.4.4.1 Postal Service:

There is preference for the existing system of sending *prasadam* by post to devotees elsewhere. Telegram facility is in demand as it would be easier to intimate the near and dear regarding casualties (in addition to the telephone facility). Mechanised goods transfer arrangements would be beneficial to the postal department

2.4.4.2 Telecommunications:

An assessment of the demands and preferences of the pilgrims, staff and others like drivers and support personnel at Sabarimala shows that public booths are in demand here. Almost 60percent of the visitors may need to avail this facility considering that no other service provider operates here. Since a booth can cater to maximum of 300 pilgrims/day (taking average 5 minute talk time), actual requirement of booths in Sabarimala would be 160 where as only half the number (86 nos) are existing. Other major demand is for proper positioning of telephone facility for ease of accessibility.

2.5 Commercial Activity

2.5.1 Introduction

Sabarimala is now a fascinating phenomenon which reflects all known convictions of a true pilgrimage and much beyond. The geographical, ecological, cultural and ritualistic uniqueness gives Sabarimala entirely different dimensions in comparison with other pilgrim centres.

The famous Ayyappa temple at Sabarimala is thronged by multitude of pilgrims for nearly 160 days every year. The devotees go for pilgrimage to Sabarimala after 41 days of penance during which they live like *true saints* discarding all worldly pressures and luxuries. The pilgrimage culminates when the devotees have darshan of Lord Ayyappa at the temple after a holy dip in the sacred river Pampa.

The pilgrimage to Sabarimala has become so monumental that it now significantly impacts upon the economy of Kerala. The total annual commercial activity generated by the pilgrimage is estimated as Rs.3,000 crore. Thousands of families in the surrounding region earn substantial income during the two-month pilgrimage season from commercial activities, which is enough to keep them going till the next season. Even beggars are reported to be reaching the place for begging from the neighbouring states. Crores of rupees are paid towards state taxes and other levies. Other departments benefited are the sales tax department, excise department, transport department, health department, KWA and KSEB.

TDB claims that the proceeds from the Sabarimala pilgrimage are used to support 900 of the 1200 and more temples administered by TDB which earns substantially lesser revenue. The revenues from lease rights and out-sourcing of other commercial activities by TDB form a considerable portion of the total income. TDB reported its income as Rs. 65 crores from the last pilgrimage season (November 15, 2005, to January 14, 2006).

The ever increasing pilgrim population has attracted considerable amount of commercial activity to Sabarimala in the pretext of serving the pilgrim needs at this famous centre. Shops mushroom along the pilgrimage routes during the season, taking up vital space and

constricting the movement of the pilgrims. In fact, commercial activities along the pilgrimage routes contribute a major share of the pollution related problems in Sabarimala. The shopkeepers, who indulge in large-scale collection of firewood from the area, are also the main culprits involved in the degradation of the natural forests. Moreover, the new trend of ready-made 'use and throw' packaged products have added to the problem of plastic and other wastes which is choking up the ecosystem here. As of now, there exists very limited control on the type of commercial activities happening at Sabarimala apart from some restriction imposed by the Honorable High Court on the number of shops allotted/tendered out by TDB at Nilakkal, Pampa, along the route from Plappally to Pampa, traditional trek routes from Pampa to Sannidhanam and at Sannidhanam. In addition, the TDB also sanctioned 24 hotels and tea-coffee shops along Chalakkayam-Pampa Road, 50 at Nilakkal, 30 at Pampa Manalppuram, 50 along the Pampa-Sannidhanam trekking path, 25 at the Sannidhanam, besides eight permanent hotels at the Sannidhanam.

Presently there exists very limited control on the type of commercial activities at Sabarimala apart from some restriction imposed by the Honorable High Court on the number of shops allotted/tendered out by TDB at Nilakkal, Pampa, along the route from Plappally to Pampa, traditional trek routes from Pampa to Sannidhanam and at Sannidhanam. The following tables (Table 11 and 12) indicate the details of all shops sanctioned to operate at Sabarimala by TDB during the peak season.

Table 11: Commercial establishments at Nilakkal Base Camp

<i>Sl.No</i>	<i>Shop Type and location</i>	<i>Built Character</i>	<i>Area (Sq.m)</i>	<i>Remarks</i>
a	Hotels	Temporary		12 Nos
1	Near Guest House (left)	Temporary	375	
2	Inbetween Bath pond and Temple pond	Temporary	375	
3	Near Guest House (Right side)	Temporary	450	
4	Near TDB AE office (opposite side)	Temporary	750	
5	Near TDB AE office (Rear side)	Temporary	750	
6	Near Toilet block 1and2	Temporary	750	
7	Near Telephone exchange	Temporary	450	
8	Near Toilet block 7and8	Temporary	450	
9	Near Toilet block 5and6	Temporary	750	
10	opposite Effluent sump	Temporary	375	
11	Near labour quarters	Temporary	300	
12	Rear side of Shiva Temple	Temporary	80	
	Total area		5855	
b	Other Stalls	Temporary		4 nos
1	Near Toilet block 7and8	Temporary	25	
2	Near Hotel No.8	Temporary	50	
3	Opposite TDB AE's office	Temporary	25	
4	Right side of TDB AE's Office	Temporary	25	
	Total area		125	
c	Blocks	Temporary		2 Nos
1	Front of Shiva Temple	Temporary	90	
2	Rear side of Shiva Temple	Temporary	90	

<i>Sl.No</i>	<i>Shop Type and location</i>	<i>Built Character</i>	<i>Area (Sq.m)</i>	<i>Remarks</i>
Total area			180	
d	STD Booth	Temporary		6 Nos
1	Front of Shiva Temple	Temporary	4	
2	Near Toilet block 1and2	Temporary	4	
3	Opposite TDB AE's office	Temporary	4	
4	Opposite Hotel No.11	Temporary	4	
5	Near Hotel No.10	Temporary	4	
6	Near Hotel No.6	Temporary	4	
Total area			24	
e	Tender Coconut Stalls	Temporary		2 Nos
1	Near Toilet block 1and2	Temporary	50	
2	Opposite Devi temple	Temporary	50	
Total area			100	
f	Other Stalls	Temporary		1 Nos
1	Camphor Stall	Temporary	15	
Grand Total area of temporary structures at Nilakkal			6299	27 structures

Source: TDB and Survey

Details of commercial establishments in the Pampa area are presented in the following table.

Table 12: Commercial Establishments in Pampa Area

<i>S.No</i>	<i>Shop Type and location</i>	<i>Built Character</i>	<i>Area (Sq.m.)</i>	<i>Remarks</i>
Thriveni				
a	Balitharas	Temporary	135	Total Numbers = 30 @ 1.5*300 each
Pampa Manalppuram				
b	Hotel	Temporary		18 nos
1	Hotel Shed	Temporary	400.4	
2	Hotel Shed	Temporary	471.5	
3	Hotel Shed	Temporary	635.5	
4	Hotel Shed (Permanent)	Temporary	525	
5	Hotel Shed (Permanent)	Temporary	734.4	
6	Hotel Shed (Permanent)	Temporary	781.2	
7	Hotel Shed	Temporary	669.92	
8	Hotel Shed	Temporary	388.8	
9	Hotel Shed	Temporary	550.8	
10	Hotel Shed (near Pandala Raja shed)	Temporary	64.2	
11	Hotel Shed (near Pandala Raja shed)	Temporary	184.92	
12	Hotel near Gurd Rm + Kitchen	Concrete structure	186	
Total			5592.64	
c	Blocks	Temporary		13 nos
1	Milma	Temporary	16	
2	Shed near Pampa Bridge	Temporary	400.4	
3	Supply Co shed	Temporary	400	
4	Shed Next to Supply co	Temporary	156.25	

<i>S.No</i>	<i>Shop Type and location</i>	<i>Built Character</i>	<i>Area (Sq.m.)</i>	<i>Remarks</i>
5	Shed	Temporary	390	
6	Shed	Temporary	500	
7	Studio	Temporary	280	
8	Shed next to Studio	Temporary	220.5	
9	Shed next to ABASS	Temporary	220.5	
10	Space for various dailies	Temporary	126	14 nos @ 3x3m size
11	Health dept. ambulance shed	Temporary	625	
12	Shed near Guard Rm (2nos)	Temporary	36	
13	Labour Shed for Toilets	Temporary	150	
	Total		3520.65	
d	Other			
1	Shops on ground floor of building abutting Nadapanthal	Concrete structure	330	22 nos
e	STD Booths			5 nos
1	Near Pampa Bridge	Temporary	4	
2	Near permanent Hotels	Temporary	4	
3	Near Media stall area	Temporary	4	
4	Near book stall in Ganapathi temple premises	Temporary	4	
5	Near Ganapathy temple auditorium	Temporary	4	
	Total		20	
Hill top and left Bank of Pampa				
a	Hotel			8 nos
1	Hill Top shed	Temporary	50	
2	Hill Top shed	Temporary	50	
3	Hill Top shed	Temporary	167	
4	Left bank shed	Temporary	136	
5	Left bank shed	Temporary	175	
6	Kitchen + stall	Temporary	93.75	
7	Permanent Hotel	Concrete structure	51.75	
8	Permanent Hotel	Concrete structure	31.5	
	Total		755	
b	STD Booths			1 no
	Near KWA	Temporary	4	
	Grand Total		10357.29	67 individual structures and 6 telephone booths (25 permanent structures)

Source : TDB and survey

Along the road stretch from Plapally to Pampa, shops are permitted by Forest Department on 'permissive use' basis. TDB contracts out the operation of these shops to the private. These temporary structures mostly house tea shops and hotels to serve the moving pilgrims and the

staff deployed at stations enroute to Pampa. Details of the types and number of shops here are presented in the table below.

Table 13: Shops details : Road from Plappally to Pampa

S.No	Shop Type and location	Built Character	Area Sq.m	Remarks
a	Shops From Thriveni to Chakkupalam Parking Ground	Temporary		7 nos
1	Stall with Add. Kitchen Facilities	Temporary	212	
2	Stall with Add. Kitchen Facilities	Temporary	212	
3	Stall	Temporary	200	
4	Stall	Temporary	200	
5	Stall	Temporary	150	
6	Stall	Temporary	200	
7	Stall	Temporary	150	
b	Chalakkayam -Ponnampara Stretch	Temporary		4 nos
8	Stall	Temporary	200	
9	Stall (Palam Thodu)	Temporary	200	
10	Stall (Palam Thodu)	Temporary	200	
11	Stall (Ponnampara)	Temporary	200	
c	Ponnampara - Arattukavala	Temporary		4 nos
12	Stall	Temporary	200	
13	Stall	Temporary	200	
14	Stall	Temporary	200	
15	Stall (Arattukavala)	Temporary	200	
d	Arattukavala-plappally	Temporary		9 nos
16	Stall (Elavunkal)	Temporary	200	
17	Stall	Temporary	200	
18	Stall (Plappally)	Temporary	200	
19	Stall (Plappally)	Temporary	200	
20	Stall (Plappally)	Temporary	200	
21	Stall (Plappally)	Temporary	200	
22	Stall (Plappally)	Temporary	200	
23	Stall (Plappally)	Temporary	200	
24	Stall (Plappally)	Temporary	200	
Total			4724	24 nos

Source: TDB and Survey

The routes from Pampa to Sannidhanam also houses temporary stalls set up during the season. The permission to erect these shops are given by the Hon'ble high court of Kerala. These shops are also temporary in nature.

Table 14: Shops along Traditional Trek Route, Swami Ayyappan Rd. and Chandranandan Rd.

S.No	Shop Type and location	Built Character	Area (Sq.m)	Remarks
a	Tea Stall	Temporary		22 nos
1	Sharamkuthy	Temporary	120	
2	Marakkootam along swami Ayyappan Rd	Temporary	120	
3	At Marakkootam	Temporary	120	
4	At Marakkootam	Temporary	120	
5	Between Sharamkuthy and Marakkootam	Temporary	120	
6	At Marakkootam	Temporary	120	

S.No	Shop Type and location	Built Character	Area (Sq.m)	Remarks
7	Opposite Sabaripeedom	Temporary	75	
8	Side of Sabaripeedom	Temporary	120	
9	At Neelimala	Temporary	120	
10	At Neelimala	Temporary	120	
11	At Neelimala	Temporary	120	
12	Opposite Pump House no. 4	Temporary	120	
13	Near Cardiology centre Appachimedu	Temporary	105	
14	Near Cardiology centre Appachimedu	Temporary	75	
15	Near Cardiology centre Appachimedu	Temporary	75	
16	Near Cardiology centre Appachimedu	Temporary	75	
17	Near Cardiology centre Appachimedu	Temporary	75	
18	Near Pump House No.1	Temporary	75	
19	Swami Ayyappan Rd	Temporary	75	
20	Swami Ayyappan Rd	Temporary	75	
21	Swami Ayyappan Rd	Temporary	75	
22	Swami Ayyappan Rd	Temporary	75	
b	Stalls	Temporary		28 nos
1	Opposite Sabaripeedom	Temporary	120	
2	Opposite Sabaripeedom	Temporary	120	
3	Saranam Stall	Temporary	6.25	
4	Neelimala	Temporary	75	
5	Between Appachimedu Cardiology centre and Pump House No. 3 (Left side)	Temporary	75	
6	Between Appachimedu Cardiology centre and Pump House No. 3 (right side)	Temporary	75	
7	Between Appachimedu Cardiology centre and Pump House No. 3 (right side)	Temporary	75	
8	Between Pump House No. 3 and Pump house No. 2 (right side)	Temporary	120	
9	Between Pump House No. 3 and Pump house No. 2 (left side)	Temporary	120	
10	Between Pump House No. 1 and Pump house No. 2 (left side)	Temporary	75	
11	Between Pump House No. 1 and Pump house No. 2 (left side)	Temporary	75	
12	Between Pump House No. 1 and Pump house No. 2 (Right side)	Temporary	75	
13	Between Pump House No. 1 and Pump house No. 2 (Right side)	Temporary	75	
14	Between Pump House No. 1 and Devaswom Guest House (left side)	Temporary	75	
15	Between Pump House No. 1 and Devaswom Guest House Tender Coconut stall	Temporary	75	
16	Between Pump House No. 1 and Devaswom Guest House (Right side)	Temporary	45	
17	Between Pump House No. 1 and Devaswom Guest House (Right side)	Temporary	45	
18	Between Pump House No. 1 and Devaswom Guest House (Right side)	Temporary	45	

S.No	Shop Type and location	Built Character	Area (Sq.m)	Remarks
19	Swami Ayyappan Rd Tender Coconut stall (Right side)	Temporary	75	
20	Swami Ayyappan Rd (Left side)	Temporary	75	
21	Swami Ayyappan Rd (right side)	Temporary	75	
22	Swami Ayyappan Rd (right side)	Temporary	75	
23	Swami Ayyappan Rd (Left side)	Temporary	75	
24	Swami Ayyappan Rd (right side)	Temporary	75	
25	Swami Ayyappan Rd (Left side)	Temporary	75	
26	Swami Ayyappan Rd (Left side)	Temporary	75	
27	Swami Ayyappan Rd (Left side)	Temporary	75	
28	Swami Ayyappan Rd (Left side)	Temporary	75	
c	STD Booth	Temporary		7 nos
1	Between Sharamkuthy and Marakkoottam		4	
2	Side of Sabarippeedom		4	
3	Neelimala		4	
4	Appachimedu		4	
5	Between Pump House No. 3 and Pump house No. 2 (right side)		4	
6	Swami Ayyappan Rd (Left side)		4	
7	Swami Ayyappan Rd (Left side)		4	
Total			4324.25	50 nos (7 booth are attached to stalls)

Source: TDB and Survey

At Sannidhanam, there are many shops which serve as hotels, tea stalls, shops selling pooja items, general articles of all types etc. These are either housed in permanent, semi permanent or temporary structures. Details of these shops are as under.

Table 15: Details of Commercial Establishments at Sannidhanam

S.No	Shop Type and location	Built Character	AREA (SQ.M)	Remarks
1	Footwear Keep Stall	Temporary	8	
2	Lean to for Permanent Hotel	Temporary	72	
3	Permanent Hotel near Sub way No-4	Concrete structure	500	
3	Shops attached to Permanent hotel near Subway	Concrete structure	105	7 nos (2 tea stall and one Medical Shop)
4	Civil supplies hotel No-21	Temporary	72	
5	Permanent Hotel No 3 near Nadapanthal	Concrete structure	140	
6	Lean To for cellar portion	Temporary	70	
7	Lean To for kitchen of Permanent Hotel no 3	Temporary	70	
8	STD booth Abutting Pilgrim centre near Nadapanthal	Temporary	4	
9	Malikappuram Complex	Concrete structure	390	26 shops
	Book stall			
	book stall			
	1 mt empty space			
	8 hotel spaces			

<i>S.No</i>	<i>Shop Type and location</i>	<i>Built Character</i>	<i>AREA (SQ.M)</i>	<i>Remarks</i>
10	Maramath Complex Dev bookstall Karpooram Stall Gold silver including 1.1 MT space	Concrete structure	120	8 shops
11	Under Fly over Bhasmathattu Malathattu Chukkuvallapura 2 hotels	Concrete structure	180	12 shops
12	Shops abutting rear side of maha sannidhi Vettilapakku Gold Silver Malakada Padakada	Concrete structure	36	4 nos
13	Studio abutting post office	Concrete structure	72	
14	Hotel abutting Health section	Temporary	150	
15	Hotel on rear side of Pilgrim centre-2	Temporary	35	
16	Hotel by the side of Pilgrim centre-3	Temporary	150	
17	Book stall near Malikapuram Nadapanthal	Temporary	570	3 nos
18	STD and Photostat (malikappuram Nadapanthal)	Temporary	9	
19	Nalikera Counter Malikappuram Temple	Temporary	6	
20	Hotel near Annadana Mandapam	Temporary	50	
21	Milma Stall	Temporary	16	
22	Cellar shops in Donor house no.7	Concrete structure	164.16	2 nos
23	Hotel near wiresee station	Temporary	72	
24	Kitchen for Hotel near wireless station	Temporary	90	
24	Canteen for Devaswom guest house	Temporary	140	
25	Devaswom guest house Dining	Temporary	68	
26	Hotel opposite water Tanks near Pandi thavalam-1	Temporary	200	
27	Hotel opposite water Tanks near Pandi thavalam-2	Temporary	200	
28	Hotel in Pandithavalam (right side)	Temporary	120	
29	Hotel in Pandithavalam (Left side)	Temporary	120	
30	Hotel near Donor house 6	Semi Permanent	180	
31	Kitchen for Hotel near Donor house 6	Temporary	54	
32	Annadhanam Mandapam lean to	Temporary	96	
	Total		4329.16	

In addition, many shops are provided at intermediate Thavalams along the traditional trek route from Erumely to Pampa. These are maintained by EDCs under the management of the Forest Department. A comprehensive list of such shops along the trek route is presented in the table below.

Table 16 : Commercial Activities along Trek Routes – 2006 (Azhuthakadavu to Cheriyanavattom)

Sl No	Camp Name	Hotel		Viri	Refreshment/ food stall	Drinking water Kiosk	Stationery, Grocery	STD booth	Tender Coconut	Medicinal shops
		Viri and shop	Viri and water Kiosk							
1	Azhutha Kadavu	15	1	5	1	8	1	1		1
2	Kallidamkunnu	15	3			15				
3	Inchiparakotta (cheeni Camp)	18							3	2
4	Vallithodu (mukkuzhi)	29		1		3				2
5	Vellaramchetta	26	1			2				
6	Puthussery	21								
7	Karimala Top	20				19				1
8	Oliampuzha					10			5	
9	Valiyanavattom	14		3			2		4	
10	Cheriyanavattom	5	8			1			1	

The allotment and management of shops along the traditional trek route from Erumely to Pampa is basically done by EDC's under the supervision of Forest Department. In rest of the area including all location of importance en-route, shops and related commercial activities have mushroomed with little or no control what so ever.

Presently, at Sabarimala there about 30,000 sq.m of retail and service businesses and 27,000 sq.m of Viri facility primarily geared towards serving pilgrims within a limited area of approximately 420 acres (Pampa, Nilakkal, Trek and Sannidhanam).

2.5.2 Hierarchy of Commercial Activities at Sabarimala

In Sabarimala, commercial activities are mainly in the form of clustered centres at various Base Camps and individual informal shops serving various articles of need to pilgrims at frequent intervals along all the major routes (road and trek) leading to Sabarimala. But basically the commercial areas in Sabarimala can be categorized under two major heads namely Formal Retail Trade Areas and Informal Retail Trade Areas.

2.5.2.1 Formal Retail Trade Areas

Formal retail trade areas are concentrated in few locations such as Pampa, Manalppuram, Nilakkal, Sannidhanam and various camps along the Erumely-Pampa trek route. Small dispersed commercial centers are also located at various points along all major corridors of pilgrim movement (trek paths and roads). All the spaces in the formal retail areas are officially leased out by TDB to private parties. The lease period is generally 2 months, except for few which are leased out for one year, mainly to cater to the demand of the off-season pilgrim crowd. The types of shops that are generally found in the formal areas can be categorized into 2 sections basically based on character of the activities namely; service outlets and merchandise outlets. The types of shops which are generally located in Sabarimala in the above categories are as follows:

Service outlets

Hotels: Hotels form the most common type of large shops (by size) found in Sabarimala. In the areas under TDB domain most of the hotel spaces are leased out to private parties during the season. Five shops in Pampa and one shop in Sannidhanam operate throughout the year; whereas rest of the hotels operates only during the season starting from 15th November to 15th January annually. The size of the shops varies from 100 sq.m. to 300 sq.m. In the areas under forests not leased out for TDB's activities, the temporary shops erected only for use during the peak pilgrim season are managed by the EDC's under the supervision of the Forest Department.

Tea stalls and Snack Bars: These are found in large numbers along the routes, at Pampa, Nilakkal and Sannidhanam. These shops basically provide refreshments such as bottled water, soft drinks, tea, tender coconuts, and packaged / ready-to-eat food like biscuits, chips etc., to pilgrims. These are operated and managed by private parties in non forest areas where as in forest areas mainly by the EDC's.

Doli service - Doli service is available from Pampa to Sannidhanam for those who are unable to trek the heights. For using Doli service the official fare is Rs. 660/- (Rs. 330/- for one way). But during the peak days higher (around Rs.1000-1500) are charged for their services. As of now approximately 500 dolies operate in Sabarimala during the peak season. It is estimated that more than 2000 people earn their living through this service.

Agency Outlets

Telephone Booths – As described in the section on Communication Facilities, till 1990, there were just 2 STD booths at Pampa and Sannidhanam, but now BSNL has provided carpet mobile phone coverage at Sabarimala as well as at Nilakkal. As of now, during the season BSNL sanctions 32 private telephone booths at the Sannidhanam, 28 booths in Pampa and 16 booths in Nilakkal base camp with a view to meeting the telecommunication needs of the multitude of pilgrims visiting the shrine during the annual pilgrim season. This is in addition to the 12 public telephone booths attached to the CSC at Sannidhanam, six at the Pampa CSC and two at Nilakkal telephone exchange.

Chukkuvallam (medicated hot water) counters – ABASS and TDB along with EDCs are involved in free supply of Chukkuvallam to pilgrims at various locations. ABASS and EDC are mainly active along the trek route from Erumely to Pampa and Satram-Uppupara-Panditavalam. Along the traditional trek route from Pampa to Sannidhanam and at Nilakkal, Pampa and Sannidhanam, TDB along with ABASS provide the pilgrims with Medicated hot water

Petrol Pump – The only petrol pump belonging to IOC is located at Pampa. But this facility is insufficient to cater to the actual demand. During the peak season fuel supply from the petrol pump is restricted and rationing system is put in place to cater to the huge demand. The next nearest petrol stations are at Erumely and Vadasserikkara, which are around 40 to 50 km from Pampa.

Oxygen Parlours - The ABASS volunteers 12 oxygen parlours set up by the Health Department along the trekking path. These oxygen parlours are much like shops – where pilgrims walk in, sit down, inhale oxygen and leave. In these parlors, the pilgrims are advised to sit down on a comfortable armchair and to relax as a tube is stuck up each nostril. The tubes are connected to a machine that filters out the oxygen from the nitrogen, carbon dioxide and inert gases in the atmosphere, and supplying with 97 per cent oxygen for inhalation. Supply of pure oxygen is supposed to contribute to increased energy levels and better overall health condition of pilgrims who avail the service. Pilgrims are given pure oxygen to breathe in for duration of around thirty minutes to an hour. As the pure oxygen gets into the blood stream and cells, fatigue and lung problems are supposed to get cured through this.

ATM facilities - A branch of Dhanalakshmi bank operates at Sannidhanam. The Federal Bank and the State Bank of Travancore have provided modern banking facilities, which are fully computerised with ATM facility.

Clock Rooms and Safe Keep Stores – Safe keeping facility in the form of clock rooms are provided basically by ABASS both at Pampa and Sannidhanam. TDB tenders out the right to operate services such as footwear safe-keeping facilities to private parties who collect fee from the pilgrims to provide such services.

Workshops – As of now well equipped workshops are non existent at Sabarimala. Hence, in case of a vehicular breakdown, the nearest available support of substantial nature is at Perunad or Vadasserikkara. Since last peak pilgrim season, ABASS has been providing a workshop facility on the land allotted by TDB at Nilakkal. The services provided here are minimal and only cater to the most common types of vehicular services required.

Merchandise outlets

Grocery Shop: These types of shops are generally not seen or not required at any pilgrim location. However, here the pilgrims many times prefer to cook food for themselves considering the strict vegetarianism, varying cooking ingredients preferred by pilgrims from other States, strict penance and observances etc, these have become important at Sabarimala. These shops are mainly located in base camps like Nilakkal and Pampa where the pilgrims congregate and stay for longer durations. There are both government/cooperative agencies and private parties running such shops in Sabarimala.

Utensil Shops: There are numerous shops in Pampa and Sannidhanam, selling all kind of utensils. Utensils become a requirement for pilgrims to collect and store ghee, which is the main offering to the God here in Sabarimala. However some pilgrims are found to buy utensils to cook, store food and prasadam and other uses. All varieties of utensils, both steel, aluminum, plastic etc are available here though these are not indispensable here.

Curio Shops: Though not an essential requirement, numerous curio shops could be observed here.

Fancy Shops: There are numerous such shops in Pampa and Sannidhanam selling all sort of fancy goods ranging from toys, ladies fashion items, utility articles etc.

Audio Video Cassette Shops: There are number of audio cassette shops selling devotional song cassettes in various South Indian languages. These shops also add to the noise levels as they usually play songs on loudspeakers in high pitch to attract pilgrims.

Photo Studio: There exist 2 numbers of photo studios at Sabarimala; one each in Pampa and Sannidhanam. Though not an essential component with respect to pilgrimage, these are useful for the pilgrims who would like to capture and store memories of their pilgrimage experiences though photography is banned in the temple precinct.

Shops Catering to Puja Needs and Florist Shops – These are to an extent important in Sabarimala, though the pilgrims traditionally stock the pooja items in their Irumudi. These very small stalls generally located in close proximity to the temple complex in Sabarimala and are usually manned by single person.

Medical store – There are very few medical shops in Sabarimala area. Most of these are located in unseen corners where it is difficult to be located. At Pampa and Sannidhanam, there exist designated medical shops attached to the hospital/health centers.

Convenience Store- There are numerous convenience stores in Pampa and Sannidhanam but basically clubbed along with other shops. It is understood from site reconnaissance that the shop owner sublets part of the vast space which has been contracted out by TDB to other vendors who sets up small shops selling an assortment of goods.

Confectioneries shops – Though there are no shops which sell confectionary items alone, a part of most of the shops are specifically devoted toward this, selling various kinds of sweets and other eatables.

Agency Outlets

Milma Booths –As of now there exist 3 milma outlets in Sabarimala. The outlets are located in Nilakkal, Pampa and Sannidhanam and sell almost all products of Milma (based on milk) in the market.

Government/ Cooperative store – Government owned branded outlets such as Maveli and Supply Co. have designated stores at Pampa and Sannidhanam, which are the main centres of supply of wheat, pulses, rice, cereals, etc along with vegetables and other articles of importance to pilgrims. However, the coverage of such stores is limited.

2.5.2.2 Informal Retail Trade Area

The informal retail trade occurs mainly along the major transportation corridors, such as road or trek routes. These areas are mainly occupied by hawkers and venders in makeshift shops which are unauthorized usually or functioning with no formal documents. The most common kind of retail outlets found in such informal activity areas are – food vendors, kumkum/colour vendors, artand artifact vendors, petty shops, curio vendors, etc. It is estimated that along the traditional trek path from Pampa to Sannidhanam alone, more than 100 such small and medium retail activities are sprawling. Similar kind of activities are also found at various locations along the trek route from Erumely to Pampa and along the major road corridors leading to Sabarimala. It is estimated that more than 1000 people are directly and about 5000 are involved indirectly in this type of economic activity.

Members of the Narikkuravar (nomadic tribe mainly based in Tamil Nadu and Andhra Pradesh) tribe also sell their wares (Mainly beads, chokers etc) here. Their population at Pampa is around 250. It has been reported that “nomadic tribes, most of them reportedly coming from the high health risk areas of neighbouring Tamil Nadu, camp at Pampa and along the trekking path, vending neck-chains, bangles and tribal medicines”.

2.5.3 Commercial Area Characteristics

2.5.3.1 Site Characteristics

Commercial activities are found everywhere in Sabarimala. But major activities are concentrated at Nilakkal, along the road access and trek routes and at Pampa and Sannidhanam. The goods can only be transported manually or over donkeys or by tractors to Sannidhanam and the upper reaches of the routes from Pampa to Sannidhanam. In Pampa and Nilakkal, there is full vehicular access. Pampa is located in a valley area where the commercial activities are mainly concentrated along the right bank i.e. Pampa *Manalppuram* which has a relatively plain land. In all other locations including Nilakkal, the landform is rugged and hilly with thick vegetation cover.

2.5.3.2 Built up Area Characteristics

Viris are built by the local labourers in a crude way using basic materials such as bamboos/ wooden poles and tin sheet/ tarpaulin sheet. Similar is the case of most of the temporary shops and hotels that come up during the season. Though shops and viri areas are designated and defined at the time of tendering itself, the built structure mostly intrude into spaces meant for circulation making the circulation space more crammed and congested. In addition to this there are no setbacks provided. There is no guarantee of the structural safety of most of the temporary structures as many times, the viris (multi storied) are over loaded with pilgrims. Most of the temporary structures are constructed in a closely packed formation utilizing the maximum extent of space possible and among them many structures are even multi-bunk bedded. This is a very dangerous situation with respect to fire safety as these structures are highly susceptible to fire and if it occurs the whole place will raze in the fire with virtually no barrier existing to prevent the spread. Fire possibilities are high as in most of the viri locations, pilgrims resort to self cooking. Other main concern in viri is the health and hygiene condition existing here as most of the viris are located far off from (with respect comfortable accessibility) sanitation facilities and hence, pilgrims are encouraged to go for open defecation in the vicinity. This propensity pollutes the whole environment here which in turn raises the health and hygiene issues.

Most of temporary built up areas have services and infrastructure below the "adequate" or minimum levels. The services in this context include circulation spaces, water supply, sanitation, electricity, and drainage. Water supply, for example, to individual viri or even group of viri is absent, only few public stand pipes and some hand pumps have been provided at different locations. Informal networks for the supply of water are in place. Similar arrangements are also made for electricity, drainage, toilet facilities etc.

However, viris are still the most preferred accommodation for most of the pilgrims. It is hence essential to use available area to recreate the long forgone character of traditional viris, which were spread amidst the trees. This can be done by creating viri areas between

trees/greenery, using modular construction, adhering to minimal space standards, providing facilities at convenient distance for the pilgrims.

2.5.3.3 Personals/Staff Associated with Commercial Other Service Activities

During peak season many governmental, quasi governmental and voluntary agencies work at Pampa. These include SSS, TDB, KSEB, KWA, KSPCB, Police, Post Office, Excise Department, Forest Department, Banks, Health Department NGOs like Ayyappa Seva Sangham etc, together contributing staff strength of around 1000. Barracks are provided for police and fire force personnel who manage the law and order, emergency and rescue services, while office and accommodation for TDB staff is provided in Maramath Complex. All other offices have attached office and stay facilities, creating a mixed land use at Pampa.

Other categories of occupiers at Pampa are hotel workers and vendors / hawkers whose total strength fall around 800. In addition other service personnel such as head load workers / coolly men, donkey keepers, workers and *doli* men occupy Pampa in large numbers. Their number is around 500, out of which around 30 are donkey keepers. Most of them come from nearby areas such as Kumily, Vandiperiyar, Peerumedu, Vadasserikkara and even far off locales of Tamil Nadu and stay here till the peak season is over.

2.5.3.4 Distribution of Shops by Type

The pattern of distribution of shops in Sabarimala follows no known conviction. Almost 80percent of the shops allocated are for hotel, refreshment or lodging purposes at Sabarimala. It has been observed that Pampa Manalppuram along with the trek route has the maximum number of diversified shopping activities both in formal and informal sector. Nilakkal along with Thriveni are listed among the places where least diversification of commercial activities is observed. This can be attributed to restrictions in the type of shops (imposed by the Hon'ble High Court). Also, mixed commercial activities are generally observed in Sabarimala wherein a single shop offers all kind of services to pilgrims for example, a designated hotel would have food service, viri type lodging, convenience store, petty shops etc. under one roof.

Table 17: Distribution Pattern of Shops in Sabarimala

Types of shops	Pampa		Nilakkal		Trek Route		Sannidhanam		
	Hill Top Thriveni and left bank	Manalppu temple	Ganapathy ground	Shiva temple	Devas. Office and guest house	Pampas san nidhanam	Uppupara- Pandithaval -Pampa am	Sharamku thy- Nadapant hal	Malikappura Temple m- Precinc Pandithavala m
Formal Retail activity									
Hotel	#	#	#	#	#	#	#	#	#
Tea and snack stall	#	#	#	#	#	#	#	#	#
Accommodation	#	#	#	#	#	#	#	#	#
Dolly service	#	#	#	#	#	#	#	#	#
Telephone Booths (AO)	#	#	#	#	#	#	#	#	#
Chukkuvallam counters (AO)	#	#	#	#	#	#	#	#	#
Petrol Pump (AO)	#	#	#	#	#	#	#	#	#
Oxygen parlours (AO)	#	#	#	#	#	#	#	#	#
ATM facilities (AO)	#	#	#	#	#	#	#	#	#
Clock Room and Safe	#	#	#	#	#	#	#	#	#
Keep stores (AO)	#	#	#	#	#	#	#	#	#
Workshops (AO)	#	#	#	#	#	#	#	#	#
Merchandise outlets									
Grocery Shop	#	#	#	#	#	#	#	#	#
Utensil Shops	#	#	#	#	#	#	#	#	#
Curious Shops	#	#	#	#	#	#	#	#	#
Fancy shops	#	#	#	#	#	#	#	#	#
Audio video Cassette Shops	#	#	#	#	#	#	#	#	#
Photo studio	#	#	#	#	#	#	#	#	#
Book stall	#	#	#	#	#	#	#	#	#
Shops Catering To Puja needs and Florist shop	#	#	#	#	#	#	#	#	#
Fruits and Vegetable shops	#	#	#	#	#	#	#	#	#
Medical store	#	#	#	#	#	#	#	#	#
Convenience Store	#	#	#	#	#	#	#	#	#
Confectioneries stops	#	#	#	#	#	#	#	#	#

Types of shops	Pampa		Nilakkal		Trek Route		Sannidhanam		
	Hill Top Thriveni and left bank	Manalppu temple	Ganapathy temple	Parking ground	Shiva temple	Devas. Office and guest house	Sharamku Nadapant hal	Uppupara- Pandi thaval m- Precinc t m	Malikappura Temple m- Precinc t m
Agency Outlets -Milma	#	#	#	#	#	#	#	#	
Agency Outlets -Mavelli and Supply Co	#							#	
Others	#				#	#			
Informal Retail activity									
Service outlets				#		#	#	#	#
Food									
Astology		#				#			
Curious items		#				#	#	#	
Toys and ornaments						#	#	#	
Art and artefact						#	#	#	
Merchandis e outlets		#				#	#	#	
Tribal medicine						#	#	#	
Fancy items						#	#	#	
fruits sale						#	#	#	
others						#	#	#	

Source: Primary Survey (2005-06)

2.5.4 Major Issues

- The commercial activities at Sabarimala area can be limited as the pilgrims demand only basic facilities here. These shops can be located at various specified locations of congregations.
- Current space allocation and designation of respective shops and relative activities are adhoc with no rational or logical pattern. This has resulted in the chaotic situation wherein pilgrims find it difficult to locate the commercial area according to their need.
- The shops are aligned facing the major corridors and activity spaces. Crowding of pilgrims in front of the shops in turn use up the space available for pilgrim movement.
- Almost all the temporary structures are planned and built in most adhoc manner
- Absence of 'stern and strong' measures to ensure the sale of quality food items at reasonable prices.
- TDB auctions the space for commercial outlets like hotels and tea stalls in the forestland in its control at Pampa, Sannidhanam and along the trekking path.
- The fleecing of Ayyappa devotees coming from different parts of the country is a major complaint during every pilgrim season. The authorities have often been found to be indifferent towards the fleecing. Government has been quite ineffective in checking this propensity as each year, the pilgrims complain about the sale of even biscuits and drinking water at prices far above the retail price printed on the packaged items. As the shop areas are auctioned at Pampa, Sannidhanam and along the trekking path at high rates, the shop owners feel a sense of ownership and mostly fleece the hapless pilgrims. Beggars and antisocial elements pouring in from neighbouring states are real nuisance among whom many are involved in pick pocketing, stealing, cheating and other unlawful activities.
- The types and number of shops allotted are not based on any rationale, but decided in an adhoc manner according to convenience or / and demand raised by various quarters. Essential and needed shops are short in supply while the hotels and tea stalls are teemed up in huge numbers, providing very poor service to pilgrims.

2.6 Accommodation

2.6.1 Introduction

A range of accommodation facilities operated by the Travancore Devaswom Board (TDB) as well as the State and Private parties have come up at Pampa and Sannidhanam.

Limited accommodations are available at Sannidhanam which consist of rooms, halls and dormitories. The number of rooms/dormitories is extremely limited and can be availed of on 'as available basis' or through advance booking.

The facilities at Sabarimala are located in a basin shaped land form , which is quite small in terms of spread. There is a physical limit to the number of people that it can hold at a time and one cannot afford to overlook this natural constraint. Due to space constraints and awareness about the environmental impacts associated with long duration stay here, there is a general consensus among the stakeholders that accommodation facilities at Sannidhanam for pilgrim

should be gradually reduced and to free put available area to provide maximum facilities for satisfactory darshan.

2.6.2 Accommodation Provided at Sabarimala

Presently accommodation facilities are available only at Pampa and Sannidhanam. At Pampa most of the accommodation facilities are of three types namely viri sheds, paid rooms and guest houses whereas in Sannidhanam apart from these three types, there exists Nadappanthals (covered walkways) and donor houses donated by various parties where pilgrim find space to recuperate. Presently accommodation for about 30,000 peoples are available at Sannidhanam (including facilities for staff), about 4000 in Pampa, and about 18,000 along Erumely Pampa trek route.

The main agencies which provide accommodation facilities to the pilgrims are TBD, Donors, State departments (who maintains guesthouses; such as that of PWD, KFD etc) and Social organisations/NGO's like ABASS. Guesthouses of the PWD, the KFD, KWA and a few other government departments are usually not available to pilgrims as they basically cater to the requirements of respective departments. Most of the pilgrims have rely on the facilities in form of guest houses, donor houses, nadapanthals or viri panthals provided by the TDB and others, at Pampa and Sannidhanam.

Many accommodations are available in donor houses which are basically built using funds donated for some purpose by the devotees/ groups/ philanthropists. But such facilities are for limited pilgrims as pilgrim /groups who had donated the same have a certain rights on these rooms by which these rooms have to be placed at the donors' disposal for a certain number of days every year. Most of the donors exercise this lien during the peak periods for their own use or for the use of their relatives or friends. Thus, such accommodation is not available for public booking when the donor chooses to exercise his lien. Apart from Pampa and Sannidhanam there are numerous other locations where accommodation is available. These are basically in form of paying guest or home stay facilities.

Apart from Pampa and Sannidhanam, there are numerous other locations wherein the pilgrim halts before proceeding to Sabarimala. Among these, the most important place where pilgrims congregate in huge numbers, during the season is Erumely. Presently all accommodation requirements including permanent (for resident staff/workers/labourers) temporary/seasonal (when temple remains open) are facilitated in basically 3 categories of built structures namely permanent structures, semi permanent structures and temporary structures.

2.6.2.1 Sannidhanam

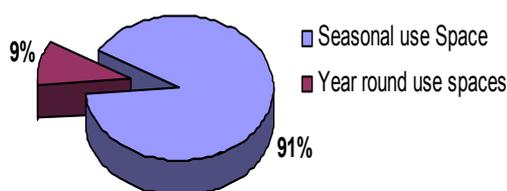


Figure 2: Space usage for Accommodation

Permanent structures – Permanent structures can further be classified into two types considering its utilisation as permanent building for full-time/year-round use and those for use only during the season. The details are listed in the following table (**Table 18**).

Total permanent built up space of about 34,000 sq.m. is available exclusively for accommodation and related activities. However, only 9percent of this i.e about 3200 sq.m. of space is used throughout the year. The total numbers of persons who can be accommodated in this available area is about 17,000, throughout the year.

Table 18: Details of Permanent Buildings used for Accommodation Purposes

<i>Name of buildings and place</i>	<i>Owner-ship</i>	<i>Purpose</i>	<i>Area (Sq.m)</i>	<i>Floors</i>	<i>Rooms</i>	<i>Use of building</i>	<i>Working period</i>
All Time use (Whole Year)							
Staff rooms beneath flyover to Malikappuram and guard room	TDB	Ground Floor- staff accommodation above is flyover	420	2	14 rooms	Accommodation	All time
Inspection Bungalow	Forest Dept	Food and accommodation	300	1	5 rooms, 1 hall, attached	Accommodation	All time
Guest House	TDB	Accommodation	1050	2	10 rooms, constructed in 1981	Accommodation	Peak season
Inspection Bungalow	Forest Dept	Inspection Bungalow	150	1	all attached	Accommodation and Office	All time
Inspection Bungalow	KSEB	IB	240	1	4 rooms	Accommodation and Office	All time
Engineers Guest House (2 blocks)	PWD	Lodging for PWD engineers	960	3	36 rooms	Accommodation and Office	All time
Use during Pilgrim Seasons							
Police Officers Cottage-1	TDB	Police Accommodation	102	1	Room and hall	Accommodation	Peak Season
Police Officers Cottage-2	TDB	Police Accommodation	78	1	Room and hall	Accommodation	Peak Season
Police Officers Cottage-3	TDB	Police Accommodation	56	1	Room and hall	Accommodation	Peak Season
Police Officers Cottage-4	TDB	Police Accommodation	56	1	Room and hall	Accommodation	Peak Season
Police Officers Quarters -5	TDB	Police Accommodation	100	1	Room and hall	Accommodation	Peak Season
Police Barracks-1	TDB	Police Accommodation	1504	4	Dormitory	Accommodation	Peak Season
Police Barracks-2	TDB	Police Accommodation	1504	4	Dormitory	Accommodation	Peak Season
Police Barracks-3	TDB	Police Accommodation	1504	4	Dormitory	Accommodation	Peak Season
Police Barracks-4	TDB	Police Accommodation	1504	4	Dormitory	Accommodation	Peak Season
Hariharaputra Auditorium	TDB	Virikal	300	2	2 halls and rooms	Accommodation	Makaravilakku only
Donor House -1	TDB/donated	Pilgrim Accommodation	1452	3	40 attached rooms	Accommodation	Peak Season
Donor House -2	TDB/donated	Pilgrim Accommodation	1452	3	40 attached rooms	Accommodation	Peak Season
Donor House -3	TDB/do	Pilgrim	1452	3	40 attached	Accommodation	Peak

<i>Name of buildings and place</i>	<i>Ownership</i>	<i>Purpose</i>	<i>Area (Sq.m)</i>	<i>Floors</i>	<i>Rooms</i>	<i>Use of building</i>	<i>Working period</i>
	nated	Accommodation			rooms		Season
Donor House -5	TDB/donated	Pilgrim Accommodation	1452	3	40 attached rooms	Accommodation	Peak Season
Donor House -7	TDB/donated	Pilgrim Accommodation	1452	3	40 attached rooms	Accommodation	Peak Season
Donor House -9	TDB/donated	Pilgrim Accommodation	1452	3	40 attached rooms	Accommodation	Peak Season
Pilgrim centre ii	TDB	Viri	5280	6	Constructed in 1998, 148 rooms	Accommodation	Peak Season
Pilgrim centre iii	TDB	Viri	5280	6	148 rooms with attached toilets	Accommodation	Peak Season
Pilgrim centre iv	TDB	Viri	960	3	Constructed in 1998 (halls)	Accommodation	Peak Season
Donors House (MN Nambiar Bldg)	TDB/donated	Accommodation and kitchen	160	2	rooms	Accommodation	Peak Season
Hotel and Lodging	Lease	hotel and viri	1200	2	hall	Accommodation and commercial	Peak Season
Hotel and Lodging	Lease	hotel and viri	1200	2	hall	Accommodation and commercial	Peak Season
Accommodation Office	TDB	Accommodation and Stalls	300	2	Top hall, bottom 5 shops	Accommodation and commercial	Peak Season
Accommodation flat	TDB/Pre ss	Accommodation and Stalls	240	2	Top hall, bottom 5 shops	Accommodation and commercial	Peak Season
Malikappuram Building	TDB	Accommodation and Stalls	980	2	Top lodge and 15 shops	Accommodation and commercial	Peak Season

Source : Landuse Validation Primary Survey(2005-06)

Semi permanent structures- Most of the semi permanent structures are used only during the peak and lean seasons. The details of the buildings under this category are listed below. The total accommodation area available in semi permanent structures is 15,500 sq.m. It is estimated that about 7600 pilgrims can be accommodated in these.

Table 19: Details of Semi Permanent Buildings used for Accommodation Purposes

<i>Name of Buildings and Place</i>	<i>Purpose</i>	<i>Area</i>	<i>Floors</i>	<i>Use of building</i>	<i>Room Type</i>	<i>Working period</i>
Devaswom Pilgrim Centre	Viri	400	1	Accommodation	Viri	Peak Season
Devaswom Pilgrim Centre	Viri	400	1	Accommodation	Viri	Peak Season
Devaswom Pilgrim Centre	Viri	400	1	Accommodation	Viri	Peak Season
Devaswom Pilgrim Centre	Viri	400	1	Accommodation	Viri	Peak Season
Devaswom Pilgrim Centre	Viri	400	1	Accommodation	Viri	Peak Season
Devaswom Pilgrim Centre	Viri	400	1	Accommodation	Viri	Peak Season

Name of Buildings and Place	Purpose	Area	Floors	Use of building	Room Type	Working period
Devaswom Building	Viri	180	1	Accommodation	Hall	Peak Season
Devaswom Building	Viri	180	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Devaswom Sheds	Viri	240	1	Accommodation	Hall	Peak Season
Malikapuramandapam	Pilgrim centre	2100	1	Accommodation	Hall	Peak Season
Volunteer Camp Devaswom	Volunteers' shelter	300	1	Accommodation	Hall	Peak Season
Volunteer Camp	Volunteers' shelter	300	1	Accommodation	Hall	Peak Season
Volunteer Camp	Volunteers' shelter	300	1	Accommodation	Hall	Peak Season
Volunteer Camp	Volunteers' shelter	300	1	Accommodation	Hall	Peak Season
Volunteer Camp	Volunteers' shelter	300	1	Accommodation	Hall	Peak Season
Volunteer Camp	Volunteers' shelter	300	1	Accommodation	Hall	Peak Season
Volunteer Camp	Volunteers' shelter	300	1	Accommodation	Hall	Peak Season
Volunteer Camp	Volunteers' shelter	300	1	Accommodation	Hall	Peak Season

Name of Buildings and Place	Purpose	Area	Floors	Use of building	Room Type	Working period
Donors House	Accommodation	24	1	Accommodation	Hall	Peak Season
Donors House	Accommodation	24	1	Accommodation	Hall	Peak Season
Devaswom Building	Accommodation	266	1	Accommodation	Hall	Peak Season
Devaswom Building	Accommodation	266	1	Accommodation	Hall	Peak Season
Devaswom Building	Accommodation	266	1	Accommodation	Hall	Peak Season
Devaswom Building	Accommodation	266	1	Accommodation	Hall	Peak Season
Devaswom Building	Accommodation	266	1	Accommodation	Hall	Peak Season
Devaswom Building	Accommodation	266	1	Accommodation	Hall	Peak Season
Devaswom Building	Accommodation	266	1	Accommodation	Hall	Peak Season
Devaswom Building	Accommodation	266	1	Accommodation	Hall	Peak Season
Devaswom Building	Accommodation	266	1	Accommodation	Hall	Peak Season
Devaswom Building	Accommodation	196		Accommodation	Hall	Peak Season
Donor House	Accommodation	60		Accommodation	Viri	Peak Season
Donor House	Accommodation	64	1	Accommodation	constructed in 1976	Peak Season
Donor House	Accommodation	100	1	Accommodation	Viri	Peak Season
Donor House	Accommodation	168	1	Accommodation	Viri	Peak Season
Donor House	Accommodation	168	1	Accommodation	Viri	Peak Season
Donor House	Accommodation	24	1	Accommodation	Viri	Peak Season
Devaswom Building	Police Barrack	900	1	Service Accommodation	Viri	Peak Season

Source : Landuse Validation Survey, (2005-06)

Temporary structures- Around 5500 pilgrims are accommodated in temporary ‘viri panthal’ provisions. In addition, around 1200 labours and workers are also accommodated in temporary sheds. About 13,500 sq.m. of accommodation space is created through such temporary provisions. The following table provides details of such structures.

Table 20: Details of Temporary Buildings used for Accommodation Purposes

Name of Building and Place	Ownership	Purpose	Area	Floors	Use of building	Rooms	Working period
Viri Panthal	TDB leased out	Viri	162	1	Pilgrim Accommodation	31 sheds	Festival season
Viri Panthal	TDB leased out	Viri	1968	1	Pilgrim Accommodation	6 sheds	Festival season
Viri Panthal	TDB leased out	Viri	384	1	Pilgrim Accommodation	4 sheds	Festival season

<i>Name of Building and Place</i>	<i>Ownership</i>	<i>Purpose</i>	<i>Area</i>	<i>Floors</i>	<i>Use of building</i>	<i>Rooms</i>	<i>Working period</i>
Viri Panthal	TDB leased out	Viri	1804	1	Pilgrim Accommodation	11 sheds	Festival season
Viri Panthal	TDB leased out	Viri	896	1	Pilgrim Accommodation	7 sheds	Festival season
Viri Panthal	Forest leased out	Viri	855	1	Pilgrim Accommodation	19 sheds	Festival season
Donated House	TDB	Viri	120	1	Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	200	1	Labour Accommodation	Hall	Festival season
Building labourers house	Contractor	Viri	144	1	Labour Accommodation	Hall	Festival season
Donated House	TDB	Viri	144	1	Accommodation	Hall	Festival season
Donated House	TDB	Viri	144	1	Accommodation	Hall	Festival season

Source : Landuse Validation Survey, (2005-06)

Closer scrutiny reveals that almost 90percent of the temporary structures in Sannidhanam are created by TDB. The following Table 21 gives out the details in this perspective.

Table 21: Details of Agencies that provide Temporary Accommodation

<i>Institution</i>	<i>Viri Numbers</i>	<i>Total Area (Sq.M)</i>
TDB	59	10074
Forest	19	855
Others (ABSSand PVT)	6	200
Total		11129

Approx No. of Pilgrims being accommodated in total (@ 2sq.m/head) = 5565

Source : Landuse Validation Survey, (2005-06)

In addition, facilities to accommodate around 30,000 people are available at Sannidhanam.

Table 22: Types of Accommodation Facilities at Sannidhanam

Type of structures	Total Accommodation Capacity	Staff/ labourer/ workers	Pilgrims
Permanent structures	17000	5000	12000
Semi Permanent structures	7600	1000	6600
Temporary structures	6700	1200	5500
Total	31300	7200	24100

2.6.2.2 Pampa

Presently, there exist very limited accommodation facilities at Pampa (**Table 23**). Most of the existing permanent facilities are meant to accommodate the staff, labourers and police in addition to limited facilities for pilgrims trekking down from Erumely. Facilities to accommodate a maximum of 4200 people, including that reserved for staff accommodation exist at Pampa.

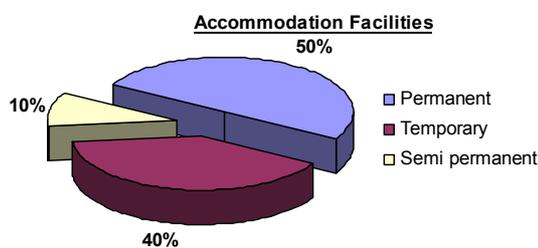
Table 23: Types of Accommodation Facilities at Pampa

Name of buildings and place	Ownership	Room / hall	No of Pilgrims /staff	Area	No. of blocks / Building	Floors	Purpose	Use	Type
Maramath Complex	TDB	95	750	3750	1	5	Office and accommodation	Max. occupancy during Season	Permanent
Pilgrim shelter (@ 164sq.m)	TDB	3	164	492	3	1	Accommodation	all seasons	Semi permanent
Police dormitory	Police	15	296	888	1	3	Accommodation	all seasons	Permanent
Viri + shop	Leased out	1	49	148	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	49	148	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	75	224	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	73	220	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	94	282	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	93	280	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	169	506	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	241	724	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	241	724	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	83	250	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	60	180	1	1	Commercial and accommodation	all seasons	Temporary

Name of buildings and place	Ownership	Room / hall	No of Pilgrims /staff	Area	No. of blocks / Building	Floors	Purpose	Use	Type
Viri + shop	Leased out	1	103	308	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	133	400	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	38	115	1	1	Commercial and accommodation	all seasons	Temporary
Viri + shop	Leased out	1	146	438	1	1	Commercial and accommodation	all seasons	Temporary
Guest Rooms	TDB	21	216	1080	1	3	Accommodation	all seasons	Permanent
KSEB	KSED	6	20	400	1	2	Office and accommodation	all seasons	Permanent
Police Complex	Police	2	75	225	1	2	Police accommodation	Year round	Semi permanent
Police Complex	Police	1	21	64	1	1	Police accommodation	Year round	Semi permanent
Police Complex	Police	1	40	120	1	1	Police accommodation	Year round	Semi permanent
Police Complex	Police	4	27	80	1	2	Police accommodation	Year round	Permanent
Police Complex	Police	1	27	80	1	1	Police accommodation	Year round	Semi permanent
Police Complex	Police	1	27	80	1	1	Police accommodation	Year round	Semi permanent
Police Complex	Police	1	27	80	1	1	Police accommodation	Year round	Semi permanent
Police Complex	Police	1	27	80	1	1	Police accommodation	Year round	Semi permanent
Police Complex	Police	1	27	80	1	1	Police accommodation	Year round	Semi permanent
Police Complex	Police	1	27	80	1	1	Police accommodation	Year round	Semi permanent
Police Complex	Police	1	27	80	1	1	Police accommodation	Year round	Semi permanent
Police Complex	Police	1	27	80	1	1	Police accommodation	Year round	Semi permanent
Fire station	Fire	2	16	80	1	2	Police accommodation	all seasons	Permanent
BSNL	BSNL	8	30	300	1	2	Office and accommodation	all seasons	Permanent
Viri Panthal	Leased out	1	25	75	1	1	Labour accommodation	all seasons	Temporary
Viri Panthal	Leased out	1	40	120	1	1	Labour accommodation	all seasons	Temporary
Viri Panthal	Leased out	1	65	194	1	1	Labour accommodation	all seasons	Temporary
Viri Panthal	Leased out	1	82	246	1	1	Labour accommodation	all seasons	Temporary
Viri Panthal	Leased out	1	18	55	1	1	Labour accommodation	all seasons	Temporary

Name of buildings and place	Ownership	Room / hall	No of Pilgrims /staff	Area	No. of blocks / Building	Floors	Purpose	Use	Type
Viri Panthal	Leased out	1	14	42	1	1	Labour accommodation	all seasons	Temporary
Viri Panthal	Leased out	1	109	328	1	1	Labour accommodation	all seasons	Temporary
Viri shed	ABASS	2	48	145	1	1	Accommodation	all seasons	Temporary
Viri shed	ABASS	3	30	90	1	1	Accommodation	all seasons	Temporary
ABASS Pilgrim centre	ABASS	30	252	1260	1	3	Accommodation	all seasons	Permanent
Pantalam Raja stay	Royal Family	1	4	100	1	1	Private accommodation	all seasons	Semi permanent
Total			4178	15641					

Source : Landuse Validation Survey, (2005-06)



Of the total facilities almost 60 percent are housed in permanent structure and 40percent in temporary structures.

Figure 3: Structural Characteristics of Accommodation Facilities at Pampa

2.6.2.3 Trek route from Erumely to Pampa

Accommodation facilities along the Erumely – Pampa trek route are presented in the table below.

Table 24: Accommodation Facilities along Erumely Trek route

Sl.No	Places	Accommodation Capacity
1	Azhuthakkadavu	1660
2	Kallidamkunnu	1820
3	Inchipparakotta	1840
4	Vallithodu (mukkuzi)	2920
5	Vellaramchetta	2620
6	Puthussery	2100
7	Karimala Top	2000
8	Valiyanavattom	1740
9	Cheriyavattom	1320
Total		18020

Source: Forest Department and Validation Survey (2005-06)

Accommodation facilities along the traditional trek route from Erumely to Pampa are mostly facilitated by forest department through Eco Development Committees (EDC). Only 8 km out of the total 43 km stretch is routed through general settlement areas where in most of the facilities including accommodation facilities are provided by private parties in unorganised sector and hence it is difficult to ascertain the actual number. However, a reconnaissance conducted during the season ascertains that facilities in the form of

temporary sheds and *viru panthal* to cater to a maximum of 1000 pilgrims exist along the initial 8 km stretch. EDCs provide accommodation facilities to some 18,000 pilgrims along the trek route. The details of existing accommodation facilities at various transit camps along the trek route are detailed out in the following table.

Table 25 : Types of Accommodation Facilities along Erumely – Pampa trek route

Location	Sl.no	Building	Purpose	Nos.	Area (sq.m)	No: of Beds
Azhuthakkadavu	1	Viri @ 200sq.m	Accommodation	5		
	2	Viri panthal @ 200sq.m space	Accommodation and service	1	200	100
	3	Viri and shops (combined) @ 300 sq.m	Commercial and accommodation	15	4500	1500
	4	Viri shed @ 100sq.m	Office/staff accommodation	3	300	60
		Total		24	5300	1660
Kallidamkunnu	1	Viri panthal @ 200sq.m space	Accommodation and service	3	600	300
	2	Viri and shops (combined) @ 300 sq.m	Commercial and accommodation	15	4500	1500
	3	Viri shed @ 100sq.m	Office/staff accommodation	1	100	20
		Total		19	5300	1880
Inchapparokotta	1	Viri and shops (combined) @ 300 sq.m	Commercial and accommodation	18	5400	1800
	2	Viri shed @ 100sq.m	Office/staff accommodation	2	200	40
		Total		20	5800	1840
Vallithodu (mukkuzi)	1	Viri and shops (combined) @ 300 sq.m	Commercial and accommodation	29	8700	2900
	2	Viri shed @ 100sq.m	Office/staff accommodation	1	100	20
		Total		30	8800	2920
Vellaramchetta	1	Viri panthal @ 200sq.m space	Accommodation + service	1	200	100
	2	Viri and shops (combined) @ 300 sq.m	Commercial and accommodation	26	7800	2600
	3	Viri shed @ 100sq.m	Office/staff accommodation	1	100	20
		Total		28	7900	2620
Puthusseri	1	Viri and shops (combined) @ 300 sq.m	Commercial and accommodation	21	6300	2100
		Total		21	6300	2100
Karimala Top	1	Viri and shops (combined) @ 300 sq.m	Commercial and accommodation	20	6000	2000
		Total		20	6000	2000
Valiyanavattom	1	Viri panthal @ 200sq.m space	Accommodation	3	600	300
	2	Viri and shops (combined) @ 300 sq.m	Commercial and accommodation	14	4200	1400
	3	Viri shed @ 100sq.m	Office/staff accommodation	2	200	40
		Total		19	5200	1740
Cheriyavattom	1	Viri panthal @ 200sq.m space	Accommodation and service (water)	8	1600	800
	2	Viri and shops (combined) @ 300 sq.m	Commercial and accommodation	5	1500	500

<i>Location</i>	<i>Sl.no</i>	<i>Building</i>	<i>Purpose</i>	<i>Nos.</i>	<i>Area (sq.m)</i>	<i>No: of Beds</i>
	3	Viri shed @ 100sq.m	Office/staff accommodation	1	100	20
		Total		14	3300	1320

Source: Forest Department and Validation Survey (2005-06)

2.6.2.4 Nilakkal

Nilakkal, which is being developed as a major Base Camp is at a distance of around 18kms from Pampa and is located on the Perunad – Pampa main road through which majority of the pilgrims commute to reach the temple. Currently, the Sabarimala pilgrims camp at Nilakkal during the peak pilgrim season only, utilising the facilities set up temporarily. There are limited facilities for accommodation which include *Nadapanthal* (built in 2004), office cum accommodation buildings and a guest house.

Following the suggestions in the Report on the “Outline of the Master Plan for Sabarimala”, TDB had initiated the task of developing a full fledged Base Camp here to cater to atleast a lakh of pilgrims. For the same the works on developing the infrastructure for administration, water supply, solid waste management, sanitation and transportation have been initiated. To date, about 400 toilets have been newly constructed in addition to upgrading 70 existing toilets and have initiated the works on water supply network and sewage systems network at Nilakkal. But for accommodation needs, no major work except the construction of a *Nadapanthal* (queuing shed) in front of the Mahadeva temple has been taken up. Existing accommodation facility is only for the permanent staff and the labourers who works in Nilakkal estate. There are 14 housing blocks, each of which consists of 4 housing units for accommodating labourer’s families. Presently, 40 labourer families are residing within the estate. Apart from this, the guest house (meant only for VIP’s) is equipped to accommodate 3 VIPs, TDB office building can accommodate around 11 staff and the Temple office building can accommodate around 4 staff. Thus, permanent accommodation facilities are available for a total of 165 people here. *Nadapanthal* (with about 1000 sq.m. of floor area) is a roofed walkway, which can accommodate 500-600 people (max 1000).

Table 26: Accommodation Facilities Available at Nilakkal

<i>S.no</i>	<i>Building</i>	<i>Purpose</i>	<i>No. of Staff/pilgrims</i>	
			<i>Through out the Year</i>	<i>Seasonal</i>
1	Labour housing blocks (14 nos)	Housing Estate Labourers (40 families, there are 47 labourers currently employed with TDB)	150	
2	TDB Administrative office	Administration and Staff accommodation	11	10
3	Guest house	TDB members accommodation		3
4	Temple office block	Administration and Staff accommodation	4	
5	Nadapanthal	Assembly/resting place		600
	Sub Total		165	613
	Total		778	

Source: TDB and Primary Survey

2.6.2.5 Erumely

At Erumely, only 20percent of the accommodation facilities provided to the pilgrims, are in the organised sector (i.e. under public domain) whereas rest is in unorganised sector (private sector in the form of home-stay, paying guest, private viri shed, open areas, etc). Approximately 7600 pilgrims are accommodated in Erumely during the peak pilgrim season in diverse conditions ranging from proper room space to open areas/road sides spaces to viri sort of facilities. Following table (Table 33) indicates the detailed type of accommodation facilities available at Erumely. It may be noted that since most of the accommodation spaces are provided by private parties mostly in own houses / premises, exact quantum of accommodation facilities made available here could not be ascertained. Around 26% of the accommodation facilities are provided by the organised sector while the major share is contributed by unorganised sector.

Table 27: Existing Accommodation Facilities at Erumely

<i>Accommodation places</i>	<i>Nos./Area</i>	<i>Space type</i>	<i>No of Beds</i>
Govt. rest house	8	Rooms	24
TDB Pilgrim centre	100	Rooms	300
KTDC Pilgrim Centre	12	Dormitory	600
private hotels	160	Rooms	651
Hired open place	1.6	Area in acres	1302
Paying guests	26	Rooms	26
Friends and relatives	52	Rooms	52
Free-open place	4.5	Area in acres	3646
Schools	20	Rooms/class room	1094
	Total		7695

Source: Based on primary survey 2005-06

During the peak pilgrim season 0.42 percent of the pilgrims use Government Rest House as the place of accommodation, 10.42 percent resort to private hotels, 20.83 percent hire open areas for spreading viri, 0.42 percent prefer paying guests, 0.83 percent accommodate with friends and relatives, 58.33 percent live in free-open place, 8.75 percent stay in the nearby schools. KTDC has constructed a pilgrim amenity centre which had been Erumely in 2003. This could accommodate only around 500 pilgrims at a time and is hence necessary to expand this facility to accommodate the more numbers of pilgrims.

Accommodation Facilities provided by the TDB for the pilgrims during the festival season are inadequate. Most of the pilgrims use the private land or open areas for accommodation and for meeting their sanitation needs (open defecation). The temporary sheds (*viri*) set up at Erumely every year is far short of the actual requirement.

2.6.3 Issues

2.6.3.1 Facility/ Service Dependency

Presently less than 20percent of the pilgrims have access to accommodation facilities at Sabarimala. Any additional accommodation requirement would call for additional built space creation which can be in permanent, semi permanent or temporary state, and provision of associated sanitation facilities. Though the most preferred type of

accommodation by the pilgrims is viri, such creation of such facility for large number of pilgrims is not advisable considering its location in the forest for want of the sanitation facilities in similar tunes and the chances of fire and other disasters.

The main problem that exists in Sannidhanam and Pampa is that the existing facilities cater only for the privileged pilgrims as presented below:

1. In case of donor houses, accommodation is not available for public booking when the donor chooses to exercise his lien.
2. There exist a limited range of rooms/dormitories at Sannidhanam and Pampa.
3. On several occasions, in rooms where it is possible to accommodate many pilgrims, (room with 10 person capacity etc.), only one or two persons stay even during peak days. As a result, a false hype in the demand for accommodation is observable during the season.
4. Though TDB has been issuing rooms to the pilgrims for a maximum of 24 hours, there exists no mechanism to check the continued possession of the accommodation by the same inmates. Thus ultimately, the same people end up staying for more than a day and other are prevented from accessing these rooms.
5. Facilities are not maintained properly or hygienically, resulting in their under utilization.
6. Sanitation facilities associated with stay areas such as toilet and bathing facilities are not enough to cater to the present demand. This encourages the pilgrims to defecate in the open, and ultimately results in pollution.

During the season it is very difficult for a pilgrim to find his way through the maze that exists at Sannidhanam and Pampa. There exists no proper planning with respect to site setting of various facilities in Sabarimala. Moreover there are no proper signages which may help the pilgrim to locate the places.

Varied types of accommodation facilities to cater to the diverse demands are non-existent. Existing accommodation facilities in Sannidhanam are basically viri type, room type or dormitory type of accommodation. Available facilities can accommodate some 20,000 pilgrims and around 6000 staff, laborers, police and service personnel which constitute around 20percent of what is required.

Pilgrim accommodation functionality is concerned with the degree to which the accommodation is suitable for the delivery of the service it is intended to support. For example, while older accommodation buildings and some viri areas may meet their intended capacity, location and utilisation / service-delivery requirements, water availability, lighting, ventilation, safety etc, the functions are not up to the perceived minimum standards. This is quite common observation in Sabarimala. Facility functionality also depends on the rent/lease conditions and the rent variance which are diverse with respect to agencies, the place and type. The rent structure varies from Rs.100 – Rs.800/day based on the type of accommodation provided.

2.6.4 Accommodation Assessment Criteria

There are four major criteria based on which the assessment of accommodation is carried out namely

1. Duration of stay by pilgrims
2. Pilgrim population

3. Pilgrims group size/characteristics
4. Land availability/ other limiting factors

Perception survey was carried out to understand the need and demands of the pilgrims and their perception on the Sabarimala development. When analysed at disaggregate level, following inferences were derived from the perception survey. These inferences have helped in deriving the actual and projected accommodation facility requirement at Sabarimala and other associated areas.

2.6.4.1 Duration of Stay of Pilgrim

Stay Details of Pilgrims from other States: Stay duration of the pilgrims from other States at Sabarimala is longer than that of the local pilgrims. The total stays in Sabarimala ranges from 1 day to 2 days, with maximum stay observed being in the range of 8 - 10days. It is observed that nearly 82.43percent of pilgrims of the pilgrims stay for at least one day at Sabarimala. Of this, almost 65.13percent of the pilgrims stay at Sannidhanam, 11.22percent at Pampa and 2.72percent at Nilakkal.

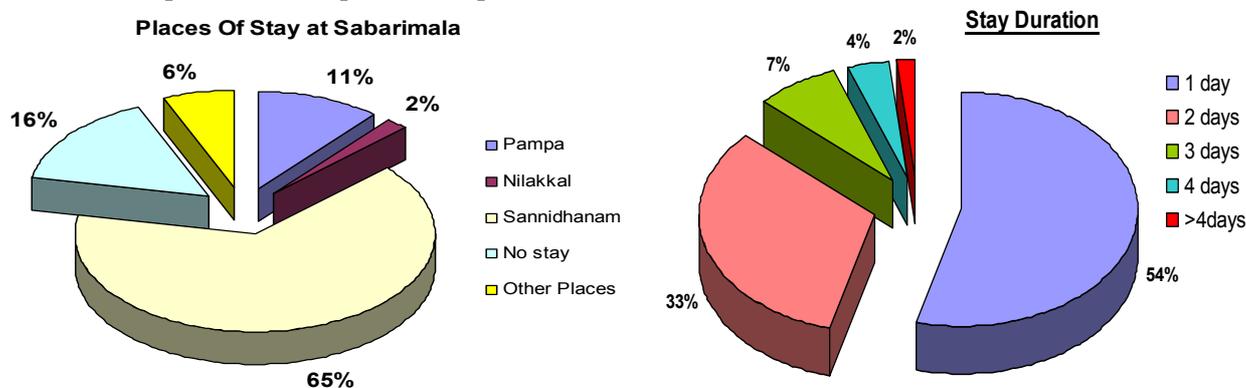


Figure 4: Places of Stay by Pilgrims in Sabarimala (outside state pilgrims)

Figure 5: Duration of Stay by pilgrim at Sabarimala (outside state pilgrims)

Stay Details of Pilgrims from within the State: Usually the local pilgrims do not stay long in Sabarimala. Of the pilgrims interviewed, almost 93 percent stated that they return on the same day after darshan. Maximum duration of stay in Sabarimala by local pilgrims has been recorded as 3 days.

General inference- It has been observed that the average stay duration at Sabarimala of the native state pilgrims is less than a day (0.56 days i.e. to say 10-14 hours on an average) as most of them stated that they return on the same day but the average duration of stay for the pilgrims from other States is more than 24 hours (1 day) but less than 2 days (1.6 days i.e. to say 36-40 hours average stay duration).

2.6.4.2 Pilgrim Group size

Group sizes of Pilgrims from within the state: Almost 38percent of the pilgrims interviewed were not in groups were as rest 62 percent where in groups with an average group size of 6 per group. The maximum size of the group identified was that of 76 pilgrims from Malappuram

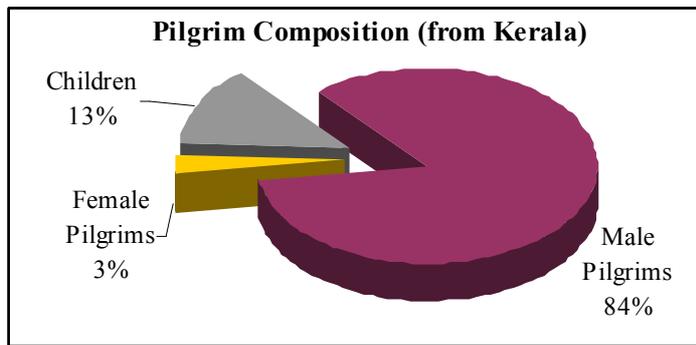
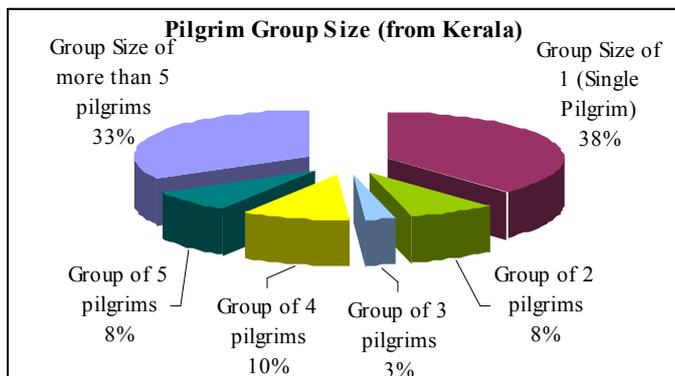


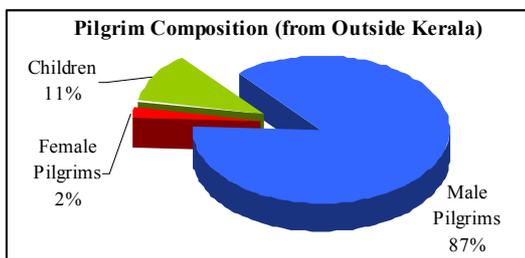
Figure 6: Composition of Pilgrims from within the State

Group Character of Pilgrims from Outside State Almost 88percent of pilgrims interviewed were in “groups” wherein the group size varied from minimum of 2 to that of maximum of



108 numbers per group for pilgrims from Karnataka, 2 to maximum of 115 numbers for pilgrims from Tamil Nadu and 2 to maximum of 184 numbers for pilgrims from Andhra Pradesh. The average group size recorded had been 16 but the largest group size recorded was of a group with 184 members, from old city of Hyderabad, Andhra Pradesh.

Figure 7: Group size of Pilgrims from within the State



General Inference- It has been observed that the average group size with respect to native state pilgrim is 6 where as for pilgrim from other states is 16.

Figure 8: Composition of Pilgrims from Outside Kerala

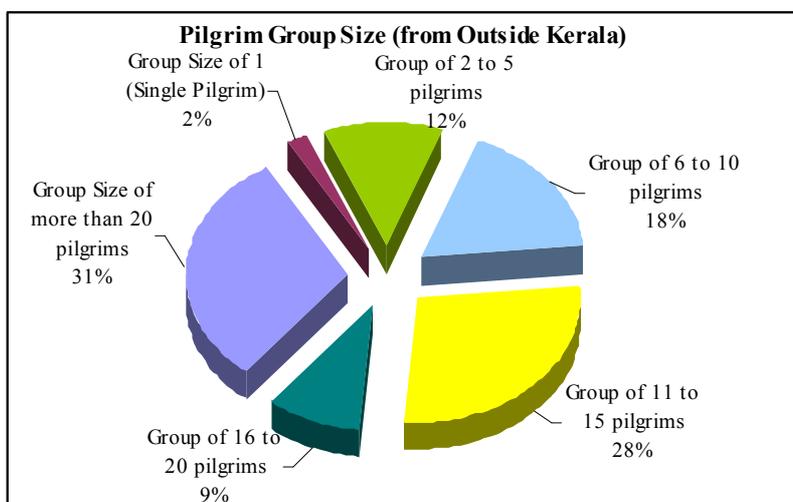


Figure 9: Group size of Pilgrims from Outside Kerala

2.6.4.3 Demand for Accommodation

The accommodation requirement is to be calculated based on the optimal darshan capacity of Sabarimala. If supported by the proposed queue complex and other well organised systems of crowd management maximum of 1.2 lakhs of pilgrims can have satisfactory *darshan in a day*. With the addition of around 0.12 lakh staff to aid the pilgrimage, the maximum population to be serviced at Sabarimala comes to 1.32 lakhs. However, considering the pilgrim activity patterns it could be inferred that pilgrims need not be provided accommodation here.

2.6.4.4 Land Availability

Sabarimala is located in the dense forest which forms a part of Periyar Tiger Reserve. The uniqueness of the temple owes to its location. Developing more and more facilities at Sannidhanam which is located in the PTR is unwarranted considering the sustainability. Pilgrim perception survey results reveals that they seek resting areas to spend the waiting time rather than any comfortable accommodation facility at Sannidhanam or Pampa. Land available for use is less at Sabarimala, which is surrounded by forests of the PTR. Around 25 ha at Sannidhanam, 10 ha at Pampa are the prime possessions by the TDB. Additional 110 ha at Nilakkal and 12.675 ha at Pampa, trek route from Pampa to Sannidhanam and Nilakkal have been transferred for augmenting the pilgrim facilities based on the recommendation in the “Outline of the Master Plan for Sabarimala”.

2.6.5 Accommodation Need Assessment

The accommodation needs are calculated based on available land and other resources available viz a viz the demand.

2.6.5.1 At Sannidhanam

The Master Plan endorses minimising the provision of accommodation at Sannidhanam and maximising the facilities to enable pilgrim to have satisfactory darshan. So, total accommodation including staff accommodation of about 6000 numbers need to be provided at Sannidhanam. This is considering the fact that staff will require proper accommodation at Sannidhanam as they need to stay all throughout the season for the service and smooth conduct of the pilgrimage and the facilities required for pilgrims who have to do special poojas or for any unexpected requirement

More facilities and management systems are proposed in the master plan to help regulate the crowd and to facilitate satisfactory darshan for each and every pilgrim coming to Sabarimala. It has been observed that most of the pilgrims stay back at Sannidhanam to have a satisfactory darshan and Neyyabhishekham. But this situation would not exist with the implementation of the proposed system wherein the pilgrims can wait in the queue complex till their turn for the darshan and the subsequent activities. It has been proposed to construct queue complexes to accommodate up to 60,000 pilgrims at a time which would be sufficient enough to provide space for the pilgrims to take rest while waiting for their turn for darshan.

2.6.5.2 At Pampa

Almost 95percent of the pilgrim population reach via Pampa which is also a place of much religious significance. Here the land available is very limited and environmentally fragile as it is located in a valley along the banks of the River Pampa. So no pilgrim

accommodation should be encouraged here. The accommodation facility to cater to maximum of 3000 staff inclusive of police and other departments, private and public agencies would be required at Pampa. By limiting the space for provision of accommodation facilities it is expected that more space could be dedicated for pilgrim activities Here.

Need for Resting Areas – Pampa being an important base station en-route to Sannidhanam where pilgrims perform many religious and ritualistic activities, it would be essential to provide space for pilgrims to safe keep their valuables and take rest. From the pilgrim survey it has been noted that most of the pilgrims raise the issue of lack of shaded areas for taking rest in Pampa. So shaded resting bays and Nadapanthal sort of facilities need to be provided at Pampa. Average duration which a pilgrim spends at Pampa is around an hour (60 minutes), before or after visiting Sannidhanam. For ascertaining the demand for resting areas, pilgrim flow can be assumed as 8000 per hour.

2.6.5.3 At Nilakkal

More than three quarters of the total pilgrims reaching Sabarimala travel via Nilakkal - – Chalakkayam – Pampa route. Nilakkal has been proposed to be developed as a full-fledged Base Camp to cater to the demands of the pilgrimage. Here 110 hectares of land which was under rubber plantation had been transferred to TDB for this purpose, following the recommendations in the “Outline of the Master Plan for Sabarimala”. It is expected that on an average about 60-70 thousand pilgrims would be visiting Nilakkal daily during the peak season

1. Following concerns need to be addressed while developing the base camp at Nilakkal. Developing accommodation facilities for around a lakh of population at Nilakkal would require creation of large extent of built up space. Taking 10 sq.m/head (accommodation, services, comfort, commercial, administrative etc all together) as the built area requirement to cater to demand of 1 lakh pilgrims at Nilakkal, the total built up area required would be about 10 lakh sq.m ,which is almost equivalent to the land available at Nilakkal (110 hectares).
2. The facilities created would be fully used for duration of maximum 2 months annually. It would be hence difficult to maintain these facilities which would require more investment in terms of time and cost overheads.
3. During lean seasons, it could be expected that the pilgrims would use Nilakkal base camp alone as the other routes to the temple remain closed. Thus it could be expected that around 30000 pilgrims would use the facilities during lean season.
4. Accommodation facilities are space intensive. Minimising the facilities at the base camp would assure considerable savings. However, pilgrims needs and demands need to be fulfilled.

Based on above consideration it can be determined that permanent accommodation need to be provided only for a maximum of 30,000 pilgrims and the additional requirement during the season could be accommodated by providing temporary viri short of facilities in housed in better structures laid out as per the proposed guidelines. However, services and the amenities at the base camp need to be created permanently, considering the operational and management aspects.

2.6.5.4 Along Erumely Pampa Trek Route

The pilgrim count surveys indicate that on an average 25,000-30,000 pilgrims trek down from Erumely to Pampa through the forests during the peak season. During the *Makaravilakku* period it may increase to 60,000-70,000. Presently EDCs provide temporary accommodation facilities at various transit camps enroute which can cater to maximum of 18,000 pilgrims per day, which is much less than the demand which is to the tune of 30,000. Presently, accommodation is available at nine different locations at a rate of 1,500 to 3000 per location.

2.6.5.5 At Erumely

Erumely remains an intense hub of activities during the peak pilgrim season. It is observed that on an average 35,000 to 70000 pilgrims pass through Erumely to reach Sabarimala. During the pilgrim survey, almost 56percent of the pilgrims pointed out that lack of accommodation facilities at Erumely is an area of concern. They pointed out that due to lack of facilities at Erumely, after the rituals they were forced to move to Sabarimala at the earliest, where facilities are available. The economy of Erumely is heavily dependent on the Sabarimala pilgrimage. It is essential that more facilities need to be provided at Erumely, both by the public as well as the private sector to provide for the needs of the pilgrims here. This would in turn, bring down the accommodation requirement at Sabarimala to a great extent. Presently, the available facilities are sufficient to cater to a maximum of 4000-5000 pilgrims at Erumely, which is insufficient to provide for the demand of around 35,000-40,000.

2.7 Police

2.7.1 Introduction

The police have a fundamental role to play in a democratic system. They are the ultimate guardians of life and property, and are responsible for the enforcement of the laws of the land and for ensuring peace and harmony. Many a times, the quality of the services they render is used as a yardstick to measure the performance of a government. This is true especially in the way they interface with ordinary citizens.

In concurrence to the known concept, Kerala police plays a vital role in Sabarimala wherein they act as a catalyst in the smooth and safe conduct of the pilgrimage during the pilgrim seasons. As of now the police personnel are mainly involved the following two activities at Sabarimala.

- Crowd Management, which guzzle the maximum manpower it has
- Providing safety and security for the property and the pilgrims

They are also involved in various other activities such as disaster management in case of any eventualities, traffic management, vigilance against malpractices etc. Around 2000 police personnel are posted here for the maintenance of law and order and security. During the festivals like Mandala pooja and Makaravilakku the strength of the police force is gradually increased to over four thousand to address the demand.

2.7.2 Police Deployment across Sabarimala

Each year Police department prepares a detailed scheme based on which deployment pattern and other activities are finalized. Police personal are posted at almost all places of importance in and around Sabarimala. Maximum deployment of the police personnel is at Sannidhanam where almost every activity needs to be monitored and controlled. The existing deployment strength is not sufficient to provide support and assistance to the entire stretch used by pilgrims in Sabarimala, mainly because it spans across thickly forested areas. As women aged between 10-50 years are debarred from taking up the pilgrimage, women constables are appointed at Pampa to enforce this.

The security measures are managed directly under two Superintendents of Police (SPs) at Pampa and Sannidhanam. A Deputy Inspector General (DIG) monitors and controls the activities of police force at Sabarimala.

2.7.3 Facilities Available for the Police at Sabarimala

TDB has a police station and control room each at Sannidhanam and Pampa from where all operations and activities pertaining to police are controlled and directed. Maximum possible accommodation facilities are provided in the form of barracks and quarters for the Police at Sannidhanam. A canteen building, 4 barracks each of 4 stories and 4 cottages are assigned specifically to cater to the Police force at Sannidhanam. At Pampa there are 3 police quarters and 3 police accommodation in addition to a toilet block. However canteen facilities are deficient here and the Police personnel depends on the canteen run by TDB in the Maramath complex. Apart from these two locations, police is accommodated at Chalakkayam, where temporary sheds are provided by TDB. In addition, TDB has initiated the construction of a full-fledged camp for 250 police men at Nilakkal, based on the immediate works proposed for 2006-07 as part of the Master Plan¹.

As a recent addition police have started installing closed circuit TV monitors from Sannidhanam to Marakkootam, Pampa and Nilakkal. This is a safety measure which monitors and screens the pilgrims. It is expected that these CCTs will maintain surveillance over the entire pilgrimage stretch in Pampa and Sannidhanam from strategically located police control rooms. In addition, special safety lighting is proposed to be installed along with seven watch towers at various vantage points at Sabarimala. Cell phone jammers are also proposed to be used to check use of mobile phone in temple precinct. Electronic information boards are also proposed to be installed by the police for imparting important information to pilgrims.

2.7.4 Areas of Concern for Police at Sabarimala

The areas of concerns for the Police at Sabarimala as conveyed by them during the Focus Group Discussion are listed below:

1. Darshan capacity is limited to around 100 pilgrims per minute who can climb the holy 18 steps. Despite this limiting aspect and the limited carrying capacity of the forest area which house the temple, the pilgrims arrives at Sannidhanam and stays here waiting for *darshan* in response to the lack of facilities elsewhere. This poses safety and security

¹ ILandFS Ecosmart ltd (2006) **Proposed Works for Immediate Implementation : 2006-07 pilgrim season**, GoK (unpublished)

- issues as the area is surrounded by thick forests and there is no control on the access points to the area.
2. Security of pilgrims cannot be assured due to following reasons
 - a. It is difficult to visually differentiate the actual pilgrim from a miscreant, as almost all are dressed in black and look alike.
 - b. The Irumudi kettu being a sacred component of pilgrimage cannot be opened and checked at any cost as it adversely affects the religious sentiments of the people. So the police can check the body of the pilgrim but cannot screen other articles related to the rituals. This aspect may be misused by the miscreants to carry undesirable things in and out of Sabarimala.
 - c. Channelising the pilgrims through Door Frame Metal Detector (DFMD) Facilities or other scanning facilities used for screening pilgrims, long queues may result which in turn may cause back-logging or slowing-down of movement of pilgrims and in turn result in confusions and crowding.
 - d. There are unlimited access points to the Sannidhanam. There exist no physical barrier for Sannidhanam and Pampa as it is surrounded by forests and hence it becomes difficult to check for any kind of unwanted activities and provides enough scope for anti-social elements to escape.
 - e. Watch towers at vantage points are to date a non-existing component in Sabarimala from where police can keep a constant vigil over the whole location.
 - f. Close Circuit Television network is incomplete in coverage, due to which the police is unable to remotely monitor the activities here.
 - g. A major share of the Police force deployed during the pilgrim season is used for crowd management rather than for considering safety and security related aspects.
 3. There exists no mechanism at Sabarimala to control and stream-line the pilgrim movement which is the root cause of the chaotic situation existing at Sabarimala during the peak season. This is compounded near the entry point to *Pathinettampadi* where the crowd from Pandithavalam and Nadapanthal areas converge.
 4. Pilgrims who arrives by the end of Mandalapooja season stays back at Sannidhanam till the temple is opened for Makaravilakku poojas. Such stay forces the police to step up security arrangements and vigil for fear of anti-social activities.
 5. Temporary barricades used for controlling and regulating the crowd movement would fail due to the pressure exerted by the crowd and probabilities of a mishap are quite high as that happened in the recent past at the Pampa hilltop.
 6. Presently there are no disaster management plans for the place. If there is any case of explosion or a terror attack, the casualties would be considerable due to large gathering of pilgrims at Sannidhanam which is least accessible. As of now the only facility available to shift injured is through *dolis* along the trek route. Moreover the hospitals at Sannidhanam and Pampa are not equipped to cater to such situations.
 7. Due to unhygienic conditions at Sabarimala, the health problems reported from among the police force are many, resulting in high incidences of withdrawal of police personnel from Pampa and Sannidhanam during the peak season.
 8. Police has no control or information on the vendors/contractors operating at Sabarimala. Currently no police verification is carried out to ascertain the background of the vendor/contractor before tendering out the respective right to them. However, access to such information is important for the Police to keep check on the possible antisocial activities here. This is also critical for use of explosive items such of crackers (Vedi Vazhipaadu) as part of rituals at Sabarimala during the season.

9. There exists no mechanism to protect water sources and check the undesirable elements in water at the storage places and pump houses before distribution.
10. Presently accommodations for senior Police officers such as CIs and DIGs are also provided in barracks, which have very few toilet and other facilities. The stress created due to poor facilities along with the huge responsibility for crowd management, usually gets reflected in reduced service delivery from the police personnel.
11. The situation on the Makaravilakku day is beyond the control of the Police as there are no proper arrangements at various other vantage points in Sabarimala from where the pilgrims can see the Jyothi. The police force is deployed in two blocks, one on the premises of the temple and the other at the base camp at Pampa. But the number of police or volunteers becomes quite insufficient during this time and the crowd overwhelms any known arrangement put in place which causes accidents and even deaths.
 - a. Lack of dispersal and evacuation points from Sannidhanam to the adjoining areas. This becomes most important when it comes to disaster management and the police have to evacuate lakhs of pilgrims safely and quickly.
 - b. The broken pieces of coconuts which were used to fill ghee which each pilgrim carries for Neyyabhishekam are thrown into a massive fire in front of the sacred 18 steps. This could possibly provide a spark to a catastrophe.
 - c. In the year 1998, 53 pilgrims died in a stampede at Pampa as the barricade made of rope along the edge of a hillock collapsed due to the pressure created due to overcrowded pilgrims. In addition, panic was aggravated due to the slippage of pilgrims perched on a heap of coconut shells and the breaking of a stay wire of the electric post. Police had very little control over such situations which could be avoided by providing proper, controlled and secured arrangement for pilgrims to stand and view Makarajyothi.
 - d. There exists no proper facility for safe keeping of pilgrim articles, due to which pilgrims are forced to carry all their articles throughout. This tendency causes problems to the Police while screening.

2.7.1 Demand and Preferences

Most of the concerns of police department are valid and require urgent attention by Government and TDB. Some of the demands and preferences of the police department for making their services effective at Sabarimala are as follows:

1. Police should be provided with better accommodation and canteen facilities at Sannidhanam, Pampa and at Nilakkal.
2. Mechanism is required to protect water sources, especially to check the presence of any undesirable element at storage places and pump houses etc. There should be some kind of filtering facility provided to overcome any eventuality.
3. There is a limit to the number of people who can be accommodated on a clearing in the heart of a forest in the high ranges, or the extent of development that can take place there without disturbing the pristine environment. There is an urgent need to regulate and limit the pilgrims visiting Sabarimala on any day so that any security arrangement could work efficiently. work properly.
4. The pilgrims should not be allowed to stay around the shrine which is a high security area. They should be encouraged to stay only at the Base Camps, which are developed away from Sannidhanam and Pampa with facilities for parking and accommodation.
5. Traffic along the main road should be regulated through proper systems and arrangements as it is so essential during emergencies.

6. As an immediate measure the hill shrine complex require queue complexes with toilet, canteen and medical facilities. Effective crowd control can take place only through a well-knit chain of barricades through which the pilgrims could be channelised, which at present is in operation only at the entrance to the shrine complex, in the shrine and in its immediate surroundings and at Pampa during the peak season.
7. Need to form an effective inspection squad headed by the police officers to deal with various anti-social, cheating and fleecing activities.
8. Movement corridor from Pampa to Sannidhanam should be manageable to facilitate disaster management.
9. The pilgrim movement at Sannidhanam needs to be streamlined through provision of queue management complexes through which pilgrims can be managed.
10. Police wants the temple authorities to share a part of their responsibility of crowd management as it may enable police to concentrate their efforts and manpower towards providing safety and security along with checking illegal activities at Sabarimala.
11. Sannidhanam and Pampa should be declared as 'Beggar free Zone'. Many a times it happens that the beggars who are evacuated from here get a bail and return to the position again at the earliest. There is no rescue home where such people could be rehabilitated at least during the season. Beggars should be checked at the entry level itself as it becomes difficult to apprehend them once they make their way up to the Trek route and Sannidhanam.
12. Appam Aravana plant should be shifted as it poses a great threat to the safety of the pilgrims.
- 13.
14. Accommodation facilities for Police are required closer to their place of work / duty.
15. Sannidhanam need to be decongested. Decentralised viewing points should be developed from where pilgrims can watch the Makarajyothi.
16. TDB / GoK should verify the background of vendors/contractors before leasing out the right to manage facilities at Sabarimala and around.
17. Facilities for holding drivers of pilgrim vehicles closer to their vehicles are required so that they would not indulge in immoral activities.
18. There should be an advance booking system for vehicular parking. The parking fee should be collected in such a manner to deter long stay. This would also eventually help people from long distance to plan their trips in advance so that they could avail parking facilities without delay upon reaching Nilakkal.
19. Sequential movement should be ensured for darshan and for offerings to God (such as ghee and coconut).

2.8 Signages in Built Environment

2.8.1 Introduction

Signages are predominant everywhere in Sabarimala. Advertisement boards are many times found marring necessary views and visual accesses. It is hence essential to understand the issues related to such provision and to provide for better signage display here.

The basic idea behind developing a signage style for Sabarimala is to ensure the signage integration with the architectural design and to avoid the visual pollution or vista degradation of one of the most sacred religious centres in South India.

2.8.2 Basic Considerations

Advertisements, advertising structures and other signages form important elements of the built environment at Sabarimala. There is an urgent need to introduce provisions that are intended to protect the significant characteristics of buildings, places, builtscapes, vistas, landscape and the built skyline. These provisions are intended to encourage well designed and well positioned signs contributing to the vitality and legibility of Sabarimala and respecting the amenity, religious conviction and safety of pilgrims and pedestrians. It is necessary to differentiate and assess whether a sign is an identification sign or a commercial advertising sign.

Whilst the high density of pilgrim information, service related and other signages may be inevitable, there are principles from a view point of developing a sense of place which can help to reduce visual intrusiveness. These include:

- Consider whether the sign is extremely necessary at the place/location
- Minimise the number of non-essential signs
- Take the opportunity to rationalise signs rather than just add to what is already there
- Find out if others are planning to provide signs in the same area and coordinate to optimise the provision
- Take the opportunity to remove any redundant signage in the vicinity.
- Take account of the design of existing signs. If possible, repeat the colour, font style and size
- Minimise size of signage
- Avoid new posts where new signs can be fixed to existing posts, lamp columns and walls or boundaries
- Avoid signs with yellow or other strident colours wherever possible
- Paint posts to match surrounding greenery
- Avoid obstructing pedestrians
- Avoid detracting from sensitive settings, which may include in particular listed buildings of religious importance, important views and riverside locations
- Consider lower heights for signage – low signs tend to be less obtrusive visually, e.g. for controlled parking zones. Signage on medians also work well
- Ensure design of sign (type, face, colours, height and angle) is carefully considered to be easily read by people from all works of life.
- Use double-sided signs where possible.

2.8.3 Existing Condition and Issues

Pampa, trek route and Sannidhanam are the areas where signages and advertising structures are placed indiscriminately. Following pictures detail out the major issues associated with signages at Sannidhanam, Pampa and Trek routes.

S.No	Issues	Picture
1	<p>No proper sign board for directing the pilgrim to service and comfort facilities – No specific colour code followed</p> <p>Too many sign boards display same information - unnecessary duplication of signage</p> <p>Poorly designed Boards – with no proper indication of direction or location</p>	
2	<p>The hoardings placed by the Government though have a specific colour coding, their placement and size mars the builtscapes. More over the randomized placing and the frequent variance in shapes and sizes create coarse grained uneven texture effect for the builtscapes.</p>	
3	<p>Pilgrim might not be able to identify or differentiate between mandatory, warning and informative signages due to disorderly placement with no or little uniformity. Completely unordered, unpredictable and confusing arrangement of sign boards.</p> <p>Detracting from views and causing clutter.</p> <p>Yellow or other strident colours used extensively</p>	
4	<p>Placement of sign boards and advertisement billboards at all convenient locations without any control.</p> <p>Detracting from views and causing clutter.</p> <p>Form and layout of the signage needs to relate to that used in the locality, which is likely to be either cast iron signs or direction sign of service.</p> <p>Exposed wiring of illuminated sign boards criss- crossing the pathways</p>	
5	<p>Signage do not reflect the scale and the character of the place</p> <p>No Proper placing and positioning of signages / direction boards</p>	

S.No	Issues	Picture
6	<p>Large Billboards completely obstruct the views around</p> <p>Oversized and do not match the context</p> <p>Large and visually unacceptable signs. The siting and background of such signage completely screens out the surrounding landscape – obstructing the view</p>	
7	<p>Redundant sign boards</p> <p>Sign boards in other regional languages familiar to majority of the pilgrims missing.</p>	
8	<p>Smaller signages on thick posts – out of proportion</p>	
9	<p>Signages fill up the total façade of the shop – Roof, eaves, shade, parapet , basement line, etc.</p>	
10	<p>Sign board colour schemes followed do not match the landscape and the context</p> <p>Diverse fonts and styles of presentation seen</p> <p>Placed such that it obscures the view ahead.</p> <p>Yellow or other strident colours used.</p>	
11	<p>Utter disorder and confusing</p> <p>Redundant</p> <p>Different kinds of signages found at all levels possible – important signages are obscured by others</p>	

S.No	Issues	Picture
12	No consistent use of type and size of Font	
13	<p>Bold Colours with oversized fonts and boards</p> <p>Repeated signages</p> <p>Excessive or special illumination schemes expressly designed for the purpose of promoting the business, activity or product, both on and inside the buildings</p>	
14	<p>Sign board cause visual intrusiveness as they obscure the building elevation being fixed randomly as per convenience.</p> <p>Wall painted signages have no standards followed – They are poorly written and displayed.</p>	
15	<p>Existing signages are unattractive for those on foot.</p> <p>Important information boards such as the price lists, announcements on free services to the pilgrims, caution signs are generally hidden behind or dappled among other items and become unnoticeable.</p>	
16	<p>Sign boards stands out in the landscape with no integration with the landscape.</p>	

S.No	Issues	Picture
17	<p>Many of the existing boards are somewhat out dated.</p> <p>New boards with mostly designs unrelated to the context.</p>	
18	<p>Completely obscures the view and vista of the place</p>	
19	<p>Banners tied across at random are quite intrusive to the views</p> <p>Signages does not always take the eye through to its destination</p>	
20	<p>Signages provided by, or on behalf of, many different organisations creates clutter</p>	
21	<p>Bold and out of context sign boards</p>	
22	<p>Banners and stickers placed at random with no conscious consideration of location or the purpose.</p> <p>Rudimentary considerations missing</p> <p>Sign boards protrude out of buildings into open spaces “Privatisation of Public spaces”.</p>	

Summarized below are the observations related to signage at Sabarimala:

1. Lack of control and regulation over signages.
2. Most of the signages do not match the context or the landscape
3. Few important signages are mostly written in English, Malayalam or Tamil. But on a larger view, not much consideration is seen accorded to other south Indian languages and Hindi.
4. Excessive or special illumination schemes expressly designed for the purpose of promoting the business, activity or product, both upon and within buildings
5. Unnecessary duplication of signages; too many sign boards display the same information
6. Large, out-of-proportion billboards completely obstructing the views around
7. Signages obscure the views and vistas of the place
8. There exists no order in the placement or location of signages
9. Signages are fixed in mostly in such a way that they hinder pilgrim movement and vision.
10. Important signages – like the price lists, information on free services to the pilgrims, caution signs are generally hidden behind or dappled among other items and are generally unnoticeable.
11. No observable order in the use of colour, fonts, shape and size of signages.
12. Wall painted signage or banners have no standards and are ill-conceived, poorly written and displayed.

3. PROPOSED INTERVENTIONS AND PHASING

3.1 Development Vision

The pilgrimage supported and contained by the immediate host region without overburdening the final holy and fragile destination.

3.2 Issue Prioritisation

- Lack of awareness regarding the route to be followed and access to hospitals in case of emergencies
- Lack of facilities across the region
- Lack of access to information and awareness to effect a guided pilgrimage suitable for the host region and meeting the aspirations of the pilgrims
- Lack of adequate facilities and services
- Lack of access to facilities and services

3.3 Guidelines for Amenities and Facilities:

3.3.1 Guidelines for Health Care Facilities

Area requirements for Health care establishments at Sannidhanam²

Location	E(site area) hectares	A (percent of population using)	M= gross built up area in sq.m per patient	F =Floor area ratio	C= Coverage in percent	S= No of storey	Q=Population at risk (percent)
Sannidhanam	0.625	5	25	1	50	3	5

As per Vasthu, hospitals should come up in the north western zone (Vayu Kon – North West) of Temple Complex

It is a common knowledge that local level health facilities once provided at a considerable cost, tends to lose their efficiency owing to neglect, inefficient management, lack of funds for up keeping, encroachment and at time misuse. This would be on higher side at Sabarimala due to the typical seasonal character of the pilgrimage. It is imperative to encourage local community and the all concerned authorities to participate in the Management of the local health facilities, even if it is created fully or partly by public funds. The idea is to distribute the responsibility for proper functioning and maintenance of the health facilities to all stakeholders rather than the health department alone. .

It has been observed that the existing health infrastructure is insufficient at Sabarimala. The existing Facilities are far below the required standards stipulated by UDPFI. Considering maximum *darshan* capacity at Sabarimala as 1 lakh the required health care facilities would be as follows.

² Space standards for health building $E = \{(1000*Q*A)/(100*100)\} * \{M/(F*100)\} = \{M/(C*S*100)\} * \{(1000*Q*A)/(100*100)\}$

The initial cumulative provision taken together should be for maximum of 100 beds (all together) with additional provision for expansion up to 200 beds, the augmentation which may be required to cater to the future needs.

Area of the hospital inclusive of area for residential accommodation for staffs -2.75 ha. This would be provided in the existing developed area, by upgrading the existing hospital facilities horizontally after removing unnecessary structures around.

Adequate health care centres at base camps and transit camps, including the trek route from Erumely.

3.3.2 Guidelines for Fire Fighting Services

- At Sannidhanam, Pampa and trek route from Sannidhanam to Pampa, temporary and semi permanent structures if at all, should be made of stable and structurally safe material only. Wood poles, bamboos, dried leaf, Plastic sheets, etc which are highly susceptible to fire and sheets which conducts heat and succumbs / fails to fire should be done away with especially within 50m of the temple.
- Fire Hydrants should be provided in the planned layout areas at Sannidhanam, Pampa and base camps, as required by the Fire and Rescue Department. These should be of the type and manner prescribed by the Fire safety standards and the National Building Codes.
- Parking space for fire service vehicles should be provided at Pampa and Nilakkal in the designated area (space allocated 4 x 10 m)
- Permit from the Fire Department and Chief of Explosive Department will be required for storage of fuels and any combustible matter used for religious activities, fuels like diesel, LPG and other explosives on the site.
- Permit will be required from MoEF and Chief of Explosive Department before any LPG pipeline is constructed and commissioned through the forests. In addition HAZOP analysis and Risk Assessment Study will be required to be conducted before seeking permission from regulatory authorities. MoEF may require submission of Environment Impact Assessment Report prior to issuance of a permit.
- Any Camp ground facility shall meet “Compliance Standards for fire and structural safety” or updated applicable standards as enforced/stipulated by the District administration. Said facilities shall be subject to applicable local, State and central regulatory authorities and all permit requirements.
- As per Vasthu, Fire related activities can come on the North East, North West, South-East sides

3.3.3 Guidelines for Provision of Energy and Fuels

Storage:

- Permit from the Fire Department and Chief of Explosive Department will be required for storage of diesel, LPG and other explosives on the site. It will be the responsibility of the owner of the site to obtain such permit. All under and above ground storage tanks will be periodically tested and certified by the regulatory authority.

Firewood shall be stored in the following fashion:

- In neat and secure stacks.
- The height of a wood pile over three feet high shall be no more than twice its width. The maximum height allowed is 1.8meters

- In a manner and location to minimize possible problems of rat or other pest infestation.
- No wood shall be stored within the required minimum area of setback from a street right-of-way or within 1.5 meters of a side lot line. In no case shall wood be stored within a street right-of-way.
- No wood shall be stored in a front yard or yard that is commonly considered the front yard.
- The maximum amount of wood that may be stored at one time is 1.2x1.2x 2.4 cubic Meter. The area covered by the stored wood shall be included in lot coverage requirements.

Wood storage under the following circumstances shall be exempt from the conditions outlined above.

- Wood stored or kept in a covered structure impervious to the elements.
- Temporary storage of logs for maximum one day's usage outside of the required areas of setback from property lines and street is allowed for the purpose of cutting and splitting logs to a size usable in the Hotel or pilgrims wood burning device.
- Any wood pile in existence as of the effective date of this Document which does not comply with the provisions of this Section must be removed or placed in compliance with this Section's provisions within one year after written notice to comply by the authorities. Such notice shall be in writing and shall be served upon the user either in person or by mail.
- Underground cabling preferred for electricity networks. All the utilities should be placed underground in suitable horizontal ducts with manholes at suitable intervals so as to facilitate easy repair and maintenance without much disturbance and resurfacing works.

3.3.4 *Guidelines for Postal and Telecommunication Systems*

- These may be tall structures over 15.0 m on roof tops or ground based. Clearance from necessary authorities (Police, Fire and Rescue departments) will be required which may require the submission of the project details to the authorities
- Need to comply with both internal technical design standards and interface with the Built system
- Underground cabling preferred for telecom networks. All the utilities should be placed underground in suitable horizontal ducts with manholes at suitable intervals so as to facilitate easy repair and maintenance without much disturbance and resurfacing works.

3.3.5 *Guidelines for Commercial Activities*

3.3.5.1 *Strategies*

There is an utmost requirement to effect marked change in the approach and functioning of commercial establishment at Sabarimala mainly in its physical parameters as well as the functioning pattern. Following strategies would help in attaining these objectives.

- Encourage Planned and Sequential development
- Identify the planning requirements decided regionally, for the number of temporary structures that can be built/ or required at Sabarimala
- Formulation and enforcement of special building rules and guidelines for temporary constructions.
- Adaptive management at the site level, combined with a process of Adaptive Planning across sites to more fully integrate scientific knowledge into resource

management that integrates design, management, and monitoring to systematically test various options to bring about concrete and long term solutions.

Recommendations for Sabarimala

Retail development, is a vital component of a sustainable Commercial activity development and control strategy which works towards fulfilling demands of the pilgrims in a most satisfactory way. However, it should be considered that that large commercial establishment and unwanted activities which have started dominating the commercial scenario in Sabarimala, can equally damage the vitality of this sacred pilgrim centre. It is also essential that a threshold to restrict the development of large scale retail outlets that would otherwise damage the traditions is adopted. So it is therefore recommend that, in addition to the sequential approach, the following policy be incorporated:

In future, all development plans/initiatives should incorporate clear policies and proposals for commercial area development, including a cap of at most 3,000m² of net retail floor space in Commercial outlets so designated at a place. In some areas it will be necessary to set the cap at a lower level, for example: in areas where the aim is to protect the existing environment, or encourage new provision of a diverse range of shops and services; in areas where a large proportion of the retail floor space is already provided in large shopping spaces; in small base camps or smaller transit camps where large shops would not be appropriate in scale or catchment to that camps. The caps so recommended are stated below

1. Pampa – 3000M² net retail floor space
2. Sannidhanam- 3000M² net retail floor space
3. Nilakkal -3000M² net retail floor space
4. Pampa Sannidhanam Trek Route – 1500 M² net retail floor space
5. Cheriyanavattom – 1500 M² net retail floor space
6. Valiyanavattom -1500 M² net retail floor space
7. Plapally to Pampa Road side – Nil (except at Chalakkayam in case the Police Outpost is retained at Chalakkayam)
8. (At any location commercial area should not exceed 5percent of the total plot area allocated for use/permissive use at Sabarimala)
9. There should not be any presumption against the approval of developments above the threshold in any circumstances

The number of shops at various commercial centers should not exceed the following limitations.

Table 28: Proposed Limitations on the Number of Shops at Various Commercial Centres

<i>Type of Shops</i>	<i>Pampa</i>	<i>Sannidhanam</i>	<i>Trek route</i>	<i>Base/transit camps</i>	<i>Nilakkal</i>	<i>Other places</i>
Formal shops (Total)	55	55	24	24	55	24
General retail	35	35	16	16	35	16
Fruits and vegetables	6	6	3	3	6	3
Service and Repair	13	13	5	5	13	5
Informal shops (Total)	22	22	13	13	22	13
General retail	14	14	8	8	14	8
Fruits and vegetables	NA	NA	NA	NA	NA	NA
Service and Repair	5	5	3	3	5	3

Note: Based on UDPFI Norms

The distribution of commercial activities should be restricted as specified in the following table.

Table 29: Distribution Pattern Recommended for Shops at Various Pilgrims Centres

<i>Activities</i>	<i>Pampa</i>	<i>Sannidhanam</i>	<i>Trek route</i>	<i>Base/transit camps</i>	<i>Nilakkal</i>	<i>Other place</i>
Shopping (retail, repair)	Yes	Yes	No	No	Yes	No
Informal shopping	No	No	Yes	Yes	No	Yes
Hotels	Yes	Yes	No (may be permitted in queue complexes)	Yes	Yes	No
Service establishments	Yes	Yes	No	No	Yes	No
Fancy store	No	No	No	No	No	No
Convenience store	Yes	Yes	No	No	Yes	No
Medical stores	Yes	Yes	No (Medical shops in queue complex)	Yes	Yes	Yes
Petrol Pumps/Fuel stations	Yes	No	No	No	Yes	Yes
Milma Booth	Yes	Yes	Yes	Yes	Yes	Yes
LPG Godown (with all safety and security provision only)	Yes	Yes	No	No	Yes	No
Agency outlets (large)	Yes	Yes	No	Yes	Yes	No
Agency outlets (Small booth)	Yes	Yes	Yes	Yes	Yes	Yes
Refreshment stall	Yes	Yes	Yes	Yes	Yes	Yes
Accommodation	No	No	No (Resting area in queue complex)	Yes	Yes	Yes
Puja Material shop	Yes	Yes	If required	Yes	Yes	If required
Florist Shop	Yes	Yes	If required	Yes	Yes	If required
Curious shop	No	No	No	No	No	No
Textile shop	Yes	Yes	No	No	Yes	No
Grocery shop	Yes	Yes	No	No	Yes	No
Fruits and vegetables	Yes	Yes	No	No	Yes	No

TDB and Forest Department should play a positive role in promoting vibrant, diversified and localised commercial development in an area. Commercial area planning should therefore reinforce investment in Sabarimala renewal by supporting the continuing role of the pilgrimage. This should include the effective use of master plan guidelines on issues such as Built Fabric Design. In assessing the need for additional Commercial areas in the future floor space in or adjacent to existing centres should not be just by considering the quantitative need for floor space but should also assess the format in which the additional floor space would most likely contribute to the vibrancy and diversity of existing commercial centres.

Promoting trade diversity and vitality in new developments (basically Nilakkal any future areas)

Following policies are recommended to be adopted:

In any significant new area of development in and around Sabarimala, provision should be made for local retail outlets which:

- avoid an overall increase in travel;
- provide access to essential shopping facilities (pedestrianised);
- Encourage need based vibrant and diverse Commercial centres which would serve the pilgrims to their satisfaction.

Promoting Cooperative, NGO and Government sector in retail segment

One of the main points of concern in Sabarimala is fleecing of pilgrims by the shop keepers through over charging. This tendency can be arrested only by enhancing the role of cooperative /government agencies in the retail segment. More over it can help bring down the tendency of over charging the pilgrims. However, complete change over to Cooperative/ government sector is also not recommended as to sustain some sort of competition which is essential to maintain the quality of service and to avoid monopolistic competition. A major category of retail outlets which are recommended to be partially put under corporative/Government/NGO control are the hotels. Indian Coffee House chain, KTDC or the NGOs like ABASS can manage some of the hotel entities thus by giving people better options and support indirectly in bringing in quality and price control.

Community Kitchens

It is also proposed that retail hotels be done away with by the introduction of community kitchens run by temple management, sponsors or volunteers.

Cooking Platforms

Designated cooking platforms may be provided with LPG, water supply, grocery supply through government agencies (like maveli stores, supply-co etc), and waste management where pilgrims can cook their food if so preferred.

3.3.6 Guidelines for Provision of Accommodation Facilities

3.3.6.1 Strategy for developing Accommodation facilities for Sabarimala Pilgrims

1. Identify the accommodation requirement, decided regionally, for the number and type of accommodation required for pilgrims;
2. Develop more accommodation facilities along the major route regionally i.e. to distribute accommodation facilities to other areas rather than concentrated development at Sannidhanam or Pampa;
3. Accommodation facilities at Sannidhanam and Pampa should be designed to cater to the minimum required to manage the temple activities;
4. Formulation and enforcing of special building rules and guidelines for permanent and temporary structure construction for accommodation;
5. Adaptive management at the site-specific level for developing accommodation facilities combined with a process of adaptive Planning across sites to more fully integrate; scientific knowledge into resource management that integrates design, management, and monitoring to systematically test various options in bring about concrete and long term solutions;
6. Accommodation developed should be meant to offer a place to recuperate pilgrim's breath and refresh oneself for a few hours before moving on. This can be stretched to a maximum of an overnight's stay. Management measures including use of biometrics systems to check the unwarranted or overstay propensity to be explored during phase 2; and

7. Maximising the use of facilities by 'rotating' them amongst as many as possible. This is possible only by restricting the duration of stay of any individual or group to maximum of one day or 24 hours. It is neither feasible nor justifiable to reserve any accommodation for individuals or groups for extended periods of two or three days as it will lead to higher demand for more facilities.

3.4.6.1 Development Guideline

All the accommodation facility created should conform to the development guidelines provided in in the Vol2: Built Fabric Analysis Module and Vol 3: Vision Document and Development Guidelines.

3.3.7 Guidelines for Signages in Built Environment

3.3.7.1 Strategy

Appropriate signs identify and promote institutions, businesses and buildings as well as communicate messages. Well designed signs contribute to the character of the place and would assist people in finding their way around Sabarimala. Inappropriate signs whether by way of location, poor quality design, excessive numbers within an area, or excessively large signs, can create visual and physical clutter, degrade the character of place and landscape and reduce the efficiency of other appropriate signs.

For new buildings (include temporary building/structure), the location, type and total number of external signs should be considered at the development application invitation/tendering out stage so that signs can be integrated into the design of buildings. This information should be detailed in a separate section of the agreement - a Signage Strategy - to be part of any development consent for a new building. The Signage Strategy will then be used to guide the appropriate introduction of any new signs on the building.

Proposals for new or substantially amended signs on existing buildings must be considered in relation to the landscape context, the architectural design of the building and the cumulative impact of any other signs in the vicinity so as not to create visual or physical clutter. In some cases it would be appropriate for a Signage Strategy to be prepared for the existing buildings as part of any application. In particular, all proposals for signs on Heritage/religious Items or in Heritage/Religious corridors need to include a Signage Strategy for the whole of the building.

Corporate identification such as corporate logos, colours and other graphic elements are not to permitted in the Sannidhanam area but could be provided in Pampa only where the corporate graphic design is highly compatible with the character of the area and the design of the building. In some cases, corporate graphics may only be permitted in a modified form, such as with reduced colour intensity, inverting graphic components (e.g. reversing black and white), deleting backing elements (e.g. using freestanding individual letters) or by the innovative use of materials (e.g. using different metals in a natural finish to represent company colours).

The provision in the Signage plan will encourage the development of 'precinct based Signage Strategies' or Development Control Plans. Particular uses may also have more specific detailed signage requirements in addition to the provisions of general Plan

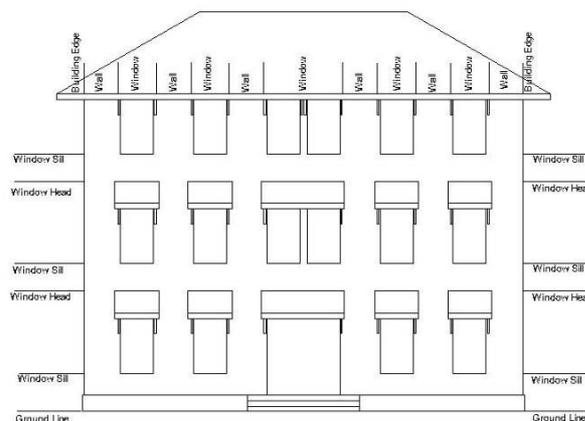
through the application of Plan prepared specific to that particular land uses, such as (for example: Temple complex/precinct) may also apply.

While considering innovative design proposals for signage which has not been envisaged by these provisions or where there are issues of interpretation, the consent authority may consider the design excellence of the proposed sign and the degree to that which meets the objectives of this Master Plan.

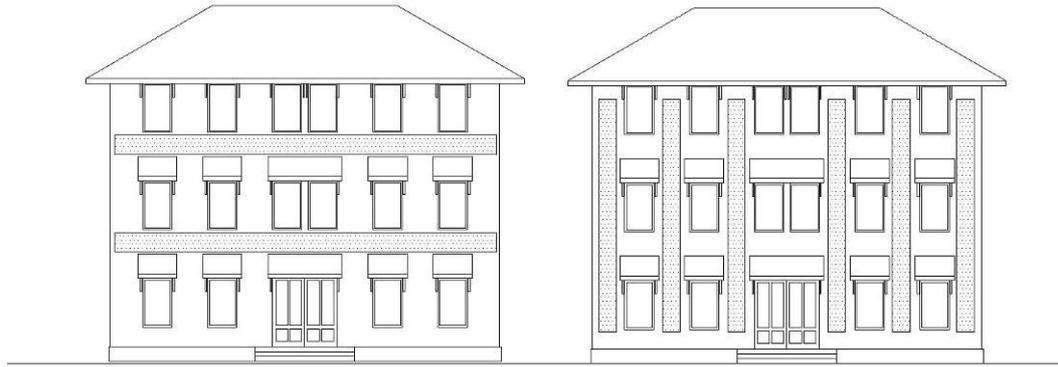
3.3.7.2 General location and design of signs

Signs are to be designed and located with the following objectives:

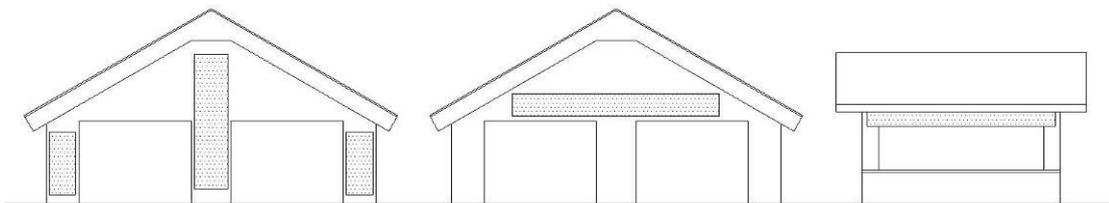
1. be visually interesting and exhibit a high level of design quality;
2. be integrated with the architecture and structure of the supporting building;
3. allow the main facades of buildings between the first floor and parapet to be uncluttered and generally free of signage;
4. achieve a high degree of compatibility with the architectural design of the supporting building having regard to its composition, fenestration, materials, finishes and colours, and ensure that architectural features of the building are not obscured;
5. consider existing signs on a building, site or adjoining vicinity to ensure that any new sign does not give rise to visual and/or physical clutter;
6. have regard to the view of the sign and any supporting structure, cabling and conduit from all angles, including visibility from the path level and nearby higher buildings and against the skyline;
7. have only a minimal projection from a building;
8. not contain additional advertising promoting products or services other than the approved use of the premises or site (for example the logos or brands of products such as soft drinks, brewers, photographic film, etc) irrespective of whether that product or service is sold or available on the site; and
9. Not be supported from, hung from or placed on other signs.
10. The scale and location of a sign shall be compatible with the building to which it is affixed and take into consideration nearby buildings, pathway and existing signs. In most cases, appropriate dimensions can be achieved by restricting signs to grid locations or panels to ensure the architectural elements (set by the lines of awnings, windows, doors and parapet lines etc) remain the dominant feature of the facade.



Example of facade grids used for display of signages.



Examples of possible locations of panels for Building Name Signs



Examples of possible panel locations for Temporary Building/ Stalls Name Signs, (signage is not permitted on roof or shades or above eaves).

11. Signs painted on or applied on the roof of a building are not to be permitted.
12. Corporate colours, logos and other graphics shall be acceptable elements of signs only where they achieve a high degree of compatibility with the architecture, materials, finishes and colours of the building and the landscape. Corporate colours, logo and other graphics may need to be modified to achieve this compatibility.
13. In considering applications for new signs the consent authority must have regard to:
 - a) the number of existing signs on the site and in its vicinity;
 - b) whether that signage is consistent with the provisions of the development plan;
 - c) whether the cumulative impact gives rise to visual clutter;
 - d) the need for the minimisation of excessive lighting which acts as an advertising device, both on and behind shop fronts, so as to prevent obtrusive impacts upon the streetscape;
 - e) in considering innovative design proposals for signs not envisaged by these provisions or where there are issues of interpretation, the consent authority will have regard to the design excellence of the sign and its compliance with all the objectives of this section;
 - f) whether the signage relates to an approved use; and
 - g) The existing and desired future character of the area.
14. Wall signs between first floor and the parapet of the building are not permitted if the building also has a building name sign on the same elevation. In all other cases signs are to:
 - a) be compatible with the design of the building and the streetscape and are not to cover architectural features and not extend above the building parapet or eaves;
 - b) occupy only a minor proportion of the building elevation;

- c) project only to a minor extent from the building elevation; and
 - d) be limited to one sign per elevation.
15. Painted wall signs may be permitted on otherwise blank side elevations of existing buildings if in the opinion of the consent authority the sign improves that elevation of the building and the sign is not commercial advertising.
 16. Non-projecting wall signs on the ground level (usually known as hamper signs) are to:
 - a) be located preferably above the public entrance to a shop/premises and any adjacent window;
 - b) not be located on frontages without a public entry;
 - c) be limited to one sign per frontage of the shop/premises;
 - d) be not more than 0.6 meters high, 1 m² in area and relate to the proportion of any shop front window/opening and door framing;
 - e) project a maximum of 150 millimeters from the shop front face/opening to the outside edge of the sign; and
 - f) Horizontally oriented signs are preferred consistent with the doorway proportions.
 17. Other signs at ground level are generally not to be permitted including signs on window glass, whether internal or external. A wall plate may be located next to the entrance door.
 18. Free standing Identification Signs are discouraged in Sabarimala. It is preferable to have signs fixed to buildings. Any free standing sign is to be:
 - a) Not higher than 1.20m (4 feet) above the ground and have a maximum area of 1m² per face and not more than two faces;
 - b) integrated into the landscape design;
 - c) present only information related to the use of the building or the site such as a directory of pilgrims and not be a Commercial Advertising Sign; and
 - d) Limited to one sign per street frontage or with a minimum spacing of 250m in case of trek routes.
 19. Significant trees and vegetation shall not be removed to accommodate signage. Free standing signs, where permitted, shall include as part of a development plan which include a landscape plan, showing all landscaping on site.
 20. Loose or moveable freestanding signs, including "A frame" and "Sandwich board" signs are permitted.
 21. Menu boards/price board or stands are not permitted on Pathways which include all signage's
 - a) being stable and so located may hinder pedestrian circulation;
 - b) Signs promoting businesses located on people or carried by people are considered a public nuisance.
 22. Signs of a minor nature, including location/place signs, directional signs, general pilgrim information signs and way finding signs, constructed for or by the TDB do not require consent but needed to strictly comply with the guidelines;
 23. The maximum number of Identification Signs generally permitted on a building elevation, – a maximum of two signs (but no more than one sign per elevation) near the roof or parapet and one at or near the building's major entry;
 24. Commercial Advertising Signs are to be generally discouraged and should not be permitted at all in Sannidhanam and along trek route;
 25. Temporary signs and sign structures are subject to the same design and locational provisions as permanent signs. However, special consideration may be given to the signs associated with special events of a community, religious or cultural nature; and

26. A temporary sign is generally permissible for a period of up to 60 days (season period only) (however this needs endorsement from the TDB, Forest and the local administration) and renewals of or extensions to the period not to be generally be permitted.

3.3.7.3 *Illumination and Animation*

1. Excessive or special illumination schemes expressly designed for the purpose of promoting the business, activity or product, both on and within buildings (including windows and doorways) and sites, are not to be permitted.
2. Illuminated and animated signs are not to detract from the architecture of the supporting building during daylight if provided.
3. Where the illumination of signs signage are is likely to have an adverse impact on religious buildings or historic precinct they are not be permitted mainly in Sannidhanam.
4. In some instances, a strict clampdown may be imposed on the operation of illuminated and animated signs where continuous illumination may impact adversely on the wild life, amenity or comfort of pilgrims or other visitor or have other adverse environmental effects.
5. Illumination (including cabling) of signs is to be:
 - i. concealed; or
 - ii. integral with the sign; or
 - iii. Provided by means of carefully designed and located remote or spot lighting.
6. The ability to adjust the light intensity of illuminated signs is required to be installed where the consent authority (Forest Department) considers necessary.
7. Up lighting of signs is not to be permitted. Any external lighting of signs is to be downward pointing and focused directly on the sign and is to prevent or minimize the escape of light beyond the sign.
8. Animated signs are to be discouraged and generally not permitted in the Sannidhanam, along trek route or Pampa. Such signs include including mechanical moving signs, 'moving' LED signs, video/television screens, projected laser advertising and other flashing, intermittently illuminated or sequenced lighting signs. If at all required, such '(only) informatory' LED signs should be approved by the Forest Department considering the response of the wildlife to such signs.
9. Illuminated signs/ or any other advertisement sign will have a period of consent for 2 months only (peak season only).

3.3.7.4 *Signs for Certain Uses*

1. Signs for commercial establishment, restricted premises and any other related activities premises must:
 - a. not interfere with the amenity of the locality; and
 - b. not exceed 450mm in height and 900mm in width, or be of an equivalent area.
2. No more than one sign should be erected, displayed or exhibited to public view in the window, or on the building, or in, outside, or directly above an access way to the commercial establishment or restricted premises;
3. Free standing signs should be avoided where ever possible. Where it becomes an absolute necessity it should be so designed to blend in with the natural landscape; and
4. Signs are to be maintained to a high standard and to Authorities satisfaction. A maintenance plan may be required to be submitted for approval prior to

commencement of construction indicating the proposed methods of cleaning, and replacement, a detailed maintenance schedule to ensure ongoing upkeep of the sign.

3.3.7.5 Signs and Road Safety

- 1 Signs are regarded as prejudicial to the safety of the traveling pilgrim if they:
 - a. obscure or interfere with road traffic signs and signals or with the view of a road hazard, oncoming vehicles, or any other vehicle or person, or an obstruction which should be visible to drivers or other road users;
 - b. give instructions to traffic by use of the word 'stop' or other directions, which could be confused with traffic signs;
 - c. are of such a design or arrangement that any variable messages or intensity of lighting impair drivers' vision or distract drivers' attention; and
 - d. Are situated at locations where the demands on drivers' concentration due to road conditions are high such as at major intersections or merging and diverging lanes.

- 2 When a suitable location for a sign has been identified, the actual positioning of the sign needs careful consideration. The following criteria apply:
 - a. The lateral clearance from the sign to the curb is to be not less than 0.6 meters. This can be reduced to 0.45 meters only if the footway width is less than 3.6 meters and the road camber is not excessive; and
 - b. The minimum headroom for passage of vehicles on a public road is generally 5.4 meters with 5.0 meters being the absolute design minimum.

3.3.7.6 Signage and Advertising Structures

- 1 While considering structures which are located in the pilgrim domain and encompass signage and advertising structures the consent authority must have regard to:
 - a. The appropriate location of any structure so as not to intrude onto or obstruct accessible paths of travel;
 - b. Clear unobstructed sightlines to structures that are well lit and colour contrasted, where appropriate, to assist people with vision impairments, and the discouragement of signs on poles which may be problematic for aged pilgrims;
 - c. The use of hazard warnings such as tactile indicators to indicate possible dangers for people with vision impairments;
 - d. The general safety of pedestrians; and
 - e. Any cumulative impacts or visual clutter created by the proposed signage and structures.

3.3.7.7 Signs in Religious Precinct

Religious structures and signs with religious value in Sabarimala have special significance. The design and location of signs on or near such structures must be carefully considered to achieve a very high degree of compatibility with the religious significance of the building or landscape so as not to detract from that significance. In some cases, the Religious significance of a structure may not allow for any signage or only limited signage opportunities.

- 1 All signs on a Religious structures are to be:
 - a. consistent in design to the architectural form of the building to which it is attached;
 - b. of a high standard of materials, construction and graphics; and

- c. Appropriately located on the Heritage Item and of a compatible design and style with appropriate lettering.
- 2 Existing signs on building generally and on Religious Structures may have Religious value and if this is demonstrated should be retained where appropriate and possible to do so, preferably in their original location.
- 3 The installation of any sign on a Religious Structure is to be carried out in a reversible manner without damage to the significant fabric.

3.3.8 Guidelines for Supporting Police Services

1 Developing proper coordination and cooperation between various stake holders:
TDB should recognize that effective partnership with Government, Police and range of other key stakeholders makes the Sabarimala pilgrimage possible. In order to achieve the ultimate objective of Sabarimala development effectively and efficiently, there is a requirement to build a strong bond between various institutions and departments operating at Sabarimala based on mutual respect and understanding. To attain effective service from the Police, cooperation and coordination between various departments are required which in turn would prove essential to build a safe and secured environment at Sabarimala. It is recommended that a core group constituting of representatives from all departments at grass route levels be formed which can be presided by the police so as to review and take decisions required on daily basis.

2 Develop implementable and flexible plan for crowd management and policing at Sabarimala:
The Police personnel, responsible for security and crowd management face a challenging and complex environment at Sabarimala. Every year safety, security and service requirements increase exponentially in scope and complexity, where as police are yet to come out with implementable and flexible solutions for Sabarimala. It is essential that the police plan out and implement strategies to ensure safety and security.

Police in consultation with TDB and the forest department can also work would a fool proof system of crowd management and a detailed disaster management plan for Sabarimala with external support from expert agencies/consultants. It is also recommended that TDB along with NGOs like ABASS should share the responsibility with police, by providing necessary support and assistance in the form of personnel and facilities. It is also recommended that TDB to provide best of facilities to the police which happen to be the most stressed out department during the season.

Accommodation facilities to be provided for around 250 police personnel in different official grades at Nilakkal. Parking and separate toilets and canteen facilities also need to be provided. (Detailed design for development of the Police camp at Nilakkal have been provided to TDB for implementation prior to 2006 – 07 peak pilgrim season)³

³ ILandFS Ecosmart Ltd (2006), Proposed Works for Implementation : 2006-07, Preparation of Master Plan for Sabarimala, GoK (Unpublished)

3.4 Suggested Interventions

3.4.1 Health Care Infrastructure

Proposed interventions include:

- Upgrading the existing hospital at Pampa with better infrastructure and specialized personnel who would render service during the pilgrim seasons;
- Tele-medical unit at Pampa to be made permanent;
- Provision of Mobile ICU/ Operation theatre units at Pampa
- Upgrading the existing hospitals at Sannidhanam;
- Provision of dismountable oxygen parlors at Sannidhanam, proposed Q- complex and along the trek routes;
- Upgrading the Cardiac center at Appachimedu Additional Cardiac center at Neelimala and provision of resting bays at Appachimedu and Neelimala (This had been included in the immediate interventions to be included prior to 2005-06 pilgrim season and 0.5 ha of land had been allocated based on the suggestion in the “Outline of the master Plan for Sabarimala”⁴).
- Medical Aid center attached to proposed Queue-complex near Marakkootam;
- Cardiac center and other medical facilities to be set up at other proposed base camps: Nilakkal, Erumely, and Vandiperiyar;
- More facilities in the form of doctors or trained volunteers at Mukkuzhi and Karimala
- Cardiology centres and Oxygen parlours at Vellaramchetta and Kallidamkunnu.
- Medical facilities in the form of first aid centre and Oxygen parlours at Uppupara and services of trained volunteers to help ailing pilgrims.
- Aged/invalid pilgrims to be provided with necessary assistance and information before the trek to Sannidhanam at a dedicated Health Centre at Nilakkal.
- Augmenting the facilities including bio-medical waste management at the designated hospitals at major towns/places en route to Pampa, Erumely, Vandiperiyar (towns such as Chengannur, Pathanamthitta, Peerumed, Kanjirapally, Mukkuttuthara, Thiruvalla, and Ranni);
- Planned development of hospital networks: hierarchical demarcation of dispensaries, small HCUs, referral hospitals, specialized hospitals (both public and private) and a dedicated management plan and institutional arrangements; (Refer Map)
- Dedicated health service personnel through out the season at designated hospitals; Regular monitoring and quality check on Pampa river water contamination, food and water quality and sale of banned foods;
- Capacity building, awareness generation and emergency services through volunteers;
- Upgrade Community Health Centre at Erumely with Cardiac Care facilities (at least 50 bedded)
- Upgrade the Community Health Centre in Ranni Perunad Panchayat to the status of a referral hospital. Infrastructure need to be upgraded and sufficient staff to be ensured.
- Dedicated medical teams (government / voluntary) to be stationed along all major routes leading to Pampa, including Erumely trek route.
- Service access from Pampa Thriveni to Swamy Ayyappan road to ensure emergency evacuations

⁴ Ibid (2005), The Report on the Outline of the Master Plan for Sabarimala, GoK (Unpublished)

- Resting bays along the trek path from Pampa to Marakkoottam (0.14ha already allocated during Stage 1 of the Master Plan)⁵
- Medical checkups and Issuance of fitness cards to all employees (including staff, workers employed in managing large scale infrastructure like prasadam making, solid waste management etc)

3.4.2 Fire Fighting

- Permanent fire base and facilities at Nilakkal;
- Upgradation of Fire installation at Sannidhanam and Pampa to give fire protective cover to whole area;
- Parking area and temporary staff room for Fire Service Personnel at Pampa (Thriveni);
- Separate service access till trek route beginning;
- Fire fighting arrangements including sprinklers at Queue Complex;
- Disaster management / escape route planning and familiarizing; and
- Provision of automated and manual Fire fighting devices as per type of fire expected in all building including religious, housing and service building
- Buildings to follow set backs and guidelines as per norms.

3.4.3 Energy and Fuels

- Provide underground cable supply line rather than depending of overhead line in Sabarimala to avoid frequent disruptions of supply due to breaking of lines as it goes through thick forest area. More over with respect to safety aspects also under ground supply network is more secure and safe;
- Underground electric supply line from the New Pampa sub station to Nilakkal by 2010;
- Safe and eco-friendly systems of supply and / or storage of fuels to be formulated and strictly implemented;
- Environmental Impact Assessment for piped supply of LPG from Pampa to Sannidhanam and implementation of the environmentally safe alternative
- New fuelling station at Nilakkal;
- Electricity Sub station at Nilakkal (in the land already provided for base camp development)
- Enhancing the maneuverability of vehicles in and near the existing fuel station at Pampa by clearing and demarcating activity zones and usage time zones
- Restricting the cutting of wood from forests for use as fire wood;
- Preventing fuel spillages to the River Pampa and other water bodies;
- Possibility of harnessing alternate energy sources like solar energy, wind energy, bio-energy, micro-hydel schemes etc have to be looked into; and
- Underground conduits for network lines to ensure safety, ease of maintenance and repairs

3.4.4 Postal and Telecommunication

- Network planning for telecom network;
- Increasing the number of booths / telephone facilities at Sabarimala to at least 120 in 2005 and to 160 at Nilakkal by 2010; and
- Underground conduits for network lines to ensure safety, ease of maintenance and repairs

⁵ Ibid

- Usage of automatic cell phone jammers in the temple precincts
- Additional cellular operators may be allowed considering the safety / security aspects, after seeking permission from the Police Department. (Guidelines to be followed are provided in Vol 3 of this report)

3.4.5 Commercial Activities

- Limit the number and type of shops at Pampa and Sannidhanam as proposed in this report
- Create Locker Services, Community Kitchens and common cooking platforms
- More involvement of government backed hotels / retain chains at Sabarimala, Pampa, Nilakkal
- Shops along the trek route from Pampa to Sannidhanam to be placed in the resting bays provided at intervals as suggested by the “Outline of the Master Plan for Sabarimala”. Additional facility if at all essential to be provided after assessing the situation and such additional facilities to be maintained by EDCs/Voluntary agencies
- Permissive use permit should be given each year to EDCs or voluntary agencies to operate small stalls and water outlets along SA Road and Chandranandan Road.

3.4.5.1 Action Strategies

1. Demonstration Projects – 2007-2008

Redevelopment Plan preparation for Pampa Manalppuram area – Almost 80percent of Pampa Manalppuram houses temporary structures. Hence redevelopment of this area would not call for large scale demolition or construction activities. A detailed redevelopment plan for Pampa; especially for Pampa Manalppuram need to be prepared and implemented without any additional requirement. The Redevelopment plan for Pampa would essentially means reorganizing commercial activities and orienting service infrastructure to cater for the needs of the pilgrims who congregate here for rituals and for embarking on the trek. The plan needs to attain the following objectives

1. Segregation of commercial spaces from other activity spaces
2. Segregation of general and service traffic route
3. Maximization of space for religious activities
4. Identification and designation of spaces for commercial and service facilities
5. To comply with all safety and security norms
6. To create and maintain a clean and hygienic environment which is pilgrim friendly and welcoming at Pampa which is the gateway to Sannidhanam.
7. Provide incentives for the Shop owners to upgrade and modernize temporary buildings.
8. Encourage through small grants, awards and bonus points for the shop owners.
9. Enforcing design guidelines and mandatory review
10. Create Identity for Spaces in Sabarimala which would support the pilgrims in orienting themselves
11. Develop an Internal order in Market place by creating identifiable and dedicated streets / localities for different combinations of shops
12. Assistance for Compliance of safety Code by conducting a “walk through” with the shop owners to identify issues and make recommendations in the inception stage of setting up the commercial area before the season. The walk through may be recorded in a brief report to the Shop owner. This effort will help save time and money and to

large extent will help to make shop owners to comply with the safety norms right from the inception.

2. Next Steps – 2009 and Beyond

Commercial Code Development and Enforcement Rules for controlling the commercial conduct need to be developed and enforced. Area wise commercial code enforcement will be one way to have shop owners improve Facilities that are a threat to the pilgrim safety.

Built Space Leasing Rather Than Plot Leasing –Presently shop owners has to go through auction process to gain the lease right of the plots during the peak pilgrim season at Sabarimala. The auction rate for a 40sqm shop would be as high as 30 to 70 lakhs. Since the initial expense incurred is very high the shop owner resort to allocating minimum share of their investment for the purpose of actually setting up the facilities. This tendency is probably the cause of the dismal condition of built environment at Sabarimala.

The temporary structures are built using economical and unsafe building materials for construction. Till the fire mishap which occurred at Pampa and resultant judgment by the Hon'ble High Court banning the use of dry leaves, bamboo, wood etc for construction, these were predominantly in use. However, the construction pattern and planning remains the same. A good solution to this aspect would be that the grantor of lease i.e. TDB/ Forest department should take up the responsibility of constructing the base infrastructure and lease out only the floor space so created to be managed and operated by private parties. No private parties/shop keepers should be allowed to construct anything at Sabarimala. Such provision should be initiated based on the redevelopment plan prepared. The following are the benefits of this approach:

- Although the initial investment may be large the grantor can get the returns in the form of rents of the space allocated
- Can easily check and regulate any sort of unauthorized construction
- Grantor will have full control over the activities and structural safety which would be highly beneficial to the pilgrims; and
- Common mandatory facilities such as solid waste storage arrangements, proper storage of hazardous materials like LPG etc could be created.

Following uses may be permitted during the peak pilgrim season (in addition to those maintained by EDCs along the Erumely trek route)

Table 30 : Proposed Permissive Use of Space for Commercial Activities

<i>Item</i>	<i>Location</i>	<i>Details</i>
Permissive Use: Facility Centre at Appachimedu and Sharamkuthy	Pampa - Sannidhanam trek route	Appachimedu Permissive Transit facilities to be set up by Ayyappa Seva Sangham / NGOs: Oxygen parlour, medical facilities may be permitted in the resting area at Appachimedu (permissive use from the land leased out to TDB: 0.01 ha)
		Sharamkuthy May be accommodated in the queue complex (permission to NGOs to use space to provide essential facilities)
Permissive Use: Shops along SA Road and Chandranandan Road	Pampa - Sannidhanam route	6 locations along SA Road on both sides Wherever land is available after widening proposed in Stage 1; small kiosks may be permitted for refreshments alone for pilgrims coming down the route. Preferably to be maintained by EDCs

3.4.6 Accommodation

3.4.6.1 Recommendations for Sannidhanam

- No special or separate Pilgrim accommodation at Sannidhanam need to be provided
- Staff accommodation for maximum of 6000 may be provided at Sannidhanam to cater to the need of all departments concerned with Sabarimala.
- Queue complex to accommodate 60,000 pilgrims. The complex will have a common waiting area where pilgrim can rest while waiting for their turn for darshan. All required services will be attached to the queue complex for the utmost convenience of the waiting pilgrims. The queue complex with all support facilities would be the only places where the pilgrim can stay if so required.

Maximum accommodation required at Sannidhanam is for 6000 pilgrims. Existing facilities can accommodate around 30,000 persons at a time. Such dilapidated structures if removed would free up sufficient area at Sannidhanam which in-turn can be used more productively for pilgrim movement, religious activities and for encouraging green infill.

3.4.6.2 Recommendations for Pampa

- No accommodation facilities for pilgrims need to be provided at Pampa. Pilgrims who need stay facilities will have to avail those developed at Nilakkal.
- Eco-friendly transit camp with proper layout and services to be created and maintained by EDCs at Cheriyanavattom and Valiyanavattom
- Accommodation facility to be provided only for the staff and laborers. Maximum requirement would be facilities to accommodate 3000 persons.
- Facility creation should not intrude/or be located in pilgrim activity space or the buffer space recommended alongside the river.
- Resting bays and sheds may be created at Pampa where pilgrims can take a break to recuperate, before starting the forward journey to Sannidhanam. Resting facilities at Pampa should be to cater to a maximum of 8 to 12 thousand pilgrims at a time.

3.4.6.3 Recommendations for Nilakkal

- Accommodation facilities for pilgrims need to be provided at Nilakkal. Nilakkal should be designed to cater to at least 1 lakh pilgrims. With respect to accommodation following are the specific recommendations:
 - i. Permanent accommodation facilities to be created at Sannidhanam for a maximum of 30,000 peoples (pilgrims and staff inclusive). Maximum of 500 staff /labourers may constitute the permanent staying population at Sannidhanam which may expand to maximum of 2000 during the season times.
 - ii. Temporary stay facilities in the form of *viri* sheds to be provided at Nilakkal in accordance to demand. Such facilities are expected to cater to maximum of 70,000 pilgrims. Units to cater for around 30000 pilgrims should be of permanent nature in addition to service cores.

3.4.6.4 Recommendations for Erumely Pampa trek route

- All temporary transit camps (9 existing major one) maintained and operated by EDC's should cater to at least 3000 pilgrims; and
- Sprawl of accommodation and other facilities should be strictly controlled and limited only to the respective transit camps areas.

3.4.6.5 Recommendations for Erumely

- Facilities to accommodate 35,000-40,000 pilgrims to be developed at Erumely;

- 80percent of these could be temporary type with permanent service facilities;
- Options like Public Private Partnership in facility creation and management may be explored
- Accommodation facilities can be created at selected locations along major routes leading to Erumely.

3.4.7 Police Service

1. Development of proper police camp with all facilities requisite by police at Sannidhanam, Pampa and Nilakkal
2. Develop full fledged queue complex in between Marakkootam and Sharamkuthy and at Pandithavalam for crowd management.
3. Installation of watch tower at all vintage locations at Sabarimala
4. Provide physical barrier including temporary and permanent fencing where ever possible during the season at all the areas of concerns which safety and security along with to restrict unruly movement of pilgrims.
5. Install all provision screening the pilgrim at queue complexes
6. Develop a new group of volunteers /service staffs to assist the police in crowd management.
7. Installing Close Circuit Television (CCTV) at all important locations at Sabarimala including Sannidhanam, Pampa and Nilakkal.
8. Development of disaster management plan for Sabarimala.
9. Developing a model code of conduct for obtaining rights to operate at Sabarimala.
10. Installing equipments to constantly monitor the drinking water supplied.
11. Provision of rescue home along the police camps where in detainee can be accommodated.
12. Provision of Clock room at Pampa and Nilakkal where in pilgrim can safely store there articles before proceeding for darshan. This will also assist in enhancing the safety and security provision where in police can prevent pilgrim from carry additional luggage other than Irumudi to be carried to Sannidhanam.

Compiled List of Interventions, Land Requirement and their Phasing is provided in the following table (Table 31).

Table 31 : Compiled List of Interventions and their Phasing