

# MANAGING RELIGIOUS CROWD SAFELY

## CRISIS MANAGEMENT PLAN FOR SABARIMALA PILGRIMAGE



### PROJECT REPORT



**Institute of Land and Disaster Management**  
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## PREFACE

Mass gathering in remote locations under limited infrastructural facilities often pose serious threat to human stampedes and other disasters. Hundreds of people die every year due to human stampedes occurring in religious festivals in India. Most of the crowded religious events involve simultaneous movement of very large groups of people in various directions. Sabarimala pilgrimage season which attracts lakhs of people from South India is one of the hotspots of human stampede due to various reasons. Various Departments of Government of Kerala work together in Sabarimala for the safe conduct of pilgrimage season. The Sabarimala pilgrimage season culminates with Makaravilakku and Makarajyothi darshan. Two major human stampedes occurred during Sabarimala Pilgrimage in 1999 and 2011. Both the incidents happened away from Sannidanam. Thousands of pilgrims' witness Makarajyothi from different viewpoints spread across two districts makes disaster preparedness more complicated and challenging.

This document is the first attempt in this line to streamline disaster preparedness operations during Sabarimala pilgrimage. We have tried to figure out the possible hazards in Sannidanam, Pamba and Makarajyothi view points and the safety measures which are to be followed by the respective departments to avert disasters. A Crisis Management Plan (CMP) was developed based on the crowd risk analysis in Sannidanam and Pamba. The operational guidelines recommended in this manual are not intended to replace the existing working pattern of the departments in Sabarimala. It gives overall idea to the administration regarding the roles and responsibilities of each stakeholder department. The recommendations in this manual are open for discussion with stakeholder departments so that the CMP becomes more precise and executable.

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## **SABARIMALA PILGRIMAGE**

Sabarimala Sree Dharma Sastha Temple is one of the most ancient and prominent Sastha temples in the country. The temple is located in the hilly terrains of Western Ghat mountain ranges in Pathanamthitta district, Kerala at a height of about 914 m asl. The temple is open to all faiths. The pilgrimage in Sabarimala begins in the month of November and ends in January every year. Apart from Kerala, the temple attracts pilgrims from Karnataka, Tamilnadu, Andhra Pradesh, Telungana and Maharashtra States during the festival season. The geography, rituals and worship schedule make the temple unique in many ways.

Mandala pooja and Makaravilakku are the two main events of the pilgrim season. The temple is also open for darsan during the first 5 days of every Malayalam month and special occasions like Onam and Vishu. The temple is very famous for its communal amity as the devotees visit Erumeli Vavasu Swami Mosque enroot to Sabarimala and worship Lord Ayyappa and Muslim Hero Vavaru Swami together at Sannidanam.

In 2015-16 pilgrimage season, about 20 lakh vehicles including motor cycles arrived Pamba and Kerala RTC conducted 92000 trips to Pamba. Nilakkal is considered as the base camp of Sabarimala, as it can accommodate thousands of vehicles and pilgrims. Kerala RTC conduct chain services during the pilgrimage season to carry the pilgrims to Pamba and back to Nilakkal.

Majority of the pilgrims to Sannidanam come through Pamba but there are traditional pathways from Erumeli and Azhutha which lead to Pamba and Sannidanam respectively. The traditional trekking path from Pamba to Sannidanam is about 4 km through hilly forest area. From Pamba, pilgrims have to walk through the traditional trekking path connecting Neelimala-Appachimedu-Sharamkuthy way to reach Sannidanam. Swami Ayyappan road and Chandranandan road which passes parallel to the traditional trekking path is used for tractor transportation and also for the return journey of pilgrims from Sannidanam. Figure 1. shows Nilakkal, Pamba, Sannidanam and Trekking paths.

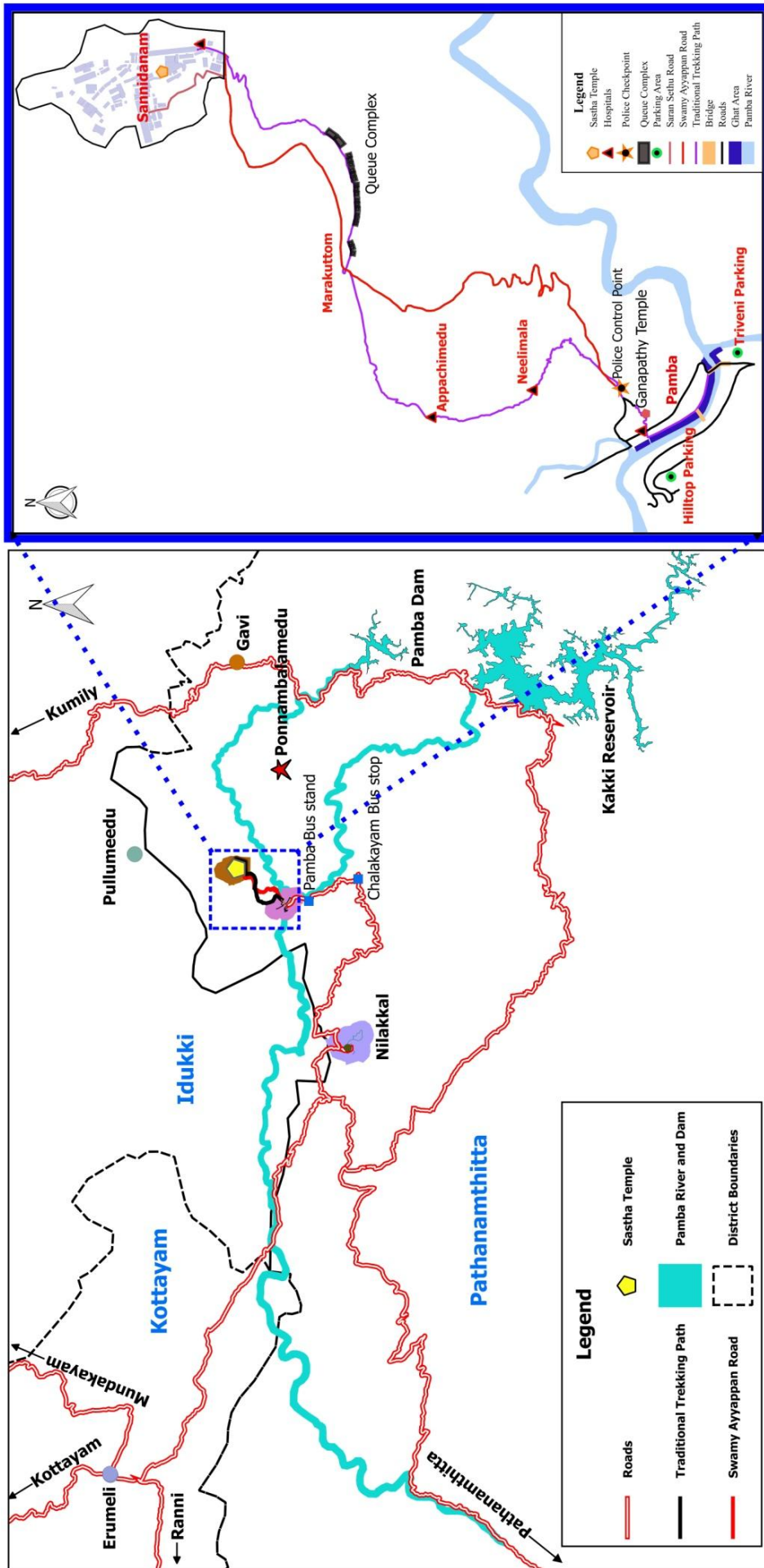


Figure 1

# SABARIMALA CRISIS MANAGEMENT PLAN

## I. PURPOSE

The purpose of the Sabarimala Crisis Management Plan is to set out actions to be taken by the administration of Sree Dharma Sastha Temple in cooperation with Kerala Police and Emergency Service Departments in the event of any crisis or emergency occurring at Sannidanam, Pamba or nearby makaravilakku view points. The Crisis Management Plan is designed to assist Crowd Management and Emergency Operations in the creation of a system for protection of life and property in the event of a natural or manmade hazard requiring emergency activation and evacuation from Sannidanam or Pamba. The Crisis Management Plan provides guidance for the administration, staff and pilgrims in order to minimize threats to life and property.

## II. DEFINITION OF “CRISIS”

For purposes of this Plan, a “crisis” is an event or situation that threatens or has the potential to threaten health/life of pilgrims, officials or event facilitators and which requires a quick, prompt and decisive response. Examples of a crisis include (but are not necessarily limited to):

- Medical emergency (potentially serious injury or sudden, potentially serious illness)
- Fire- electrical, building, LPG etc
- Extreme weather event: Cloud burst, landslide, storm
- Accidents involving motor vehicles like moving Tractor
- Violent or disruptive behavior of a group of people-Stampede-that might require a physical response
- Man-animal conflict: Incidents involving potentially dangerous animals
- Flash flooding at Pamba

### **III SCOPE**

As per the national DM Act 2005, the District Disaster Management Authority has the power to ensure that the areas in the district vulnerable to disasters are identified and measures for the prevention of disasters and the mitigation of its effects are undertaken by the Government Departments at the district level as well as by the local authorities. DDMA may directly apply the provisions in the act to ensure safety in religious mass gatherings by considering them as hotspots of crowd disasters. This guideline was prepared as per clause 18 of the DM Act to lay down guidelines to be followed by the Departments of the Government for the purpose of integration measures for prevention of disasters. The National DM Act stands as the fundamental guideline of Disaster Management, and hence it can revisit the guideline at any point of time. Apart from the given provisions in the guideline, the Chairperson of the DDMA, CMG, SEC or KSDMA may intervene the festival preparedness process or response operations in view of public safety at any point of time.

Roles and responsibilities of organizers and facilitators have been delineated in the guideline thereby knowing who is responsible for what and whom should be approached for specific needs. This guideline had further taken into account the event safety, crowd management strategies, resource management, crisis management, and emergency communication. This document need to be reviewed periodically and updated.

Government of Kerala has constituted a Crisis Management group (CMG) under the chairmanship of District Collector, Pathanamthitta to formulate and implement safety measures in Sabarimala. The Crisis Management Plan (CMP) will be the basic tool of the CMG to foresee and coordinate safety measures. Emergencies that can be handled with the resources in Sabarimala or within the administrative capacity of District Disaster Management Authority, the event will be considered as Level 1 (L1) Disasters. If the disaster grows beyond the capacity of DDMA, Pathanamthitta, the Chairperson of the DDMA or

CMG can declare it as Level 2 (L2) disaster requesting direct involvement of State Administration. When traffic inflow to Pamba is to be checked from adjacent districts or medical assistance or resources from neighboring district are to be availed, the 'crisis' is to be categorized as L2.

### **Level of Disasters**

L0: Normal times, focus on preparedness activities

L1: Disasters that can be managed at the district level; State and Centre in ready state

L2: Disasters that require resource mobilization at the State level

L3: Disasters that require resource mobilization at the national level

## **IV OBJECTIVES**

- To protect the lives of pilgrims and facilitators in Sabarimala by streamlining disaster preparedness and response operations in Sabarimala-Pamba
- To establish clear lines of authority, communication and coordination for disaster preparedness and crisis response in Sabarimala
- To develop a basic structure for time sensitive, safe, secure, orderly and efficient evacuation from Sannidanam and Pamba
- Identify and assess existing hazards in Sabarimala-Pamba and design suitable preparedness measures
- Develop a standard operating procedure for operational departments in Sabarimala-Pamba for effective disaster management

## **V. AUTHORITY**

The following are authorized and expected to be able to respond quickly and decisively in the event of a crisis

- Kerala Police
- Kerala Fire and Rescue Services
- National Disaster Response Force
- Rapid Action Force
- Department of Health and Family Welfare
- Department of Revenue & Disaster Management
- Devaswom Board

**Incident Commander:** Based on the location of the crisis, the Police Controller/Special Officer at Sannidanam or Pamba should immediately take over the responsibility of Incident Commander and make every effort to provide necessary directions to Police and other emergency service departments until the crisis has been managed effectively. If the Police Controller is not on site at the time of a crisis, the person in charge should contact, or arrange for another person to contact, the Police Controller to apprise him of the situation. Similar attempts should be made to contact the Chief Police Coordinator and District Collector, Pathanamthitta. Such contacts should occur only after necessary contacts to emergency services have been made.

Kerala Police, Fire and Rescue Services, Health, Revenue and Disaster Management, Rapid Action Force and National Disaster Response Force will be the first responding departments to all emergencies in Sabarimala. The heads of emergency service departments at Sannidanam should make their presence at crisis management point for coordinated decisions. Other functional departments will extend necessary support for the logistics and operational assistance.

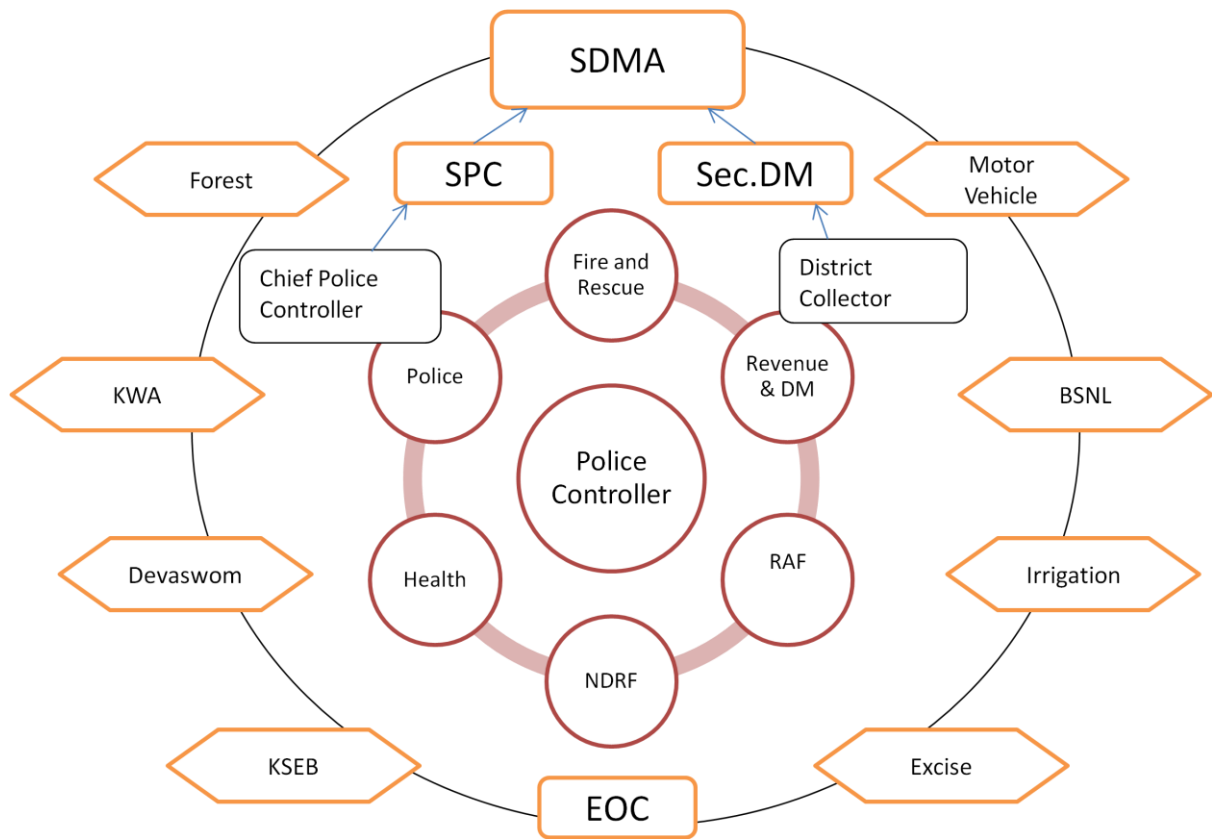


Figure 2: Crisis Management system: Police Controller/Special Officer as Incident Commander and Emergency Response Departments as first responders. Other Departments will provide necessary support for emergency response.

## **VI FAMILIARISATION**

All middle level officers and team leaders of the above departments are expected to read and become familiar with this Plan. The Team Leaders of the concerned departments should meet at least once in a week or after the duty is changed over to familiarize with the updated situation. Peak crowd hours, past crushing incidents, other noticeable incidents, and proceedings of crowd management followed should be discussed and appropriate recommendations be made to process the fine tuning of crisis management plan.

## **VI HAZARD ANALYSIS**

Hazards in Sabarimala were identified on field visits and the pilgrimage area was divided in to three sectors for systematic analysis. Field visits, interviews with departments, feedback from devotees, media report analysis etc were the tools adopted for data collection and analysis. The three sectors are Sannidanam, Trekking Paths and Pamba



## SECTOR I: SANNIDANAM

### 1. Human Stampede

Human stampedes, the most common hazard prevailing in mass gathering events, are characterized by the surge of individuals in a crowd, in response to a perceived danger or loss of physical space. It often disrupts the orderly movement of crowds resulting in irrational and dangerous movement for self-protection leading to injuries and fatalities. Sabarimala pilgrimage is highly prone to human stampedes during the Mandala-Makaravilakku season. The availability of limited open space, uneven topography and high density of pilgrims together make Sabarimala a stampede hotspot. Human stampede in Sannidanam or trekking paths can happen on the following reasons

- **Rush and Surge of people:** People try to occupy a place for better view of Makarajyothi which results in jostling, suffocation, failure of confining walls, barriers and gates. After Mkarajyothi darshan, pilgrims rush towards Vadakke Nada to make civil darshan. The likelihood of human stampede at Vadakke Nada is very high after Makara jyothi
- **Accidents:** Collapse of temporary or permanent structures at Nadappanthal or queuing area, Tractor accidents etc.
- **Natural or human induced hazards:** slope failure, heavy rain and slippery surfaces, fire, intentional acts etc. can trigger a stampede
- **Rumors:** Spread of rumor about an accident, man-animal conflict, terror attack, stampede or a calamity near to the venue
- **Long Queue Discomfort:** People standing in tightly packed queues for long hours will create discomfort among individuals and they try to escape from the queues especially at U Turn and Saramkuthy.
- **Heavy egress:** After Makarajyothi darshan, pilgrims leave Sannidanam in a short span of time. This is the most stampede vulnerable time



Figure 3. Devotees in queue waiting for darshan at Sannidanam

Crushing, trampling and suffocation are all potential hazards that can arise from the dynamics of crowd movement in Sanidanam. The existing system of Crowd Management at Sabarimala can be termed as Hold and Release method

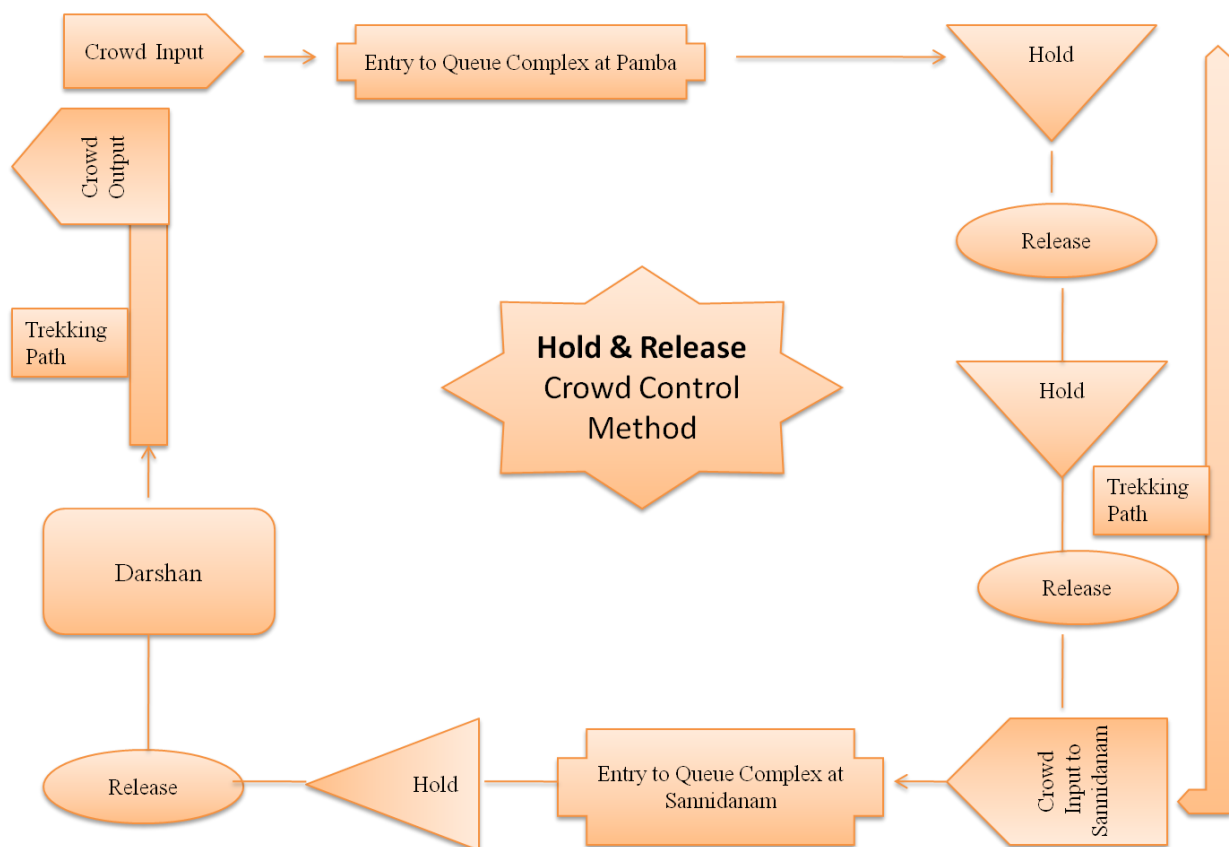


Figure 4 . Hold and Release Method of crowd control

- Overcrowding of devotees at Sannidanam should be regulated at particular check points in the downstream.
- People standing in queues for long hours at Sannidanam can create a situation where people push each other to get free space that may create stampede.
- To avoid harm from crowd surges, ensure that crowd behavior and movements are monitored through CCTV at suitable vantage points and effective crowd control interventions are made in time.
- Development of blockage, excess crowd pressure build up etc at Trekking Paths or designed queue systems should be informed to Police Controller at Sannidanam to take immediate action (eg. Regulation of crowd inflow to Sannidanam).

## **2. FIRE HAZARD**

**Building Fire:** Fire in Sabarimala can originate from electric short circuit, fire from temporary or permanent food stalls, Diesel storage Tanks or LPG storage points of Hotels, Appam-Aravana Plant etc. Appam and Aravana manufacturing plant is located right behind Sreekovil. A fire in the manufacturing unit has potential to set major disaster at Sanidanam. The plants should be equipped with the ‘state of the art fire response systems’ to control the fire developing as explosions.

**Fire Crackers:** About 450 kg of gun powder is stored in Sannidanam for ‘Vedi Vazhipadu’ worships. The storage unit is 500 m away from the firing point, but it is kept without proper security. At the firing unit, gun powder is filled in bullets and fired which is very close to coconut drying sheds. The filled bullets kept clogged by a wood piece. On firing the crackers, wood piece fly to nearly 100 m. A fire happened in Sannidanam in 1954 when a piece of fired cracker fell up on the gun powder storage shed. Hence proper safety measures should be followed in the gun powder storage and firing points. It is advisable to shift the location of

firing unit 100 m below from the present location. Fire and Rescue Department should conduct inspections about the safe and licensed use of gunpowder and other explosives.



Figure 5. VEDI Vazhipadu Location and Copra drying area at Sannidanam

**LPG Storage:** Gas cylinders are widely used by food stalls and restaurants at Sannidanam without following proper safety measures. The permissible numbers of LPG cylinders to be stored by food stalls or restaurants have not been fixed yet. Hotels store 30 to 60 LPG cylinders on their backside without any safety measures. Two hotels store more than 100 cylinders. A spark in any of the cylinders will be disastrous to Sannidanam. Electrical safety and insulations in hotels are also highly prone to fire. Fire and Rescue and Civil Supplies Departments should conduct periodic inspection and avoid excess storage of cylinders.



Figure 6. LPG bulk storage and fire prone hotels



**Diesel Plant:** Appam and Aravana manufacturing plant in Sannidanam is working on diesel powered engine. Diesel is stored in six tanks having 3000 litre capacity. As a reserve, diesel is also stored in 31 barrels having 200 litre capacities. Thus the total diesel storage in Sannidanam comes around 25200 litres. The manufacturing unit is yet to be fitted with fire detection system or automatic sprinkler system. Installation of fire monitoring and sprinkler system is very essential for a plant storing more than 25000 litres

### 3. STRUCTURAL COLLAPSE

Structural failure of buildings in Sannidanam need be considered as a possible hazard during the pilgrimage season. Proper maintenance of buildings, standardized electrical wiring, fire safety measures etc should be followed strictly in all buildings at Sannidanam.

Palazhi, Sopanam, Sree Manikanda, Siva Sakthi, Thejaswini, Sree Matha, Sabari, Dormitories etc are important buildings in Sannidanam which lacks proper fire exit and safety measures. Pranavam and Malikkappuram buildings are



more prone to structural failures due to the lapses of maintenance work. Cracks on columns and leakages on water lines are visible in these buildings. Structural stability and safety of buildings should be assessed on every season by Devaswom PWD wing.

Structural failure of a building on a heavy crowded day will create multifaceted disasters. During the Makaravilakku day, devotees should not be allowed to get atop the buildings for Makarajyothi darshan. Seal the steps of buildings in order to prevent the entry of pilgrims and overcrowding in buildings on the Makaravilakku day.

## SECTOR II: TREKKING PATHS

Trekking path from Pamba to Sannidanam passes through Neelimala, Appachimedu, Sabaripedam, Marakkootm and Saramkuthy. Along the path there are resting places, queue complexes and basic amenities for pilgrims. For the return journey of pilgrims and movement of tractors, the Swamy Ayyappan road that lies parallel to the traditional trekking is used. Hazards that exist along the To and Fro trekking paths can be summarized as

### 1. Fire

A 'Vedi Vazhipadu' unit is functioning at Sabaripedam. About 10 Kg of gun powder is stored at this point regularly and additional quantity is transported from the main storage unit at Sannidanam as and when it is required. The quantity of fire crackers stored and its usage should be made under strict safety measures. Pilgrims do Poojas with fire at several locations in trekking paths; hence the chance of forest fire cannot be neglected.



Figure 7. Sabaripedam Vedi Vazhipadu location

### 2. Stampede

To regulate overcrowding of pilgrims at Sannidanam, movement of devotees are blocked at various locations in the traditional trekking path. Crowd density in trekking paths becomes very high when the movement is restricted. Tightly packed queues for long hours are observed from Marakkoottom-Saramkuthy-U Turn stretch where the floor is muddy with boulders. Walking is difficult in such terrains especially when the queues are very tight. Keep the crowd slowly moving, release the pressure at specific intervals and provide them water to

avoid human stampede. In trekking paths, U Turn-Saramkuthy stretch is the most vulnerable area to human stampede.

**Power failure** has happened in the first week of Mandalapooja Festival in 2014. Lack of electricity at any point of time during the night can create a stampede. Hence, Aska Lights must be kept at Marakkoottom, Saramkuthy and Sabaripedam as a preparedness lighting arrangements. Search light should be provided to the Policemen and Fire and Rescue Officers who are at night duty along the trekking paths

Devotees after Darshan return through Swamy Ayyappan road. Pilgrims take short cuts at several points where the terrain is very steep and slippery. Falling of one person over the other can create stampede especially during rainy days.

### 3. Moving Tractor Accidents

Materials and commodities to Sannidanam are transported in Tractors through Swamy Ayyappan Road. The same road is used by Pilgrims for return journey and pilgrims on virtual queue for inward movement. Tractors move along the steep slopes and curves that may cause accidents in case of overturning, collision etc. Movement of Tractors should be regulated when heavy crowds are observed at Swamy Ayyappan road.



Figure 8: Moving Tractors at Swamy Ayyappan Road

### 4. Human Animal Conflict

Sabarimala is located on Periyar Tiger Reserve which is an ecological habitation of many wild animals. Heavy influx of pilgrims keeps wild animals away from the trekking paths and



Sannidanam. But the chances of spotting wild animals in the temple premises and trekking paths cannot be neglected. In 2015 Vishu Nada Opening time, a devotee was killed by the attack of a wild pig. In 2015, elephants were spotted near Plapally and Elavunkal in a couple of times that blocked traffic for hours.

Periyar Tiger Reserve is also the habitation of several poisonous and non poisonous snakes. Spotting of snakes in crowded areas can create panic and stampede

## **5. Tree Falling**

The To and Fro trekking paths at Sabarimala are passing through dense forest with large and tall trees. Falling of unhealthy trees over the trekking paths or tree falling during rain or wind is possible. Vulnerable trees are to be removed or properly anchored to mitigate the chances of tree falling hazard

## SECTOR III: PAMBA

### 1. Drowning

One of the important rituals in Sabarimala is that pilgrims take holy bath in Pamba before they walk into Sannidanam. Water level at bathing Ghats in Pamba is kept at a height of 1 to 1.5 meters. Pilgrims include children and old aged people who are highly prone to drowning at this water level. If the water level in Pamba is increased by rain or by opening the Kakkai dam or Pamba dam, the water levels may increase abruptly. It will increase the chances of drowning. Fire and Rescue Services has four units along the Ghats with two SCUBA sets and swimmers

### 2. Flash Flood

The Mandala-Makaravilakku pilgrimage season of Sabarimala is observed during the North East Monsoon and immediately after the North-East Monsoon Season. Pamba is in the confluence of Pamba and Kakkai rivers in which the water flows from Pamba and Kakkai reservoirs respectively. Heavy rainfall or landslides on the upper catchment areas of Pamba river or Kakkai river can create flash floods in Pamba. During the pilgrimage season, flash floods at pilgrim movement areas as well as at parking areas in Pamba are occurred at least once in five year period. If flash floods occur on a crowded day, risk of drowning death is very high. The flash flood on 19.11.2015 submerged the entire Triveni Paking area and bathing Ghats at Pamba.

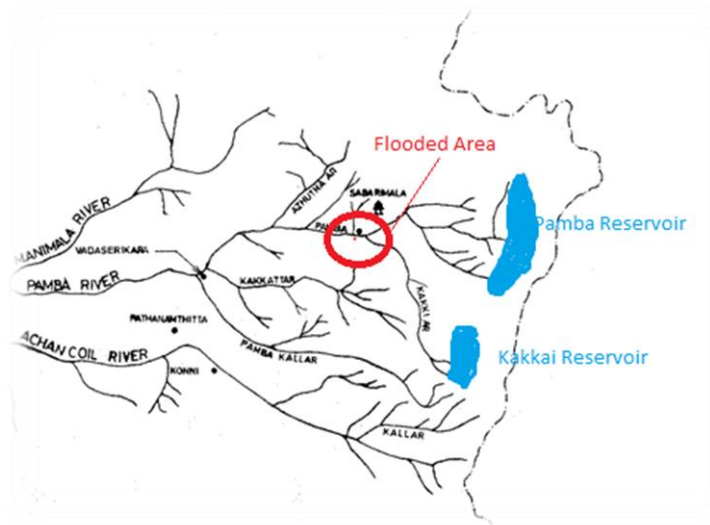


Figure 9. Flooded area in Pamba is shown in red circle

### 3. Fire

Hotels and Food stalls along the bathing Ghat in Pamba is prone to Fire hazard. The shops are tightly packed and combustible materials are kept on the back side of kitchen. Some hotels use more than four stoves and store LPG cylinders without any restriction in numbers. The shops store their commodities on the back side of the stalls which is very close to the cooking area. The area is piled up of fire woods also. Electrical safety is another concern in the shops as the insulations are not proper. Hotel staffs hang their wet and dry clothes on electric wires. Shops which sells pori and other prasada items pack the materials in a fire sensitive manner. They follow the unhealthy practice of candle light-plastic cover packing instead of machine packing. Above reasons make the area highly prone to fire hazards. Immediately restrict illegal storage of more LPG cylinders. If the fire is lighted, it will be difficult to control as the shops are made of easily combustible materials and involve lot of LPG cylinders.

Pilgrims prepare their own food in Viriveppu locations at Pamba using cooking gas, kerosene and fire wood. They carry LPG cylinders and Kerosene and cook their food at amidst the

crowd. Different pilgrim groups cook at the same area by placing cylinders and stoves together. This practice has to be restricted as a policy decision to avoid fire hazards.



Figure 10. Pilgrims prepare their own food with LPG at viriveppu locations

#### **4. Stampede at Queue Complex, foot bridge and steps to Ganapathy Kovil**

The queue system to Sannidanam starts in Pamba Nadappanthal. In peak days, Hold and Release system is used to control crowd. Pamba is the place where crowd inflow and Outflow meets. Foot over bridge that leads to Ganapathy kovil is always congested. Extreme care need to provide in the foot bridge especially during night time.

#### **5. Vehicle Accidents**

Official vehicles, Tractors and few private vehicles are moved up to Ganapathy Kovil. Vehicles are driven along with the moving crowd in Thriveni Bridge which pose a major threat of vehicle accidents. After prayers in Ganapathi Kovil, pilgrims walk into the trekking paths where Vehicles again move in to the crowd in opposite direction. The walking crowd and moving vehicles are vulnerable spots for accidents and triggering stampedes.

## VII CRISIS MANAGEMENT PLAN FOR SANNIDANAM

### EXCESS ARRIVAL

If Sannidanam is overcrowded or queues in Nadappanthal are extended beyond the Water Authority Office, the number of pilgrims arriving at Sannidanam need to be restricted till the crowd pressure is under control. Walking pilgrims in trekking paths can be accommodated at Old and new Queue complexes. Police has to ensure regulated crowd inflow from Pamba till the waiting time for darshan has come to less than one hour and holding pilgrims from queue complexes at Marakkootom-Saramkuthy Stretch are cleared. The crowd management system in Sannidanam should follow the guidelines

- Monitor Crowd Density through CCTVs in Sannidanam and regulate pilgrim movement from Pamba
- Identify crowd pressure build up in Queues and deploy NDRF, RAF or Police for controlled pressure release
- In case of any stampede chance, do not restrict egress at the stampede crowd. Reduce the crowd pressure by hold and release and segmenting. Give clear instructions to pilgrims to avoid pushing each other.
- If an officer on duty find it difficult to management crowd, he has to pass the information through Wireless and ensure additional forces
- Use megaphones for addressing people in vulnerable areas
- Do not make the people panic in case of any accident. Officers on duty at specific locations should not leave the crowd unattended unless they are summoned to a crisis point
- Use police from Andra Pradesh, Tamilnad and Karnataka to communicate and calm down pilgrims from other States
- Pilgrims who have got darshan should not be allowed to stay back at Sannidanam. It will create overcrowding at Sannidanam.
- Always maintain existing walking ways and tractor movement paths at least by 3 meter width.
- If somebody has fallen down in a crowd or queue, stop the movement of the crowd, remove the victim

## **ZONES OF EMERGENCY RESPONSE**

The crisis management plan of Sannidanam is expected to act as the coordination system for all emergency response agencies. Sannidanam has several limitations in view of safety like lack of sufficient resources, lack of mass casualty management facilities, lack of road connectivity, space limitations etc. The existing situations and available resources at Sannidanam was estimated to develop the Crisis Management Plan. To streamline the crisis response operations, Sannidanam is divided in to 10 zones to assign designated zonal emergency response officers.

### **Zone 1: Sopanam and Kodimaram**

Emergency Response Zonal Officer: Dy.SP, Sopanam

Officers on Duty: Kerala Police  
Commando Wing, Kerala  
Rapid Action Force  
Devaswom Security

### **Zone 2: In front of Pathinettam Padi- North Direction.**

From Azhi to Fire and Rescue Office

The area covers Aappam Aravana distribution counter and walking way to Devaswom Mess

Emergency Response Zonal Officer: Dy.SP, In front of Holy Steps

Forces on Duty: Kerala Police  
Rapid Action Force  
Fire and Rescue  
Commando Wing, Kerala

### **Zone 3: In front of Pathinettam Padi-South Direction**

Area between Kopra breaking area, Vavar Nada and Sannidanam Police Control Room

Emergency Response Zonal Officer: Dy.Commandant RAF

Forces on Duty: Kerala Police  
Rapid Action Force

#### **Zone 4: Vadakke Nada**

Zone covers barricades in front of Vadakke Nada, Area under Malikappuram fly over, in front of Ayyappa Seva Sangam Annadana Counter and RCC Nadappanthal

Emergency Response Zonal Officer: Dy.SP, Vadakke Nada

Forces on Duty: Kerala Police  
Rapid Action Force

#### **Zone 5: Padinjare Nada**

Area in front of Dhana Lakshmy Bank, in front of Padinjare Nada, way to Bhasmakkulam and in front of Aravana plant

Emergency Response Zonal Officer: Asst.Commandant, RAF

Forces on Duty: Kerala Police  
Rapid Action Force  
Devaswom Security

#### **Zone 6: Nadappanthal**

Nadppanthal and adjacent resting places

Emergency Response Zonal Officer: Dy.SP, Nadappanthal

Forces on Duty: Kerala Police  
NDRF  
Rapid Action Force  
Devaswom Security

#### **Zone 7: Malikappuram**

Malikappuram premises

Emergency Response Zonal Officer: Dy.SP, Malikappuram

Forces on Duty: Kerala Police  
Rapid Action Force  
Devaswom Security



### **Zone 8: In front of Media Building**

Zone covers area after vadakkenada barricade to Malikappuram Nadappanthal

Emergency Response Zonal Officer: Team Commandant, NDRF

Forces on Duty: Kerala Police  
Rapid Action Force  
NDRF

### **Zone 9: Pandithavalam**

Area in front of Pandithavalam, Steps in Pandithavalam, Makaravilakku viewing sites etc

This zone needs to be activated only from two days ahead of makarajyothi darshan

Emergency Response Zonal Officer: Deputy Commandant, NDRF

Forces on Duty: NDRF  
Kerala Police  
Rapid Action Force

### **Zone 10: Kopra drying yard**

Makarajyothi viewing sites in and around kopra drying area

This zone needs to be activated only from two days ahead of makarajyothi darshan

Emergency Response Zonal Officer: Dy.SP need to be deployed

Forces on Duty: Kerala Police  
NDRF

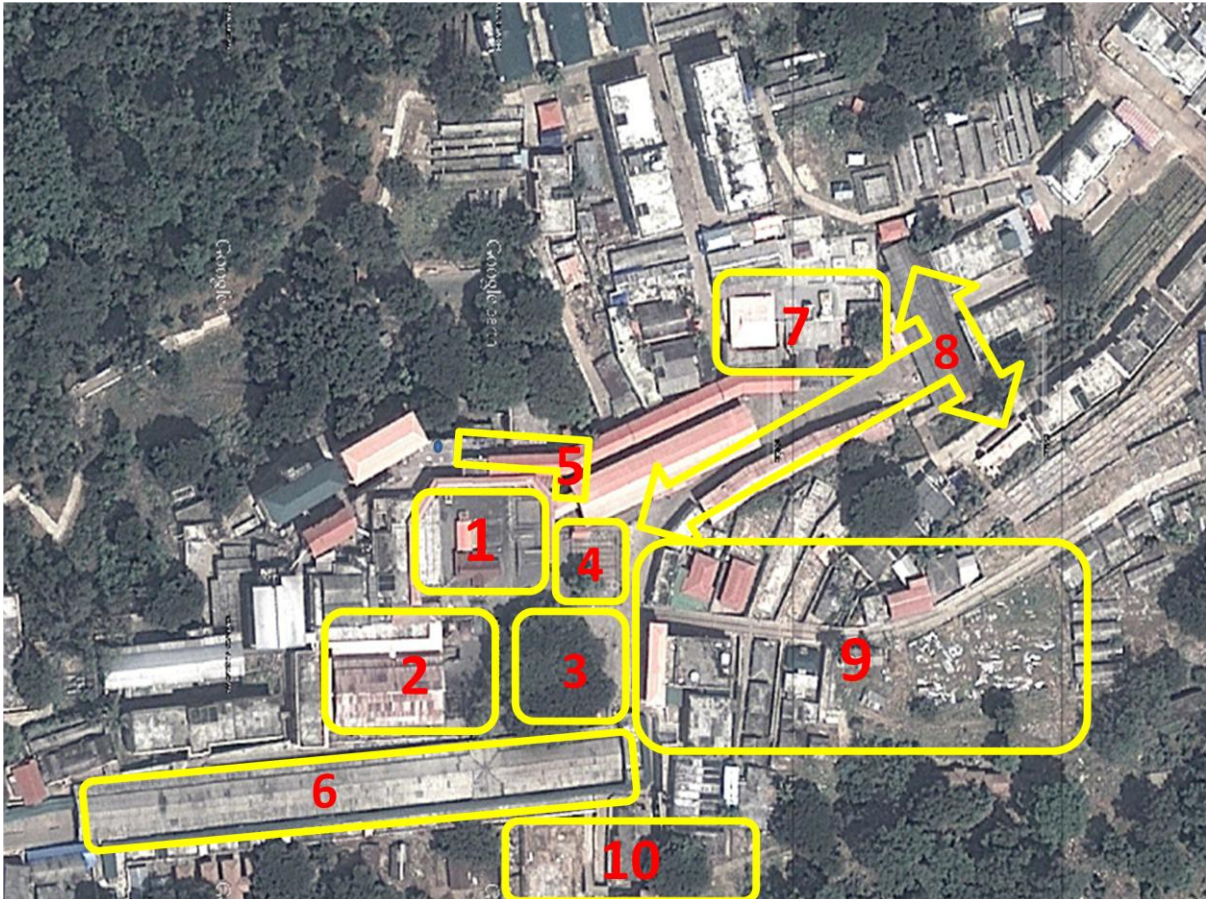


Figure 11. Emergency Zones at Sannidanam. Each zones has area specific commanding officers

## STAMPEDE PRONE AREAS

Stampede may happen at any of the emergency zones when the crowd density goes beyond the accommodating capacity of the area.

1. Vadakke Nada
2. In front of Pandithavalam steps
3. Padinjare Nada
4. Subway in front of Pathinettampadi
5. Walking and Tractor way from Nadappanthal
6. Space between RCC Nadappanthal and Malikappuram Building
7. Nadappanthal barricade and entry point in front of Virtual Queue
8. Steps in front of Fire Station near Aravana-Appam Counters

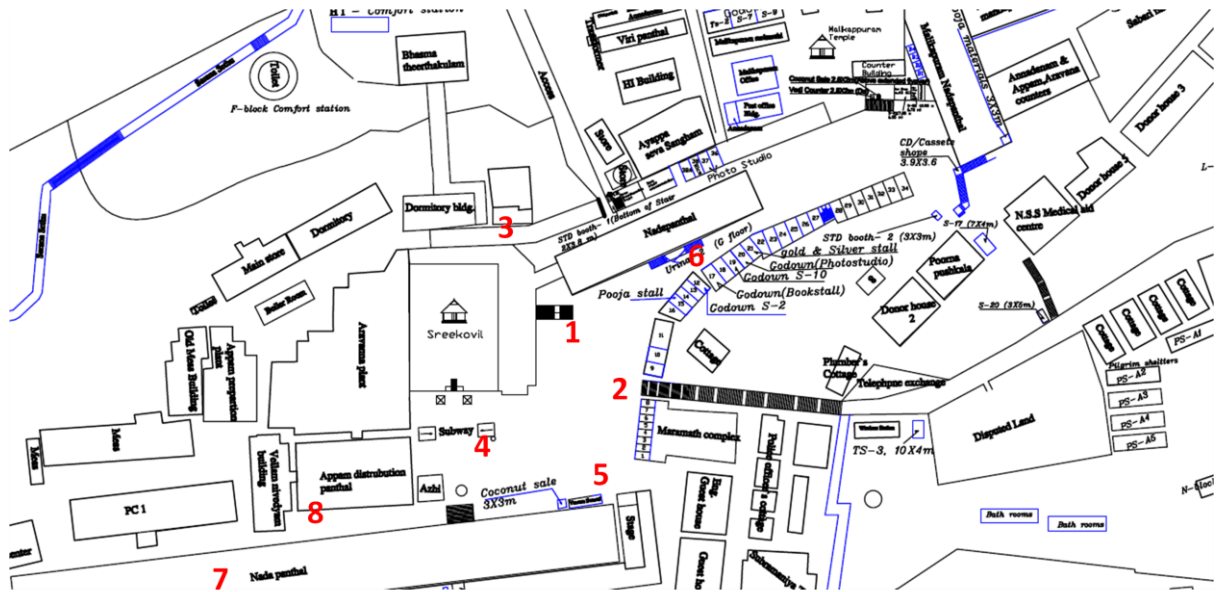


Figure 12: Eight Stampede prone locations in Sannidanam

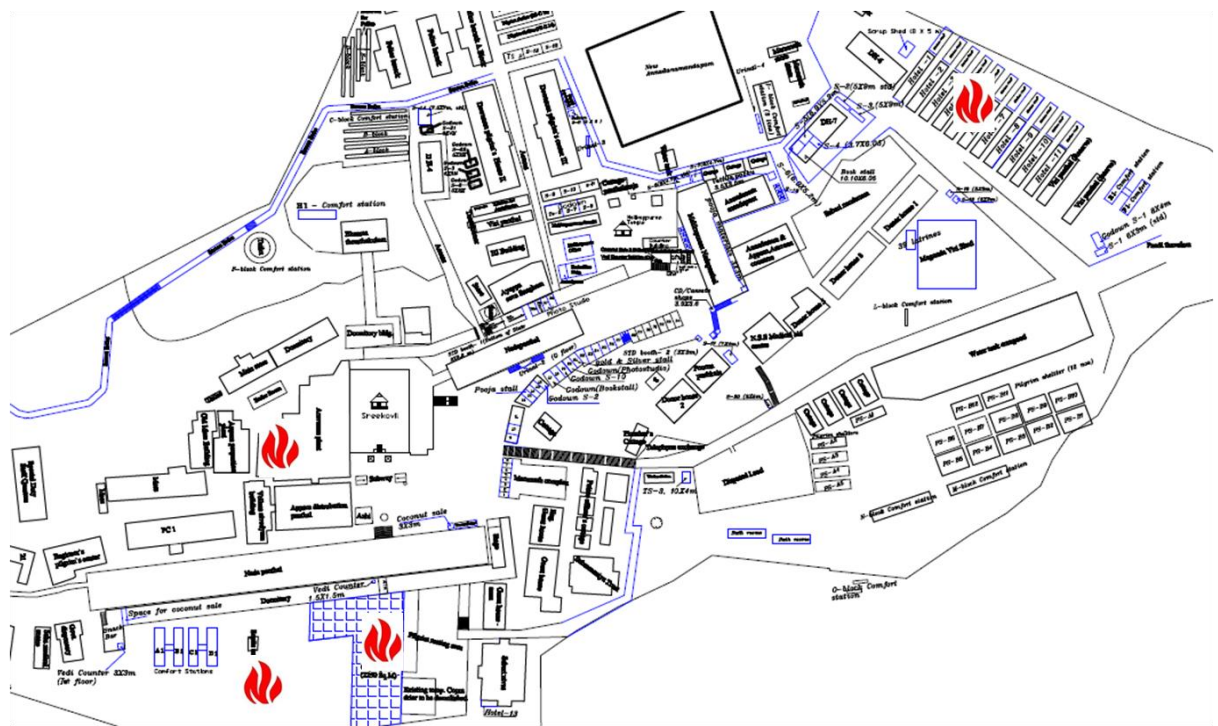
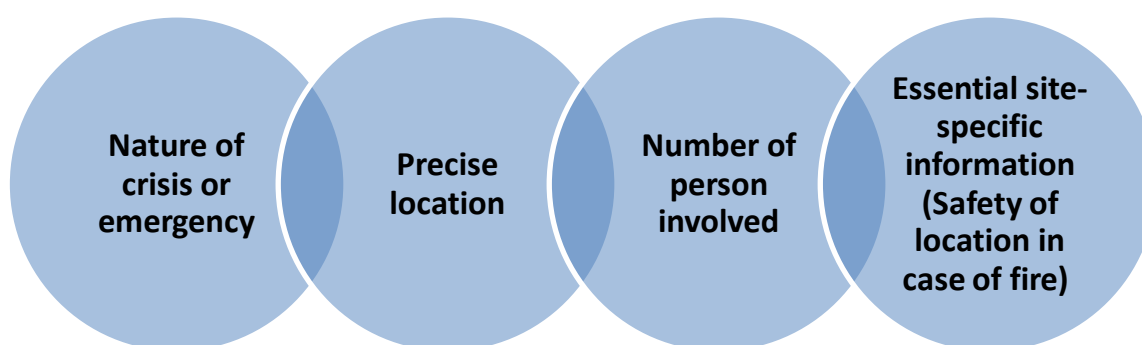


Figure 13: Fire prone areas given in the symbol of flame. The prone areas are Appam Aravana Plant and diesel storage, Copra drying area, Vedi Vazhipadu location and Hotels storing excess number of LPGs



## VIII. INCIDENT CONTROL AND CRISIS COMMUNICATION

If a crisis occurs; the Emergency Response Officer at the designated Zone shall first determine the nature and circumstances of the event as quickly as possible so that the most appropriate course of action can be taken. If the officer finds it difficult to manage the situation with the officers at his command, he has to call for assistance from neighboring zones with communications to Police Special Officer/Incident Commander. If the situation requires trained manpower, the emergency response officer should pass the information to National Disaster Response Force, Rapid Action Force or Fire and Rescue depends on the nature of the incident. In a situation that is likely to require emergency response personnel, it is critically important to be able to provide as much key information as possible.



**Figure 14: Key information for crisis communication**

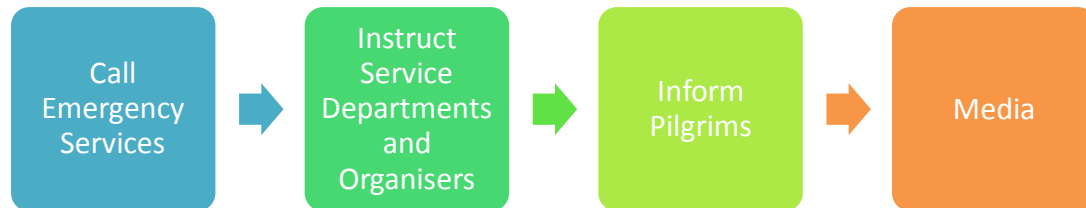
Incident Commander or his delegate can summon emergency service agencies at any point in view of crisis management. The Incident Commander should act as though a crisis exists and take every precaution against worsening the situation, rather than delay taking action that might later be proved to have been crucial. This includes engaging emergency response personnel such as NDRF, Fire and Rescue, Bomb Squad, Rapid Response Teams, etc.

### **Communications Priorities**

Crisis Communication Priorities for Emergency Response Officers, in order of importance:

1. Call emergency services - request urgent support from RAF, NDRF, Commandos, Fire etc
2. Instruct Event Facilitators – Instruct Departments like Devaswm, Disaster Management, Forest etc to ensure everyone knows what is happening, and what they need to do

3. Inform pilgrims - let them know what is happening, and what they should do. Use mega phones in Trekking Paths and Public addressing system in Sannidanam or Pamba
4. Inform media –Once the situation is settled, let media know what has happened, and what is being done to resolve the situation



**Figure 15. Crisis Communication Priorities**

Getting the right message to the right people is the key to effective communications in a crisis. Certain types of crisis or emergencies, such as trampling of one or two persons may be noticeable only to Police Officials on duty in the immediate vicinity, rather than to Emergency Response Zonal Officer or incident commander. In such situations, the Police Officer on duty should inform Emergency Response Zonal Officer and in turn the Incident Commander. The Emergency Response Zonal Officer (Officer in charge of each zones) should make reasonable efforts to keep pilgrims in the immediate vicinity from spreading misinformation or a sense of fear or panic to others. Since the arrival of emergency personnel will likely be noticed by everyone on the premises, the person in charge should enlist the assistance of others as necessary to maintain general calm and order and to convey accurate information about the emergency as appropriate. Key components of Communication during Crisis is given below

#### **Emergency Service Departments**

- Give clear and direct instructions - tell individuals & teams what to do
- Quickly identify which other services are required
- Supply concise information as to the nature and severity of the incident(s)
- Supply specific instructions as to the best route into the event, so as to avoid diverting the pilgrims crowds

#### **Pilgrims**

- Give sufficient but minimal information about what is happening,
- Give clear instructions on what people should do
- Provide reassurance that the matter is being dealt with by management / emergency services
- Promise to provide more information at a later stage

## IX. EVACUATION

Emergency Evacuation Plan is an essential component of Crisis Management Plan. Taking a decision to evacuate an emergency zone is a complicated process and requires input from various entities knowledgeable in the lay out and facilities of Sannidanam, the crowd size and distribution, the hazard involved, and the anticipated response to that hazard.

In the event of a crisis, decision to make evacuation from an emergency zone is to be taken by the concerned Emergency Response Zonal Officer in communication with Incident Commander. Evacuation and Emergency Response actions should be based on the location of incident, nature of hazard, availability of response forces and evacuation routes. A major challenge in executing evacuation at Sannidanam is the lack of adequate crowd buffer zones to accommodate the evacuating crowd. Based on the nature of the crisis, evacuation at Sannidanam will be either from one emergency zone or from multiple emergency zones.

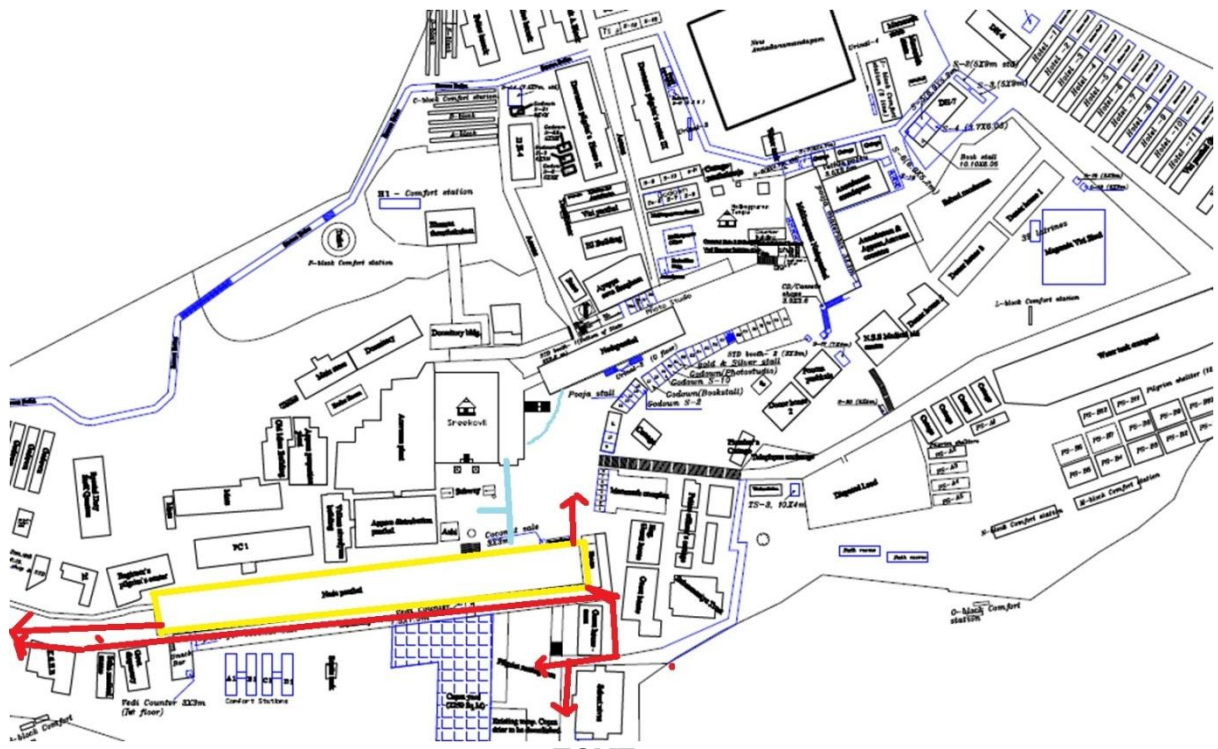
### **A. Evacuation Plan for Mandala-Makaravilakku Season**

Evacuation plans from emergency zones have been designed through comparatively safer walking routes which lead to available open areas or return journey path. During the Mandala-Makaravilakku season, the stampede prone locations like Nadappanthal, Vadakke Nada, space between Nadappanthal and Shops etc will be crowded. Each emergency zone should be cordoned with 3 meter wide buffer zone as evacuation corridor. Emergency Response Zonal Officers and sub ordinate officers should be aware of the evacuation routes. When evacuation is decided, the Zonal officers should communicate it with the adjacent zones to clear evacuation routes passing through other zones. The Police should strictly control the inflow of crowd or infiltration to that particular evacuation zone while the evacuation is in progress. Police, NDRF, RAF and Fire and Rescue Services should guide the people through evacuation routes. Emergency Zonal Officer has to clear a path of 3 meter

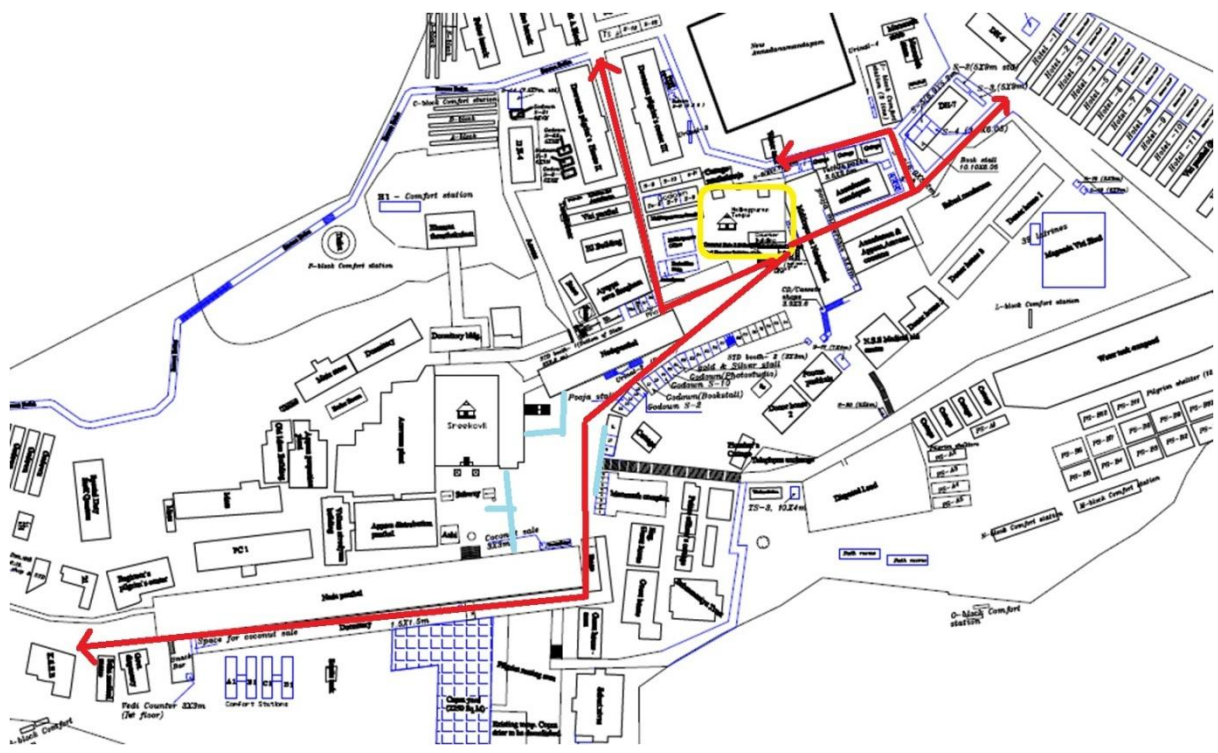








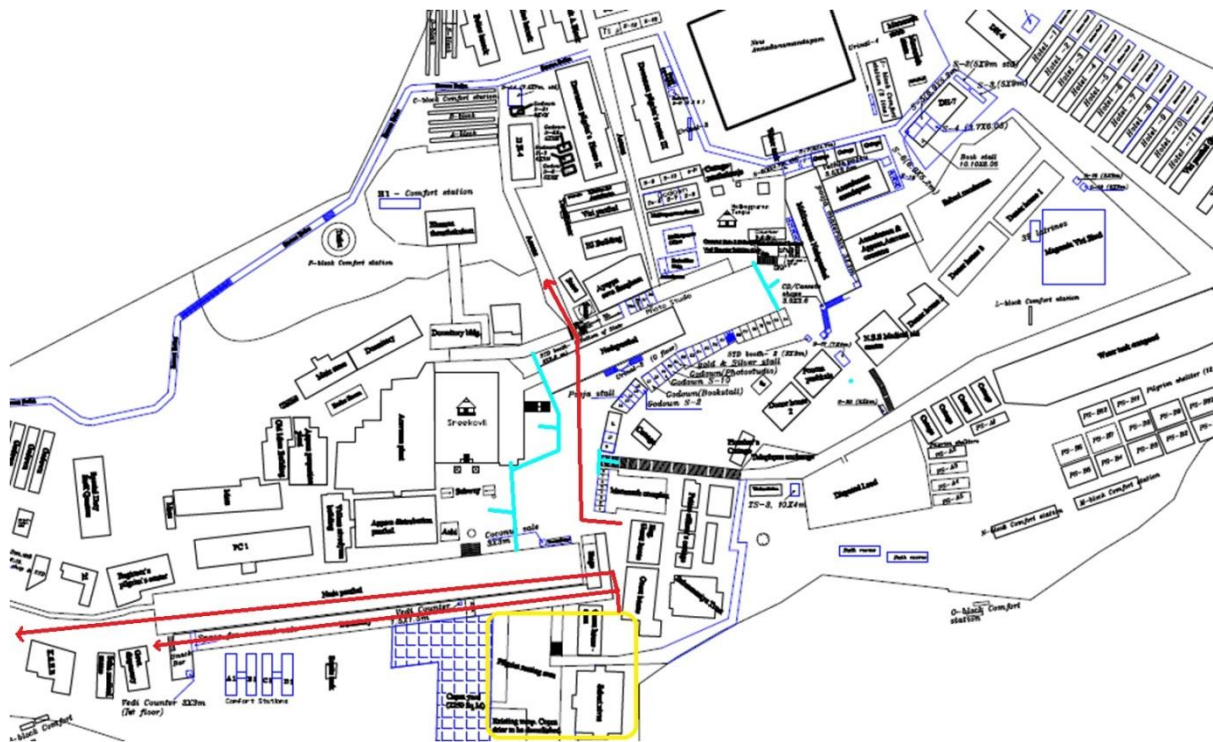
ZONE 6



ZONE 7







ZONE 10

### **PADINJARE NADA**

Pilgrims after darshan passes through Malikappuram fly over to reach Malikappuram Temple. A portion of pilgrims after darshan steps down through Padinjare Nada instead of moving ahead through Malikappuram fly over which make Padinjare Nada highly congested. After darshan, pilgrims should be directed through Malikappuram fly over only. Use the Padinjare nada for emergency VIP exit only

### **STEPS NEAR FIRE & RESCUE OFFICE**

After collecting Appam and Aravana, pilgrims step down from Thirumuttom using the steps near Fire Station. Then to reach Nadappanthal, pilgrims use the narrow foot bridge. Two directional flows and crowding is seen in and around the steps and foot bridge. From Aravana Counters, pilgrims has to be directed through under pass and foot bridge designed for return journey. Narrow Foot Bridge at Nadappanthal and steps near to the fire station should be reserved for the staff movement only.

### **Entry In front of Virtual Queue**

When the virtual queue extends beyond the entry point, the virtual queue pass holders have to wait outside the Nadappanthal. During day times, devotees are forced to align in queues outside the designed area. Crowding of pilgrims in front of the virtual queue entry under sun shine create discomfort that may trigger stampede.

### **B. Evacuation Plan for Makaravilakku day**

Two days ahead of the Marakarajyothi day, pilgrims occupy viewing sites at Sannidanam to reserve space for Makarajyothi darshan. As a result, all open spaces and evacuation routes will be occupied by pilgrims that make Sannidanam over crowded. In case of excess crowd pressure at crowded areas or at a crisis point, evacuation should take place as per the evacuation plan specified.

Immediately after Makajyothi Darshan, pilgrims located at various viewing points try to reach Vadakke Nada for 'Civil Darshan'. Thousands of pilgrims from Pandithavalam, Malikappuram and Kopra drying areas rush towards the Vadakke Nada Barricade. This is the most vulnerable time to happen stampedes. In order to avoid stampede risk and cross flow of people, segmented release of pilgrims is preferred on Makara Jyothi day

- Pilgrims move all directions which makes them difficult to manage.
- Most of the people try reach Vadakkenada to make 'Civil Darshan'
- Fifty percentages of the stampede chances can be reduced if 'Civil Darshan' is closed after Makara jyothi. If 'Civil darshan' is restricted from 6.30 pm for the day, the crowd flow can be stream lined and uni directional.
- Release pilgrims as per a systematic schedule and avoid confrontation of crowd flows

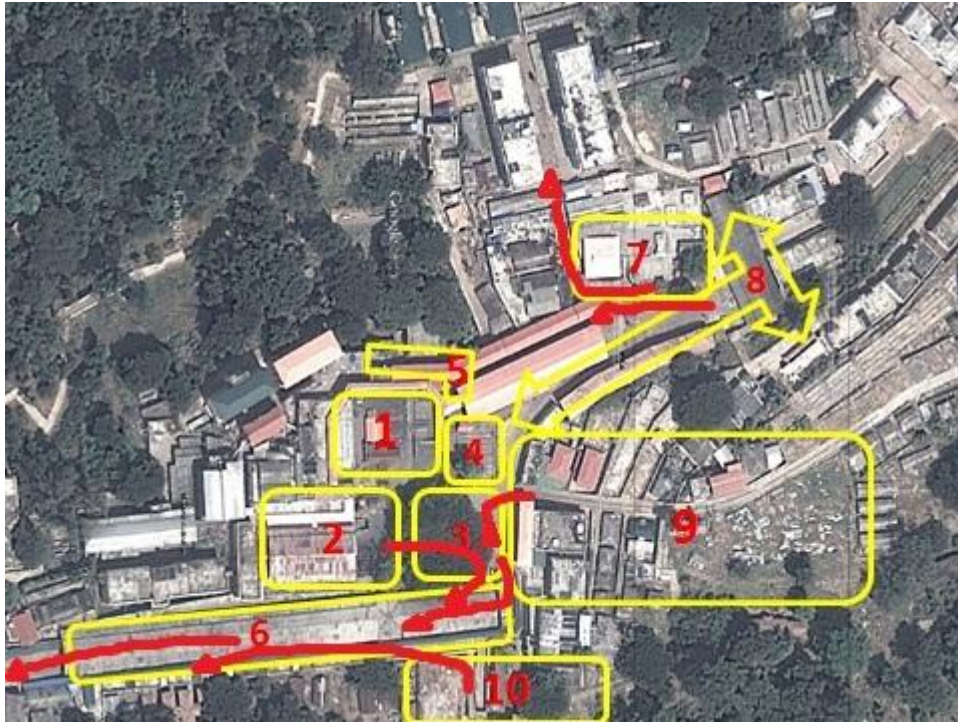
## **SCHEDULE OF PILGRIM RELEASE ON PRIORITY ORDER**

The multi directional movement of pilgrims after Makara Jyothi darshan poses high risk to human stampedes. Movement of people from all the viewing cites simultaneously to exit pathways or Vadakke Nada has be designed as one way system. Segmented release is recommended on priority order is recommended on Makaravilakku day. The release schedule should be communicated to Makarajyothi viewing pilgrims through public addressing system so as to make them aware of the crowd management plan. The proposed crowd release schedule can be executed only if the civil darshan through vadakke nada is restricted on the Makara Jyothi day.

The release schedule on priority order is given below.

- 1. Zone 6**
- 2. Zone 10**
- 3. Zone 7 through Sarana Sethu**
- 4. Zone 8 through Sarana Sethu**
- 5. Zone 3**
- 6. Zone 2**
- 7. Zone 4**
- 8. Zone 5**
- 9. Zone 9**
- 10. Zone 1**





Release schedule of pilgrims after Makara Jyothi darshan

## **PANDITHAVALAM**

A major portion of the Makara jyothi viewing pilgrims are located at Pandithavalam. After Makarajyothi darshan, all pilgrims from Pandithavalam rushed to Vadakke Nada and Nadappanthal. The entire crowd passes through the 5 meter wide steps which is steep also. Human stampede can happen at any point of time at these steps in front of the Pandithavalam steps.



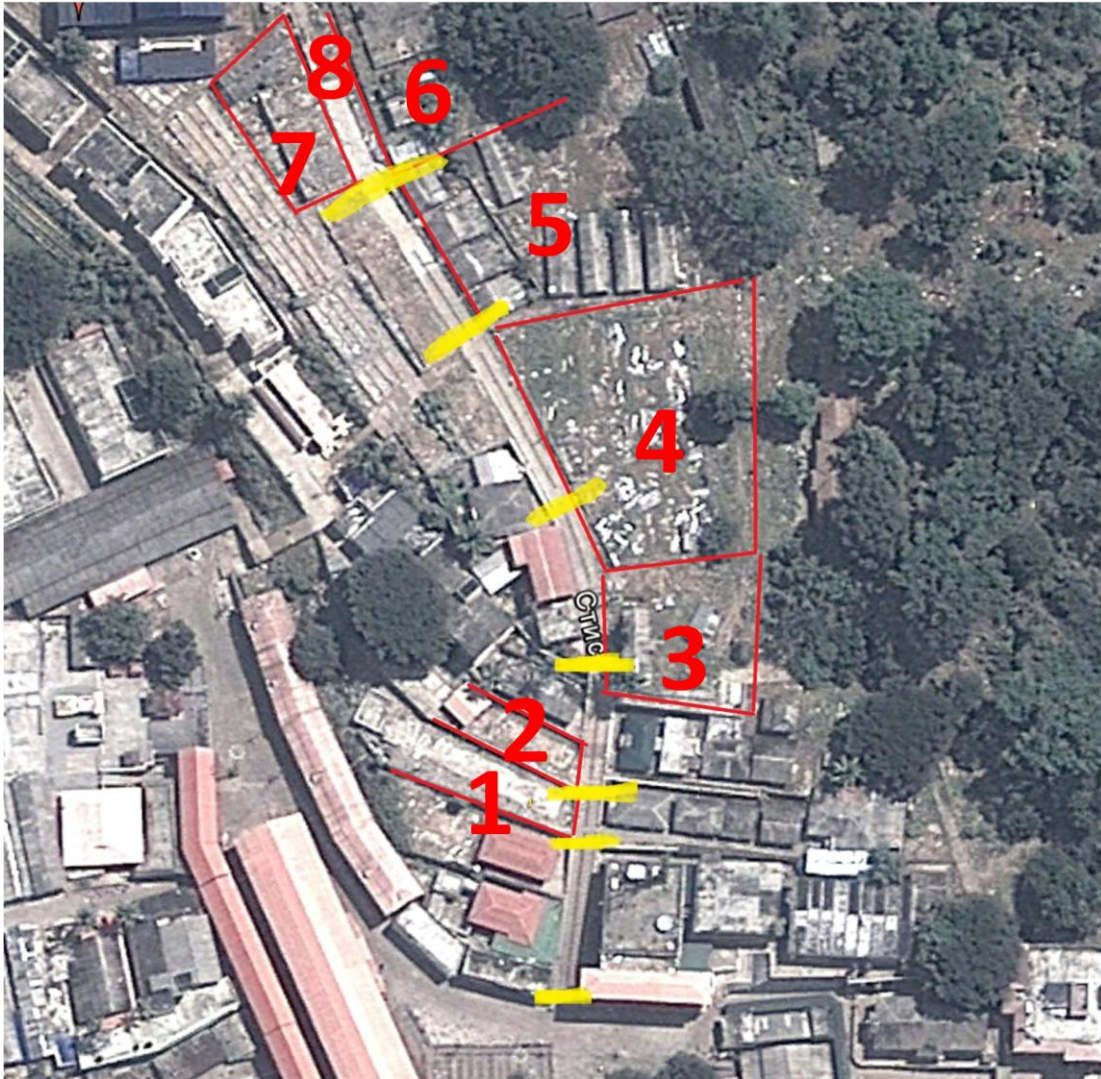
Scene in front of Pandithavalam steps



Multi directional movement-Highly prone to stampede

Pilgrims at Pandithavalam need to be further divided in to 8 sections for crowd release.  
NDRF is assigned to take care of the area with the support of Kerala Police and RAF





Crowd Release schedule at Pandithavalam

Crowd holding arrangements are to be made at 8 points in Pandithavalam. Iron barriers or ropes can be used to contain the crowd. Crowd release is to be performed on sequential order from 8 sections

#### **Facilities Required for Evacuation**

- Safe assembly points: Ascertain the safety of assembly points before diverting the pilgrims
- Adequate signage throughout the Venue showing the assembly points
- Internal Communication System for Emergency Service Departments
- Public Address system that can be heard throughout the Venue.
- Evacuation routes are left clear of any obstruction

## **X. MEDICAL EMERGENCIES AND MASS CASUALTY MANAGEMENT**

A medical emergency at Sannidanam exists if people have suffered a serious illness or injury in an unexpected manner. For the purpose of this crisis management plan, a mass casualty incident is defined as an event which generates more patients at one time due to the sudden act of a natural or manmade disaster that alter the routine procedures of health system management at Sannidanam. The Medical Officer in charge of Government Dispensary, Sannidanam will hold the total command of medical facilities and personnel at Sannidanam during medical emergencies.

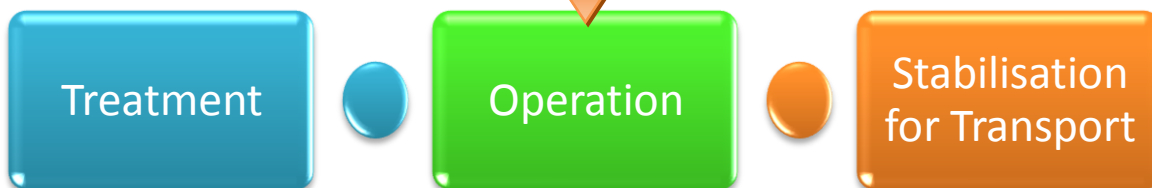
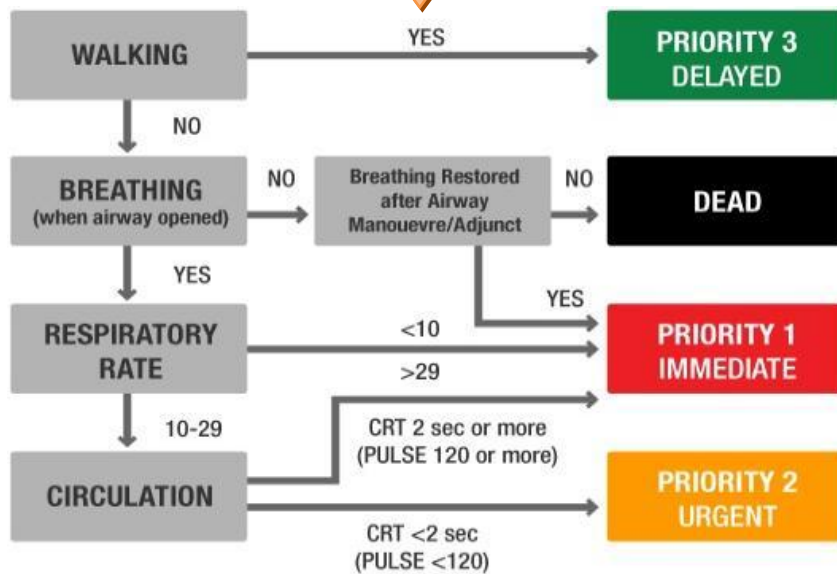
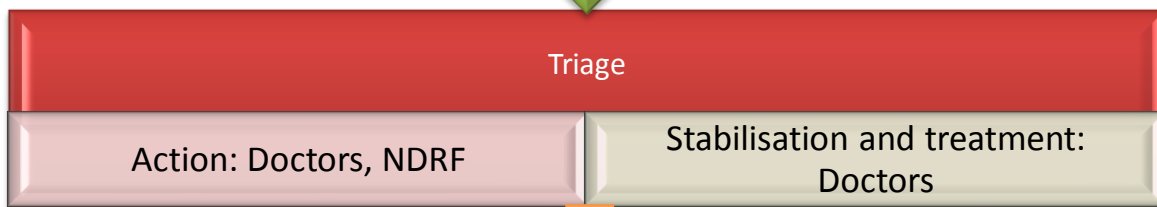
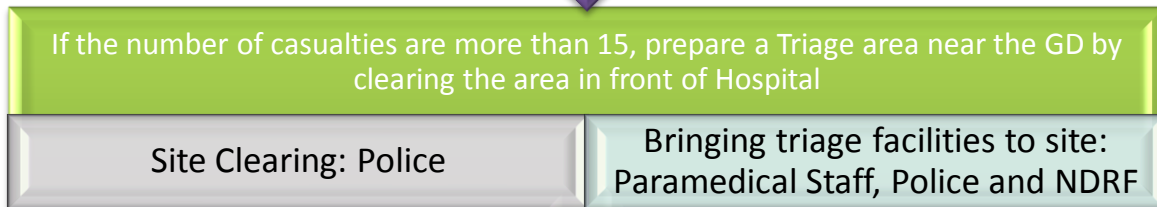
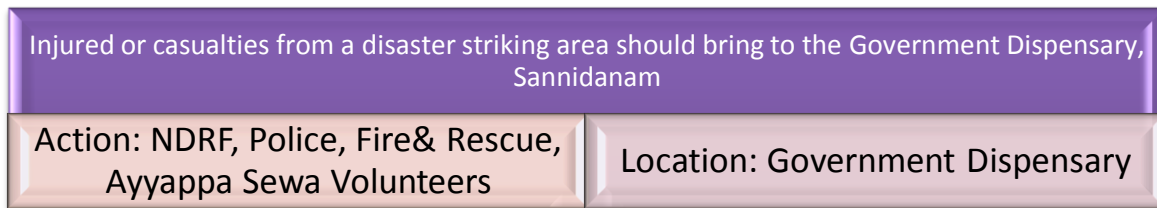
### **Medical Facilities at Sannidanam**

The Government Dispensary, Sannidanam has six Doctors including General Medicine, Orthopaedics, Anaesthesia, and Surgery. First Aid, In Patient facility, Observation, Outpatient care and referral facilities are available at the Dispensary. An Operation Theatre facility (One Table) is also attached to Government Dispensary. A cardiology unit with two Cardiologists from Health Department is also functioning at SAHAAS in Sannidanam.

The cardiology Centres at Appachimedu and Neelimala has two cardiologists and four specialist Doctors (Medical Officers/Surgeon/Orthopedic Surgeon). The Government Dispensary Pamba has 10 Doctors and ICU facilities. Altogether thirty Government Doctors are available at Sannidanam-Trekking Paths and Pamba region.

### **TRIAGE PROCESS**

Triage is the prioritization of patient care (or victims during a disaster) based on illness/injury, severity, prognosis, and resource availability. The purpose of triage is to identify patients needing immediate resuscitation; to assign patients to a pre-designated patient care area, thereby prioritizing their care; and to initiate diagnostic/therapeutic measures as appropriate. If more Doctors are need, summon from Neelimala or Appachimedu health centres. Service of Doctors from other States available in the crowd may also be used for Triage. The process of Triage at Sannidanam is given below



**Proposed Process of Triage at Sannidanam**

## EMERGENCY MEDICAL TRANSPORTATION FROM SANNIDANAM

Transporting casualties from Sannidanam to Pamba is a major challenge for emergency operations. At present, patient transportation is possible only through stretcher services. Thirty to forty minutes required for transporting one patient in stretcher from Sannidanam to Pamba through Swamy Ayyappan road.

### Stretchers at Sannidanam

- Health Service has 30 stretchers at Sannidanam
- Ayyappa Sewa Sangham has 40 stretchers at Sannidanam-Appachimedu region.
- Fire and Rescue has five foldable stretchers
- NDRF: Five stretchers

### Manpower

- Ayyappa Sewa Sangham: 350 volunteers in Sabarimala and 750 volunteers during Makaravilakku day
- Dolly service people: 1500 men in Sabarimala-Pamba stretch

To aid patient transportation, at least fifty stretchers and 500 men will be available at Sannidanam. To carry each stretcher six individuals are needed normally but during medical transportation seven carriers required. While the patients are transported through Swamy Ayyappan Road, Police should clear the entire stretch for the fast movement of stretchers. A pilot team to clear the pilgrims from Swamy Ayyappan Road will go immediately before the stretcher transportation starts.

When medical transportation is taken place, block the movement of evacuated pilgrims through Swamy Ayyappan Road. Allow them to go through the traditional path only. Crowd flow from Sannidanam to Pamba should be regulated. Otherwise Pamba will get overcrowded which will make the movement of Ambulances and emergency response vehicles very difficult. People who are trapped in Swamy Ayyappan road should be accommodated to available crowd absorbent spaces at specific intervals. From, Marakkootom, allow pilgrims to return through the traditional path only.

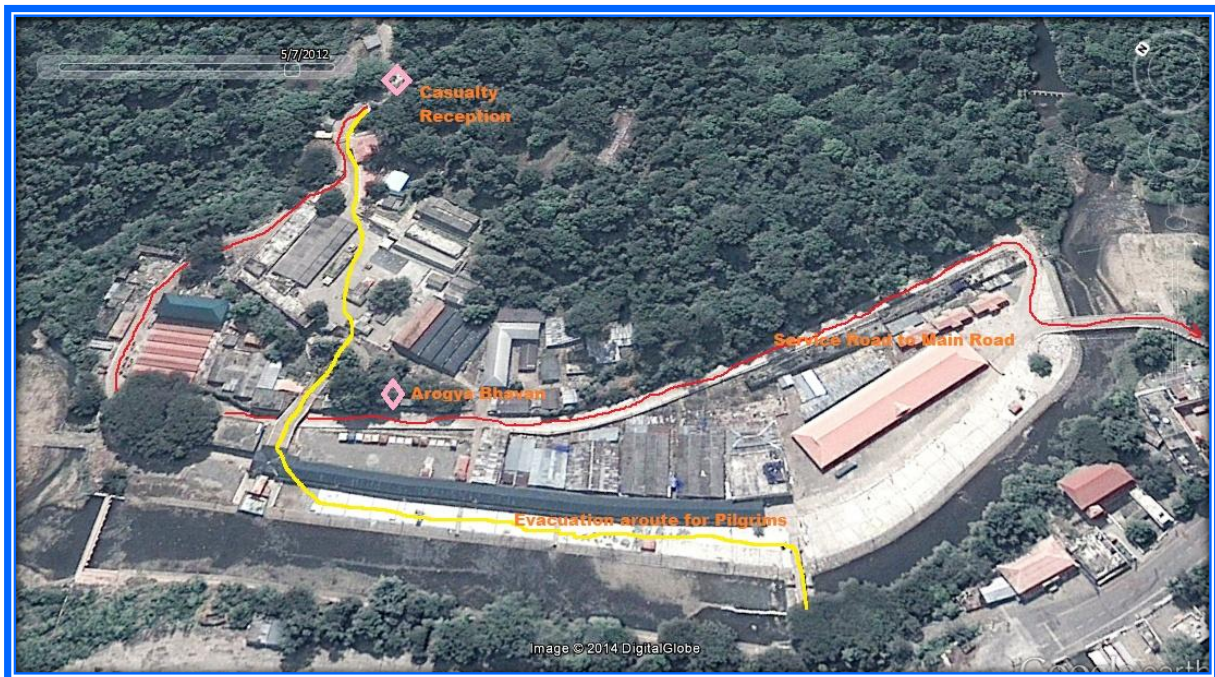


## ARRANGEMENTS REQUIRED AT PAMBA

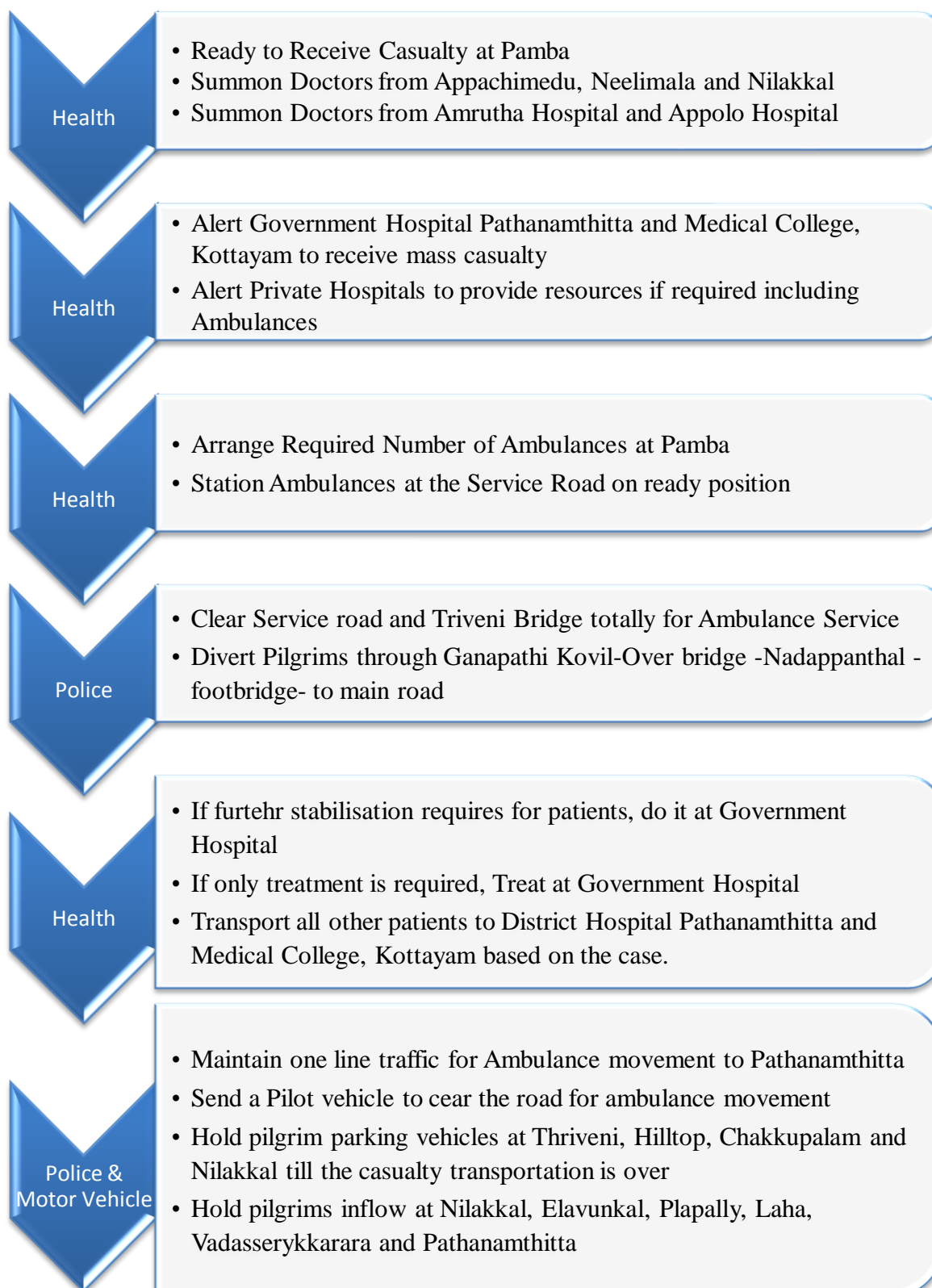
After receiving casualty information from Sannidanam, necessary arrangements are to be made at Pamba to receive, stabilize and transport casualties. The entire operations at Pamba including transportation, logistics and arranging medical facilities at Pathanamthitta etc will coordinate by the District Collector with the help of Emergency Operation Centre. The crowd control operations will carry out by the Police controller Pamba. The operational flow chart for emergency operations at Pamba is given in Figure 20. At present, Thirteen Ambulances are available for patient transportation from Pamba as given below

• Health Services	6 BLS and 1 ALS
• Amrutha Institute	1 ALS
• Ayyappa Sewa Sangam	1 BLS
• Appolo Hospital	1 BLS
• Seva Bharathi	1 BLS
• Devaswom	1 BLS
• Motor Vehicle Department and Fire and Rescue	Normal

With this capacity, only 26 patients can be transported in Ambulances from Pamba. Additional Ambulances are required at Makaravilakku Season to increase transportation capacity to fifty.



**Ambulance movement and pilgrim evacuation route. Red: Ambulance, Yellow: Pilgrim evacuation**



**Operational flow chart for emergency management at Pamba**

## XI DISASTER SPECIFIC RESPONSE

### FIRE

Fifty Officials from Fire and Rescue Department are on duty at nine fire points in Sannidanam

- Nadappanthal,
- Mainshed : 04735202033
- Bhasmakulam,
- Pandithavalam,
- Malikappuram,
- KSEB,
- Saramkuthy,
- Marakkootom
- Kopra drying area.

There are 28 hydrant points at various locations in Sannidanam. Assistant Divisional Officer, Fire and Rescue will be responsible for the prompt response to fire incident. He will plan the evacuation from fire points to safe assembly places. National Disaster Response Force will provide necessary support for response and evacuation.

**Hazard:** Most vulnerable locations to fire hazard at Sannidanam are shown in figure 13.

**Focal Point:** Assistant Divisional Officer at Sannidanam

**Limitations:** Lack of Fire Tender and Sky ladders at Sannidanam

## **Response**

- Determine the nature of the fire
- Remove/Evacuate people from the fire point or building
- Police clear the way for the movement of fire and rescue vehicles
- Fire response to extinguish the fire
- If mass evacuation required, do as per the evacuation plan outlined for Sannidanam.
- Medical treatment and patient transportation as explained for mass casualty management

## **Fire and Rescue Unit Locations at Pamba**

- Thriveni : 04735202333
- Sabari Hotel
- Pilgrim Centre
- Ganapathi Kovil
- Cheriyanavattom
- Pandalam Raja

In case of LPG Fire, inform the Fire and Rescue Team, isolate the LPG supply line, remove cylinders from the area, evacuate people and apply extinguishing media

## **Other Fire and Rescue Locations**

- Nilakkal : 047355205205
- Plappally
- Seethathodu : 04735253101
- Uppupara
- Erumely



## **BUILDING COLLAPSE**

### **Hazard**

Pilgrim Centres at Sannidanam are only 20-30 years old. But it looks very old due to the lack of proper maintenance. A building collapse on a Makaravilakku day or at a crowded day can create a major disaster at Sannidanam

### **Focal point**

Commandant, National Disaster Response Force

ADO, Fire and Rescue

### **Limitations**

Lack of heavy machineries for debris removal

Limited weight lifting and hydraulic equipments with NDRF and Fire & Rescue

Difficulty of additional resource mobilization

### **Response**

- Evacuate people from the damaged building and premises to safe places
- Quarantine the area
- Assess building stability of further collapse
- Search and Rescue
- Medical treatment and transportation as given in Chapter X.

## **TREE FALLING**

### **Hazard**

Along the trekking paths and Roads leading Pamba

### **Focal point**

ADO, Fire and Rescue  
Commandant, National Disaster Response Force  
ACF, Forest Department

### **Limitations**

Along the trekking path, Fire unit is located only at Saramkuthy and Marakkootom

If trekking path is blocked by falling trees, Fire unit has to come either from Saramkuthy or from Pamba to cut and remove fallen trees from trekking paths

Difficulty of additional resource mobilization

Identification of accident spot due to the lack of proper signage at trekking paths

### **Response for trekking paths, Sannidanam and Pamba**

- Inform EOC/Forest/Fire and Rescue Control Room
- Send Fire and Rescue Team and Forest Officers with equipments to remove the trees
- Regulate pilgrim movement through the accident area
- If needed, get the support of NDRF
- Unhealthy trees along the trekking path need to be removed in consultation with forest Department

### **Response for tree falling on the roads leading to Pamba**

- Inform the incident to Police Officers on duty or Mobile patrolling unit
- Inform Nearby Fire and Rescue Unit and Forest Unit
- Police has to regulate traffic at the point till the road is cleared

## **HUMAN ANIMAL CONFLICT**

### Hazard

Spotting of Wild animals in pilgrim movement ares

Elephant, Tiger, Wild pig, Snake

### Focal Point

Assistant Conservator of Forest, Control Room Pamba

Officers in Charge at Neelimala, Cheriyanavattom, Valiyanavattom, Plapally etc

### Response

- On spotting a wild animal, inform Forest Control Room/ EOC at Pamba
- Keep safe distance from the animal or folk
- Restrict isolated or individual pilgrim movement through the vulnerable area
- Allow pilgrims to move as a group.

Elephant squad under the control of a Veterinary officer is available at

- Pamba,
- Plappally,
- Sanndanam
- Uppupara

Snake Squad available at

- Sannidanam and Neelimala

## **FLASH FLOOD AT PAMBA**

### Hazard

- Heavy rainfall in the catchment area of Pamba River or Kakkai river
- Opening shutters of Kakkai or Pamba reservoir
- Landslide at Pamba or Kakkair River catchment area

### Vulnerable Area

- Triveni Parking Ground
- Pamba bathing ghats

### Focal Point

- Police Special Officer, Pamba

### Preparedness

- Emergency Operation Centre at Pamba should issue daily warning of rainfall to Police Control room
- If heavy rainfall warnings have been issued, do not allow parking of vehicles at Triveni ground
- Issue warning to pilgrims at Pamba and responding departments
- Triveni parking should be restricted to Taxi vehicles only in which drivers are present at the parking time.
- In all the parking grounds, driver number should be exhibited inside the front glass of all parking vehicles

### Response Stage

- If water level reaches the forth step at the bathing Ghats
- If water starts flowing through the Triveni Parking ground

### Response Actions

- Evacuate pilgrims and Vehicles from the flood prone area

Issue warning alerts to downstream bathing points and Pathanamthitta Collectorate

## **XII. DOCUMENTING A CRISIS OR EMERGENCY**

Persons in charge of or assisting with the handling of a crisis or emergency should recognize that the incident may be the subject of a later investigation. Therefore, it is potentially of extreme importance to the Police, Fire, Health and Duty Magistrate to make a written record describing their recollection of the event as soon as possible, while it is fresh in their memories. Such a record need not be formal in any way, but it should be as complete and detailed as possible. Recording descriptions of a crisis or emergency should be considered a necessary final step in properly dealing with the situation or event.

## **XIII. WHAT MARKS THE END OF A CRISIS?**

The District Collector and or Incident Commander will decide when the crisis is over. The criteria will be that 'the situation is back under control'. This does not necessarily mean that full normality has been achieved ie event teams and/or emergency services may still be dealing with issues. But the key consideration is that they are now able to manage and have control. The actions at this point are, again in order of priority:

1. Instruct Emergency Departments - ensure everyone understands what is now happening, and what still may need to be done (including actions towards resuming the programme).
2. Inform public - let them know what has happened and what they should now do
3. Inform media - let them know what happened, how it was dealt with, and the next steps





## **ANNEXURE I. RECOMMENDATIONS**

### **IMMEDIATE**

1. The arrival pattern of pilgrims shows high variability. A centralized registration and reservation system should be implemented at Sabarimala.
2. There is no X Ray Facility in Government Dispensary, Sannidanam and Pamba. In case of Mass casualty, orthopedic examination can't be performed without X-Ray. Hence immediate attention should be given to establish X-Ray Units in Pamba and Sannidanam. Otherwise it will worsen triage and stabilization process very badly.
3. Hotels at Sannidanam are highly prone to Fire. The shops are very tightly packed and made of highly combustible materials. On inspection, it was found that some hotels use more than four stoves and they are storing 30 to 130 LPG cylinders. The shops store their commodities on the back side of the stalls which is very close to the cooking area. The area is piled up of fire woods also.
4. Develop crowd absorbent spaces at Traditional Path and SwamyAyyappan Road
5. A temporary blood bank facility may be established at Pamba for the festival season
6. Sarana sethu road is too steep. Terrace Sarana Sethu road and make it ready for evacuation.
7. Vadakke Nada barricade has only one entry and one exit. In case of an emergency, there are no openings to make entry in to the barricade for rescue operations. Due to the lack of space between the barricade, 4 additional opening are to be made at vadakke nada as emergency opening
8. Establish one more layer of temporary barricade for virtual queue members
9. Implement one way crowd movement system at Sannidanam
10. Restrict Civil darshan after 6 pm on Makara jyothi day

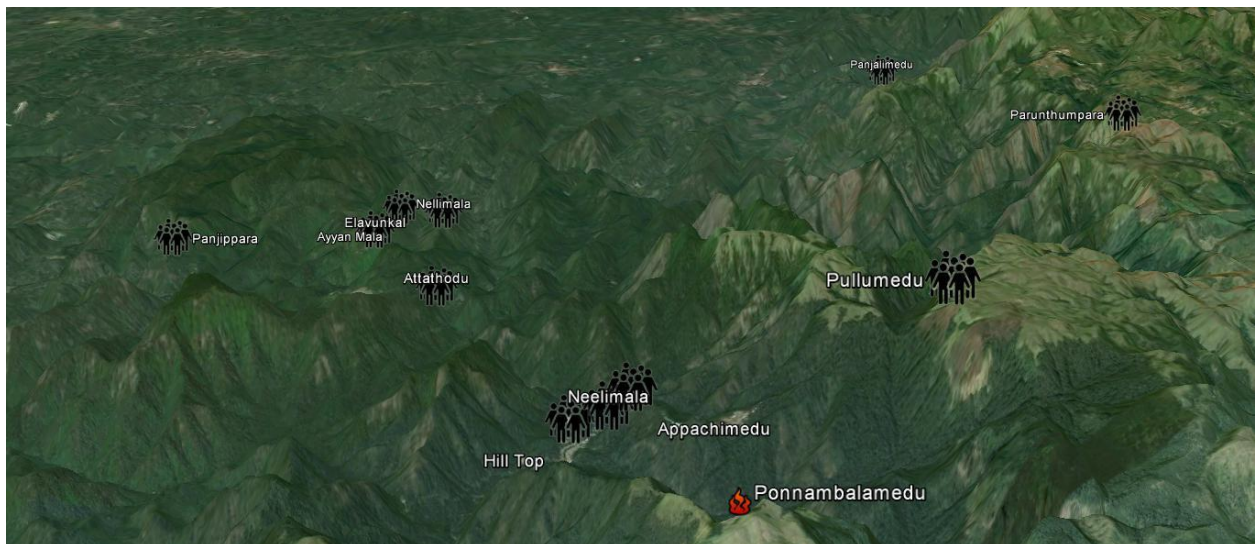
11. Nellimala and Ayyanmala in Pathanamthitta District are risk involved places.  
Emergency operations and evacuation is difficult in these locations. Parunthum Para view point at Idukki district may be promoted as a safe Makar jyothi viewing point.
12. Prohibit carrying LPG beyond Nilakkal for mass cooking by pilgrims
13. Restrict pilgrims cooking at Viri Veppu locations/resting places
14. Develop more open space in Sannidanam for crowd absorption, evacuation and safe assembly
15. Excess storage LPG cylinders in Sannidanam should be restricted. Devaswom board can take an agency for LPG supply to Sannidanam. A centralized storage facility has to be established at Pamba and Sannidanam
16. Swamy Ayyappan road is getting crowded as the return devotees and devotees in virtual queue are passed together. Use Swamy Ayyappan road for return journey only
17. Convert Arogya Bhavan as multi-specialty allopathic hospital
18. Develop an alternate route for mass evacuation from Sannidanam
19. Develop a helipad at Sannidanam for emergency evacuation and medical transportation
20. Give identification numbers to all major turns and important locations along the trekking path. So that identification of an accident spot and facilitating emergency response would be more feasible.
21. Pilgrims, who step in the holy steps after closing Sreekovil late in the night, stay at Sannidanam to perform 'Neyyabhishekam' in the next morning. It prompts more people to stay back at Sannidanam for long hours. An alternative approach to get 'Neyyabhishekam' as prasadam may be thought of by Devaswom board in tune of the temple rituals. Like Aravana and Appam, introduction of packed 'Neyyabhishekam' may be considered.

## ANNEXURE II. MAKARAVILAKKU DISASTER PREPAREDNESS

### Makaravilakku Festival

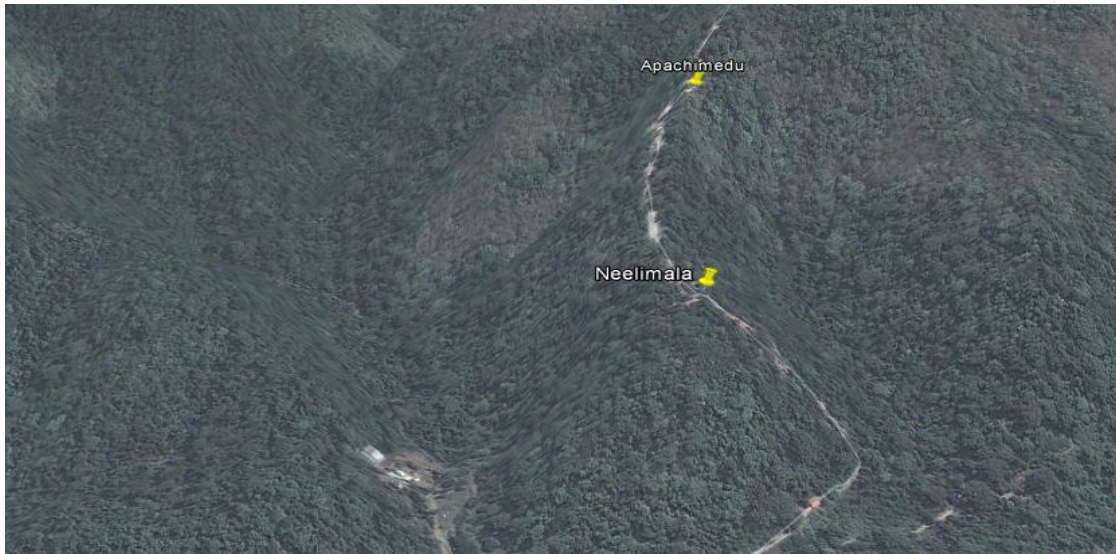
To view the Makarajyothi appear in Ponnambalamedu, thousands of Ayyappa devotees gather at various view points. The view points are located in Pathanamthitta and Idukki Districts.

Ayyappa devotees arrive at the view points in advance of one to two days to occupy the view sites. Pilgrims make temporary resting places made of tree branches, cloths and plastic sheets. A portion of the devotees do open cooking in these Makarajyothi viewpoints makes the area fire prone. After Darshan, devotees will leave the viewpoints very fast roughly in half an hour. This sudden release of mass crowd in short span of time may create human stampedes. The congregation of devotees in remote and unsafe viewpoints needs to be considered very seriously. The safety assessment on view points and recommended disaster preparedness measures are given below



Makarajyothi appearing hill (Ponnambalamedu) and Makarajyothi view points in Pathanamthitta and Idukki Districts

## SECTOR I: NEELIMALA-APPACHIMEDU STRETCH



### NEELIMALA

Neelimala is located on the traditional walk way to Snnidanam between Pampa and Apachimedu. Devotees can view the Makarajyothi from here. The view point is right in front of the Neelimala Cardiology Centre.

#### Recommended Preparedness Measures

- Devotees may gather in the small flat area which need to be cleared of bushes and debris
- Barricades required for demarcating the safe view zone
- Additional lightning may be provided to the open area





## APPACHIMEDU

Appachimedu is located on the traditional walk way to Sannidanam after Neelimala. Devotees congregate in Appachimedu will get a very clear view of Ponnambalamedu. A permanent concrete view point is in place at Appachimedu for Makarajyothi observation.

Risk: Devotees may go beyond the concrete and metal barricades in view point for better observation of Makarajyothi. Failure of any structural component may make serious consequences.

### Recommendations

- Height of the protecting wall needs to be increased or barricades are to be fixed
- Safe zone demarcation required on both sides
- Additional Lightning required
- View point has several trees with branches. Restrict devotees from climbing on it



Appachimedu View Point



Barricades required here



## SECTOR II: HILL TOP



Hill Top is one of the vehicles parking area in Pampa. Hill Top is one of the most convenient places for direct darshan of Makarajyothi, hence it may expect that the entire area get over crowded. Devotees will occupy the place from 48 hours before.



### Risk

- One side of this 1.5 km long stretch is protected by concrete wall. In the top of the hill, the sideline concrete wall have failed or not in place.
- Chances of falling from height where there is no concrete walls
- People gathering area is very close to the KSEB Substation. HT lines passing overhead which pose serious risk

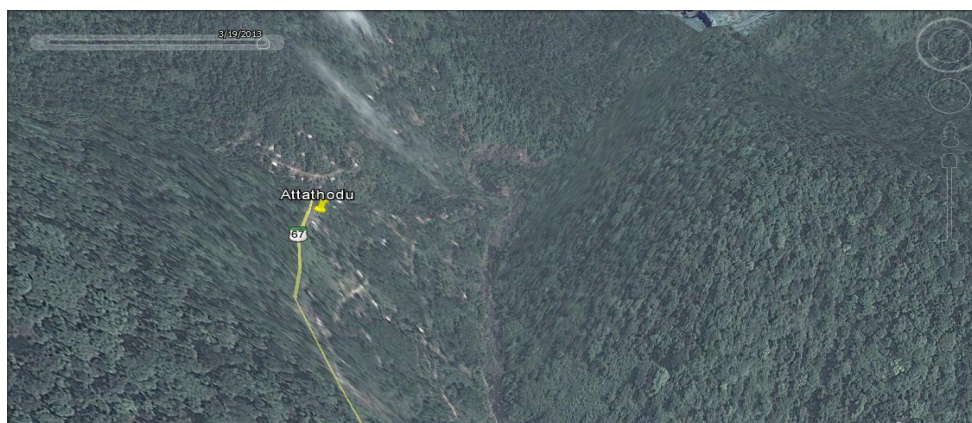
## Recommendations

- Wherever protective structures are absent on the view side, concrete side wall or permanent barricade need to be constructed
- Area need to be cleared of debris and bushes
- Arrange drinking water facility
- Arrange Public addressing system
- Devotees should not be allowed to run away from the place after darshan which may cause stampede
- A waste pit 3x4 meter size is there on hill top. It is to be filled up
- Make fire lines on the upper side of the hill top





## SECTOR III: ATTATHODU



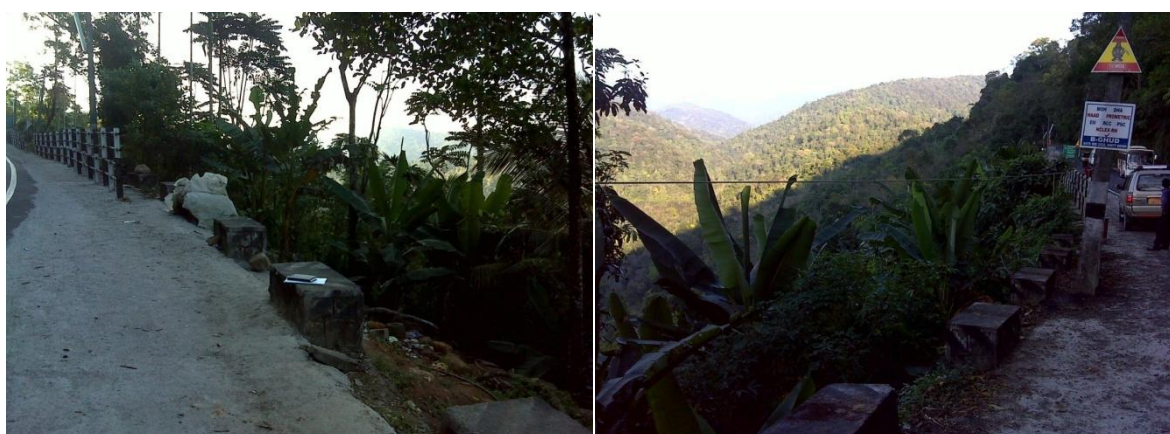
- Attathodu is between Nilakkal and Pampa
- 1 km road stretch is makarajyothi viewable area

### Risk

- One side is steep slope and gully
- Traffic will be blocked on the day. In case of any emergency in Pampa or above, vehicles have to be passed through.

### Recommendations

- Devotees used to clear the heights and climb on the trees which should be restricted
- Fire Lines are be drawn on the other side
- Permanent barricades are in place in a considerable area. Wherever the protective barrier is absent, that should be erected
- Additional lighting required
- Arrange drinking water
- Arrange Public addressing system



## SECTOR IV: ELAVUNKAL



- Elavunkal view point is just down line the Elavunkal safe zone
- Devotees can watch Makarajyothi in one kilometer stretch area

### Risk

- One side is a steep slope

### Recommendations

- Devotees used to clear the heights and climb on the trees which should be restricted
- Fire Lines are be drawn on both side of the road
- Permanent barricades are in place in a considerable area. Wherever the protective barrier is absent that should be erected
- Additional lighting required
- Arrange drinking water and Public addressing system
- Identify vehicle parking area and do not allow vehicles to enter spot during the darshan time





## SECTOR V: PANJIPARA SHIV TEMPLE



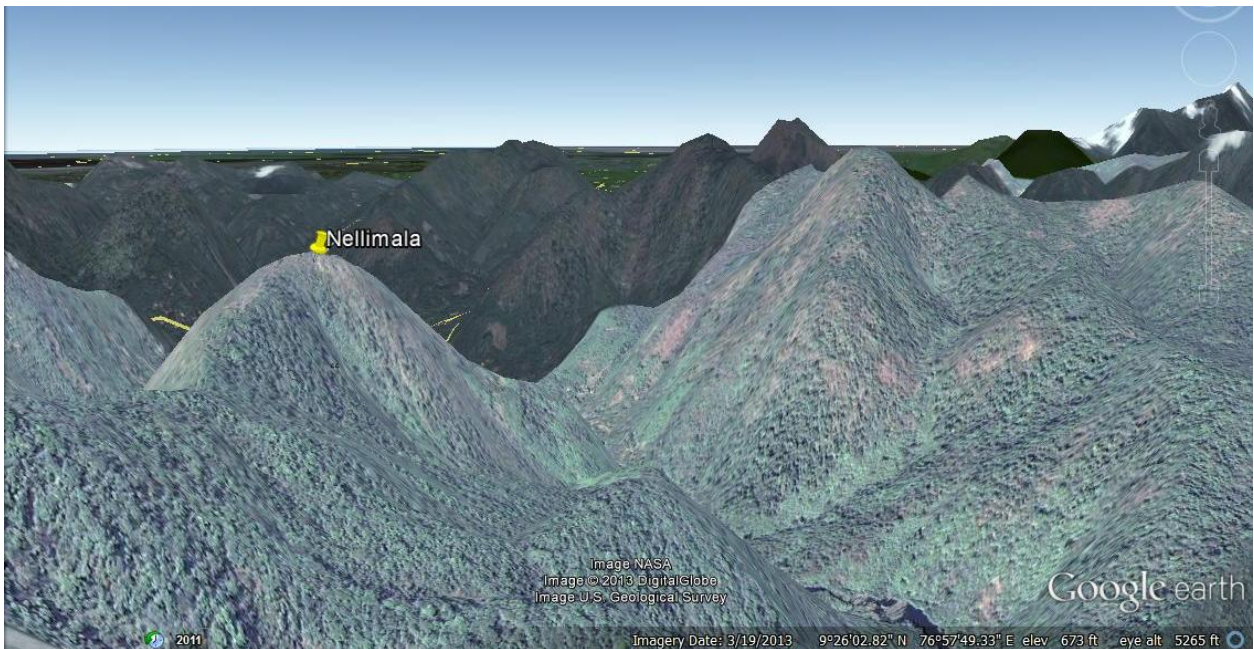
- Panjipara Shiv Temple is located in a hillock near angamuzhy
- 5 km away from main road
- Concrete jeep road for access
- Temple administration is willing to cooperate with administration to extend facilities for devotees

Risk: Comparatively safer spot

### Recommendations

- Necessary lighting should be provided on the temple premise and walk way to temple
- Allow vehicles to be parked only on the main road and do not allow vehicles in to the Jeep road
- Arrange Public addressing system and drinking water. Temple is having electricity
- Ambulance with medical team and Fire Tender with crew to be stationed on the day
- The area need to be cleared to eliminate any chance of fire
- Rope demarcation required for safe zone marking

## SECTOR VI: NELLIMALA



- Nellimala is 4 km interior in to the dense forest from Aryattukavala, Nilakkal
- The View point is in Teak Plantation
- Access to the area is very difficult. Only muddy jeep road is available

### Risk

- View point is in a steep slope area. People may slip or fall
- Dried Teak leaves may catch fire while devotees using campher for poojas
- In case of Emergency, Evacuation is difficult
- No light at all, hence visibility is an issue

### Recommendations

- Provide sufficient lighting on the view point and walking way
- Aska Lights may be used
- Safe Zone should be demarcated with rope, and barricades should be fixed on slope
- Arrange drinking water and PA system
- Station Medical Team with Ambulance
- Station Fire Tender with crew
- Nellimala is not safe for Makarajyothi view, discourage access to the place in future



## SECTOR VII: AYYAN MALA



- Ayyan mala is located between elavunkal and Kannamala
- 5km away from main raod (Erumeli-Elavunkal)
- Narrow Jeap road available for access
- View point is in a Settlement area
- Terraced Terrain with Pepper, arecanut and tapioca plantation

### Risk

- Local people informed that devotees clear the area in half an hour time after darshan. They will not use the road for return walk, instead run through the plantation where there is no light. This may lead to fall and injury

### Recommendations

- Safe area demarcation by rope
- Arrange PA System, drinking water, medical team, ambulance and Fire Force
- Sufficient Lighting should be provided





## SECTOR I: PARUNTHUMPARA IDUKKI DISTRICT



- Parunthumpara is one of the hilltop tourist destination in Idukki near Peerumedu
- Devotees can view Ponnambalamedu from seven meadows in Parunthumpara, and it can accommodate large crowd
- Parunthumpara is 8 km away from Peerumedu-Vandipperiya Highway
- Tarred road access is available

### Risk

- It's a hill top having steep cut gully in view side
- Steep cut slope is protected by Iron fencing which was damaged in several points
- Vehicles will reach up to the hill top where devotees gathered. Accidents are possible in darshan time or immediately after when devotees return

### Recommendations

- Ensure safe parking of vehicles in the downstream road and do not allow devotee vehicles entering in Parunthumpara
- Repair damaged fencing
- Demarcate safe zone using rope
- Discourage local tourist visits to Parunthumpara during the Makaravilakku day
- Provide adequate lighting and Public addressing system
- Drinking water may be arranged by Kerala Water Authority
- Station Fire Tender and Ambulance with Crew





## SECTOR II: PULLUMEDU, IDUKKI



- Pullumedu is 10 km interior to Periyar Tiger Reserve from Vallakadavu Forest Range Office
- Devotees can reach the place on foot of 6 km through Sathram Raoad
- Only vehicles with 4 wheel capacity can reach the place by an off road drive of 10 km

### Risk

- No Lighting
- Dried grass may catch fire
- Pilgrims may slip in to the steep slope

### Recommendations

- Last year Entry of Vehicles limited to Pullumedu and devotees were allowed to walk in to the place only on Makaravilakku day. The same system may be followed
- KSRTC Conducted chain services up to Kozhikkanam Check post.
- Light arrangements should be provided on the walk way and view point
- Aska Light can also be used
- Drinking water facility should be provided
- Public Addressing system should be arranged
- Controlled burning of grass is required to avoid fire chances



- Double barricading system is required on the slope side to prevent falling
- Mobile phones have no coverage there. BSNL has a temporary tower in Pullumedu that should be made operational from the second week of January 2014



## SECTOR II: PANJALIMEDU. IDUKKI



- Panjalimedu is one of the hill top Tourist destination in Idukki
- Located at Peruvanthanam Panchayat and Peerumedu Village
- The hill top have a Temple and the devotees gather around the temple for jyothish darshan
- Tarred road available for access to Panjalimedu

### Risk

- Comparatively safer area in Idukki for makarajyothi darshan
- It's a grassy meadow. Dry grass may catch fire while lightning Campher

### Recommendations

- Controlled burning of grass is recommended to avoid fire during the Makaravilakku day
- Lighting should be provided, aska light can be used here
- Public Addressing system and drinking water facility should be arranged
- Safe view points may be demarcated using rope



## **POINTS TO BE CONSIDERED FOR MAKARAJYOTHI PREPAREDNESS**

- Nellimala and Ayyanmala in Pathanamthitta District are risk involved places. Emergency operations and evacuation is difficult in these points
- Public Addressing system, Drinking water and Lighting should be made available to all view points
- Fire Crew with tender and Ambulance with Medical team should be arranged in all places
- A Safety Officer must be assigned for each view point and he must coordinate with Police, Revenue, Fire, Health, Forest and Local Authorities.
- An inspection of safety arrangements should be made on the previous day evening and status report should be submitted to the District Collector and Superintendent of Police
- Aska Lights may be used wherever necessary
- Repair Barricades or concrete walls where the existing ones have failed
- Additional barricades may be provided wherever necessary
- Safe zone should be demarcated using rope in all viewpoints
- Traffic recovery vehicles may be arranged in strategic points
- Service of HAM radio operators may be used if necessary
- Fire lines are to be in place wherever necessary
- Public addressing system may be mounted to one Police vehicle in each view point
- Alert nearby hospitals in Idukki, Kottayam and Pathanamthitta Districts for emergency accommodation
- Devaswom PWD may be directed to check structural stability of existing permanent barricades
- Transportation through Tractors in Swami ayyappan raod may be restricted for two days
- After Darshan, devotees will try to leave the place on hurry which may cause accidents. This should be considered as a high risk time. Police should develop site specific crowd release and vehicle management plan for the peak time management.
- Banners/boards should be displayed in viewpoints exhibiting Does and Don'ts for devotees.



## **ANNEXURE III: SAFETY GUIDELINE FOR DISASTER MITIGATION**

Travancore Devaswom board being the principal administrator of the temple holds the management and operational control of Sabarimala Sree Darma Sastha Temple. Apart from Travancore Devaswom board, various Government Departments offer their services in the safe conduct of Sabarimala pilgrimage

### **STATE GOVERNMENT DEPARTMENTS/AGENCIES**

- Kerala Police
- Revenue and Disaster Management
- Kerala Water Authority
- Kerala State Electricity Board
- Forest Department
- Irrigation Department
- Fire and Rescue Department
- Excise Department
- Motor Vehicle Department
- Public Works Department
- Health Department
- State Disaster Response Force
- Pollution Control Board

### **CENTRAL GOVERNMENT AGENCIES/DEPARTMENT**

- National Disaster Response Force
- Rapid Action Force (QRT)
- Bharat Sanchar Nigam Limited

### **Non-Governmental Organisations**

- Ayyappa Seva Sangham
- Private Hospitals

## **I KERALA POLICE**

Kerala Police plays a pivotal role in the safe conduct of Sabarimala pilgrimage. The crowd management and law and order in Sabarimalais primarily vested with Kerala Police. The Chief Police Coordinator, Joint Chief Police Coordinator and Police Controllers in Sannidanam and Pamba hold the administrative control of police force in Sabarimala.

### **Roles and Responsibilities**

- Ensuring safety and security of Sabarimala and pilgrims.
- Proper Crowd Management at Erumeli, Nilakkal, Pamba, Trekking Paths and Sannidanam
- Maintaining Smooth vehicular traffic system in all roads leading to Pamba.
- Managing efficient Vehicle Parking System at Erumeli, Pamba, Nilakkal and Hilltop.
- Maintaining Law and Order and preventing the occurrence of crimes in Sabarimala.
- Identify vulnerable locations and implement necessary safety measures for crowd management
- Based on the size of the crowd expected, determine the number of personnel that are needed in various locations to ensure the safety of the event (e.g., viriveppu locations, resting places, viewpoints etc).
- Develop a coordination mechanism with Police from other States
- Manage public addressing system in Sabarimala for safety and effective crowd management.
- Identify a route for evacuation from Sannidanam and develop a proper plan
- Coordinate with Fire and Rescue, Health and Disaster Management Department for Disaster preparedness and Response
- Identify places where additional lighting is required and report the matter to Devaswom board
- Aska lights available with Police Department should be repaired and used in vulnerable areas for lighting
- Set up barricades or rope lines for crowd management wherever permanent barricades are absent
- Prevent pilgrims carrying LPG and Kerosene beyond Nilakkal



## **II REVENUE AND DISASTER MANAGEMENT DEPARTMENT**

Revenue and Disaster Management Department will be responsible for the overall coordination of disaster preparedness operations in Sabarimala. The District Collector, Pathanamthitta will coordinate various departments for disaster preparedness and crisis management operations.

### **Roles and Responsibilities**

- Ensure effective coordination with all stakeholder departments for disaster preparedness and response
- Establish Emergency Operation Centre at Pamba with advanced and alternate communication facilities
- Allot trained staff or officers as needed to Sannidanam, Pamba and Nilakkal.
- Create a detailed staffing plan that designates location for each officer.
- Coordinate with other departments to ensure that the event site meets all public safety requirements, and ensure that all permits and licenses are obtained
- Prepare safety instructions for pilgrims and give to Devaswom Department for displaying it at important locations
- Identify vulnerable areas and work out mitigation measures. Coordinate with Devaswom board for implementation of Structural safety measures
- Prepare an inventory of resources which are likely to be needed in an emergency
- Conduct inter-departmental review meetings
- Activate control room in Collectorate during the Sabarimala season

## **III DEVASWOM BOARD**

- Provide infrastructural facilities for disaster preparedness and crisis management operations
- Provide legible and visible signs that describe trekking paths, resting places, toilet facilities, darshan timing etc.
- Display safety instructions for pilgrims prepared by Revenue and Disaster Management Department

- Facilitate implementation of structural mitigation measures suggested by Disaster Management Department
- Make arrangements for providing food and accommodation facilities to all officials working on disaster management
- Portable stretchers with required men should be reserved at Sannidanam for Emergency Evacuation during the festival season
- Construct handrails in Traditional Trekking path and Swamy Ayyappan road
- Inspect the durability of permanent barricades and other crowd control structures
- Enforce ban on self-cooking by pilgrims at Pamba using LPG and Kerosene

#### **IV FIRE AND RESCUE DEPARTMENT**

- Position required number of Firefighting units in Pamba, Nilakkal and Erumeli
- Conduct a safety auditing in Pamba, nilakkal and Sannidanam and share the details with Police and Disaster Management Department
- Conduct specific safety auditing at storages of fire crackers, petrol, diesel and LPG at Sannidanam, Pamba and Nilakkal
- Inspect commercial shops, hotels and tea shops periodically to ensure that they have undertaken fire safety measures. Issue notices to shops which have not followed the safety measures and bring it to the notice of Devaswom board. Devaswom board holds the responsibility to not open such unsafe stalls and allow them to open only after necessary measures have undertaken
- Check the requirements for fire extinguishers in Sannidanam and ensure their availability. Coordinate with Devaswom board for implementation of any safety requirements.
- Ensure Fire water lines are available at major crowd gathering points. Any additional requirements may be reported to Crisis Management Committee and Devaswom Board
- Coordinate with Kerala Water authority for emergency supply of water
- Inspect all temporary sheds constructed by Devaswom Board for the Pilgrims in Sannidhanam and Pampa on fire safety point of view. Any short comings having potential to cause fire should be brought to the Devaswom Board.
- Deploy rescue team and swimmers at Ghat points in Pamba River

- Study fire chances in Sannidanam and give detailed proposal to establish smoke detectors and automatic sprinklers in building complexes and queue complexes
- Inspect the safety of diesel storage tank, appam-aravanana plant, gun powder storage point etc. periodically

## **V HEALTH DEPARTMENT**

- Allot sufficient number of Doctors and paramedical staff to Sannidanam, Pamba, Nilakkal and Erumeli
- Reserve required medicines at sufficient quantities and ensure availability of medicines till the season ends
- Establish health units at major crowd gathering locations
- Position sufficient number of BLS ambulances in Pamba, Nilakkal, Erumeli and other strategic locations
- Prepare a mass casualty management plan for Sabarimala
- Alert all hospitals in Pathanamthitta, Idukki and Kottayam Districts to prepare for Sabarimala Season
- Coordinate all medical facilities for Sabarimala pilgrimage season including medical teams from other States/agencies/institutions
- Prepare an inventory of resources available with the Department and share with Emergency Operation Centre.
- Identify any requirements of equipments or resources for emergency operation and report to crisis management committee for necessary arrangements
- Engage more Doctors at Sannidanam during makaravilakku day
- Prepare a detailed proposal on requirements for mass casualty management in Sabarimala and submit to Devaswom board/crisis management committee

## **VI. IRRIGATION DEPARTMENT**

- Dam Safety Officers should be directed not to open the dams at river Pamba without taken permission from District Collector, Pathanamthitta
- Regulate the flow of water in Pamba river

## **VII. KERALA WATER AUTHORITY**

- Ensure uninterrupted supply of drinking water to Sannidanam, Pamba, Nilakkal, Erumeli and other crowd gathering points
- Ensure fire waterlines are connected to
- Ensure uninterrupted supply of water to fire hydrants
- During any emergency, priority should be given to reach water for firefighting operations

## **VIII. KSEB**

- Ensure un interrupted supply of electricity in Sannidanam, Pamba and Nilakkal
- Make alternative arrangements for power supply during emergencies
- Conduct a safety walk in Snnidanam, Pamba, Nilakkal, Trekking Paths and ViriVeppuLocations to ensure sufficient lighting arrangements are maid
- Many human stampedes in India have happened during the night time in the absence of proper lighting. Hence check and replace any damaged electric appliances or lights
- Replace damaged wiring system and keep all wiring insulated.
- Ensure electric posts are properly anchored.
- All labours should be trained to follow the instructions of KSEB safety manual
- In vulnerable areas, keep Carbon Dioxide Fire Extinguishers

## **IX. FOREST DEPARTMENT**

- Take necessary measures to prevent Forest Fire in and around Sannidanam, Pamba, Nilakkal and routes leading to Sabarimala
- Conduct periodic monitoring for any malpractices or actions leading to forest fire
- Deploy snake squad in Trekking Paths and Sannidanam
- Discourage the entry of devotees in to dense forest
- Identify the places where devotees are gathered in forest for makarajyothidarshan
- Check the safety of Makarajyothi viewpoints in forest areas
- Inspect pilgrim movement and gathering points in forest and carry out controlled burning of grasses and bush if necessary

## **X. KSRTC**

- Facilitate smooth pilgrim movement between Pamba and Nilakkal
- Assess the traffic demand in Pamba and Nilakkal and conduct sufficient Pamba- Nilakkal Chain Service
- Keep 2 buses as reserve for any emergency evacuation from Pamba

## **XI. MOTOR VEHICLE DEPARTMENT**

- Ensure Smooth traffic on routes leading to Pamba
- Coordinate with Vehicle companies and arrange break down service
- Arrange necessary traffic recovery vehicles on strategic locations
- Enforce intensive patrolling on Sabarimala roads
- Install sign boards and warnings at important locations
- Identify accident prone areas and take necessary structural and non-structural safety measures
- Pre-plan the places where traffic will be checked and regulated
- Arrange drinking water at places where traffic is checked for long hours
- Position Ambulances with BLS support at 5km intervals



## **ANNEXURE IV: ESTABLISHMENT AND FUNCTION OF EMERGENCY OPERATION CENTRE (EOC)**

The Emergency Operations Centre (EOC) will function as the communication and coordination hub. EOC will be the focal point to design and implement emergency response operations in Sabarimala. Emergency Operation Centre plays a vital role in the Emergency Operation activation. It coordinates the flow of information with respect to activities associated with response operations. During the normal times it maintains a systematic database of the resources available, important phone numbers, names and addresses of important government and non-government officials, and NGOs. During crisis it is expected to function as a centre for decision-making and help flow of information horizontally and vertically to the respected departments for smooth emergency response operations.

District Administration Pathanamthitta and Devaswom Board will provide all necessary support to the State Delegates. District Level Officers from all departments operated in Sabarimala are Members to Emergency Operation Centre. Every Department should designate an officer as nodal officer to EOC. The EOC will function round the clock to the entire season. During the crowded days and especially on Makaravilakku day, all departments must be present at EOC. The incident commander can activate Emergency Operation under any circumstances and Nodal Officers from Departments should occupy their seats on Emergency Operation Activation.

### **STRUCTURE OF EOC**

- Head of EOC- District Collector, Pathanamthitta
- EOC Coordinator- SNO for VHF Communication
- Nodal Officers from all Stakeholder Departments

- Representatives from NDRF, SDRF, Karnataka, Andhra Pradesh and Tamil Nadu Police
- Officials from Department of Disaster Management
- Telephone and Fax
- Hotline Facilities to Sannidanam and PathanamthittaCollectorate
- VHF network to Sannidanam, Nilakkal, PathanamthittaCollectorate and Taluk Office
- HAM Radio Operators for Crowd Monitoring during Makaravilakku days

### **Functions of EOC**

- Monitor crowd movement in important locations
- Prepare and update inventory of resources available for emergency response
- Collecting information about the vulnerable areas.
- Sharing data related to disaster and vulnerable areas with all the line departments and other organization and stakeholders.
- Coordination for preparation, mitigation and response with all the responsible parties.
- Receive and process disaster alerts and warnings from nodal agencies and other sources and communicate the same to all designated authorities and stakeholders.
- Monitor emergency operations at various locations.
- Facilitate coordination among primary and secondary Departments/Agencies.
- Requisitioning additional resources during the disaster phase.
- Consolidate, analysis, and disseminate of damage, loss and needs assessment data.
- Planning for emergency preparedness and response
- Information gathering and record keeping on disaster events.
- Early warning dissemination.

## ANNEXURE V: EMERGENCY CONTACT NUMBERS IN SABARIMALA (CODE - 04735)

SI No	Officer	Landline Number
1	Special commissioner, Sabarimala	202015
2	Devaswom Commissioner	202004
3	Finance & Acc. Officer/Dy. Commissioner	202012
4	Excise Commissioner, Sabarimala	202203
5	Excise Commissioner, Pampa	203332
6	District Collector Camp, Sabarimala	202336
7	District Collector Camp, Pampa	202218
8	SP Vigilance	202081
9	Chief Engineer	202037
10	Executive Officer	202028
11	Assistant Executive Officer	202019
12	Executive Office	202026
13	Exe. Engineer Maramath	202453
14	Asst. Ex. Engineer Maramath, Sabarimala	202027
15	Asst. Ex. Engineer Maramath, Pampa	202464
16	Devaswom AO, Sabarimala	202038
17	Devaswom AO, Pampa	203442
18	Information Centre (PRO)	202048
19	Information Centre (PRO), Pampa	202339
20	Accommodation Office	202049
21	Vigilance Offices	202058
22	Local Fund Audit Wing, Pampa	202334
23	Guest House Sabarimala	202056
24	Guest House Pampa	202441
25	Liaison Officer, Sabarimala	202084
26	Liaison Officer, Pampa	202113
27	Main Store TDB, Sabarimala	202083
28	Main Store TDB Pampa	202326
29	Electrical Section	202072
30	Generator Room	202093
31	Malikapuram Temple	202022
32	Anna Dana Mandapom	202918
33	Toll Gate Chalakayam	203522

34	ThanthriSabarimala	202907
35	MelsanthiSabarimala	202428
36	KeezhsanthiSabarimala	202154
37	MelsanthiMalikapuram	202755
38	Post Office Sabarimala	202130
39	Post Office Pampa	202330
40	Duty Magistrate Sabarimala	202013
41	Duty Magistrate Pampa	203336
42	Sanitation Office	203316
43	KSEB Sabarimala	202024
44	KSEB Pamba	202424
45	KSRTC Pamba	203445
46	Forest Officer Sabarimala	202074
47	Forest Officer Pamba	202335
48	Forest IB Pamba	202076
49	Telephone Exchange Sabarimala	202199, 202000, 202836
50	Telephone Exchange Pamba	203398, 203399, 203433
51	Govt Ayurveda Dispensary Sabarimala	202102
52	Govt Ayurveda Dispensary Pamba	202536
53	Government Hospital Sabarimala	202101
54	Government Hospital Pamba	203318
55	Homeo Hospital Sabarimala	202843, 202080
56	Homeo Hospital,Pamba	203537, 203350
57	Health Inspector,Pamba	202346
58	Police Station Sabarimala	202014, 202016
59	police Station,Pamba	203419, 203386
60	Police Special Officer, Sabarimala	202029
61	Police Special Officer, Pamba	203523
62	Police Wireless Station	202079
63	Fire Force, Sabarimala	202033
64	Fire Force, Pamba	202033
65	Petrol Pump, Pamba	202346
66	Media Centre	202664
67	District Police Chief	0468-2222636, 9497996983
68	Public Relations Officer TDB	0471-2316963, 9446446464