PANDEMIC PREPAREDNESS PLAN

KOTTUKAL PANCHAYAT 2026

MESSAGE FROM PRESIDENT/CHAIR LSGI

THE ADVERSE EFFECTS OF PANDEMICS SUCH AS PLAGUE AND SMALLPOX IN PAST CENTURIES ARE SOMETHING WE HAVE BEEN HEARING ABOUT SINCE OUR SCHOOL DAYS. ALTHOUGH THE PRESENT GENERATION CAN CLAIM ADVANCEMENTS IN SCIENCE AND TECHNOLOGY, CHANGING CLIMATE CONDITIONS AND EVOLVING LIFESTYLES ARE CREATING MANY CHALLENGES IN THE WORLD. THE PHYSICAL HARDSHIPS AND ANXIETIES CAUSED BY THE COVID-19 PANDEMIC ARE BEYOND WORDS. BEFORE ANOTHER PANDEMIC STRIKES, WE MUST BE FULLY PREPARED IN EVERY WAY. I HOPE THIS PANDEMIC PREPAREDNESS PLAN WILL BE USEFUL FOR THAT PURPOSE.

MESSAGE FROM HEALTH STANDING COMMITTEE CHAIR

DISEASES, ESPECIALLY COMMUNICABLE DISEASES, CAN OCCUR AT ANY TIME. THEREFORE, IT IS VERY ESSENTIAL TO HAVE A PANDEMIC PREPAREDNESS PLAN IN PLACE. I WOULD LIKE TO ASSURE YOU OF MY FULL SUPPORT IN THE PREPARATION OF THIS PLAN.

MESSAGE BY MEDICAL OFFICER

THE COVID-19 OUTBREAK IN 2020 WAS COMPLETELY UNEXPECTED. WE WITNESSED HOW QUICKLY IT SPREAD ACROSS THE WORLD AFTER ORIGINATING IN CHINA. KERALA'S STRONG HEALTHCARE SYSTEM PLAYED A CRUCIAL ROLE IN CONTROLLING THE SPREAD OF COVID-19. GLOBAL WARMING AND INTERNATIONAL CONFLICTS MAY ALSO CONTRIBUTE TO THE SPREAD OF PANDEMICS. THEREFORE, PREPARING A PANDEMIC PREPAREDNESS PLAN WILL BE HIGHLY BENEFICIAL FOR THE FUTURE. FULL SUPPORT WILL BE EXTENDED FROM THE SIDE OF THE CHC TEAM.

EXECUTIVE SUMMARY

Primary Health Centre (PHC), Kottukal functions as the primary public healthcare institution serving the population of Kottukal Grama Panchayath. The PHC plays a pivotal role in delivering comprehensive, accessible, and affordable healthcare services, with a strong focus on preventive, promotive, curative, and rehabilitative care in accordance with national and state health programmes.

The PHC caters to a predominantly rural population, addressing key public health priorities such as maternal and child health, communicable and non-communicable disease control, immunization, family welfare, adolescent health, and geriatric care. Regular outpatient services, home-based care through field health staff, and outreach activities ensure healthcare coverage even in geographically challenging areas. The institution actively implements national health missions, including the National Health Mission (NHM), National Tuberculosis Elimination Programme, National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS), and other disease surveillance initiatives.

PHC Kottukal works in close coordination with the Grama Panchayath, ASHA workers, Anganwadi centres, schools, and community-based organizations to strengthen community participation and improve health awareness. Emphasis is placed on early detection, timely referral, health education, and lifestyle modification to reduce disease burden and improve overall health outcomes.

Despite constraints related to infrastructure, manpower, and increasing service demand, the PHC continues to enhance service delivery through effective planning, data-driven decision-making, and community engagement. Strengthening facilities, upgrading digital health systems, and expanding preventive services remain key focus areas for future development.

Overall, Primary Health Centre,Kottukal stands as a vital institution in safeguarding public health and improving the quality of life of the residents of Kottukal Grama Panchayath

LIST OF ABBREVIATIONS

LSGD/LSGI	**Local Self Government Department / Local Self Government Institution**
BMO	**Block Medical Officer**
IDSP	**Integrated Disease Surveillance Programme**
NDMA	**NATIONAL DISASTER MANAGEMENT AUTHORITY**
PPE	**PERSONAL PROTECTIVE EQUIPMENT**
ICMR	**INDIAN COUNCIL OF MEDICAL RESEARCH**
CD	**COMMUNICABLE DISEASES**
NCD	**NON-COMMUNICABLE DISEASES**

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INTRODUCTION

Background of the PPP

Despite Kerala's strong health system, COVID-19 exposed gaps in preparedness, including resource constraints and coordination challenges. Panchayats played a crucial role but often lacked formalized plans.

Objective of a pandemic preparedness plan

- Address These Gaps By Establishing Clear Protocols
- Improving Infrastructure
- Enhancing Coordination

Scope of the document

- Surveillance
- Healthcare Delivery
- Logistics
- Community Support Systems.

LSGD AT A GLANCE

Baseline data

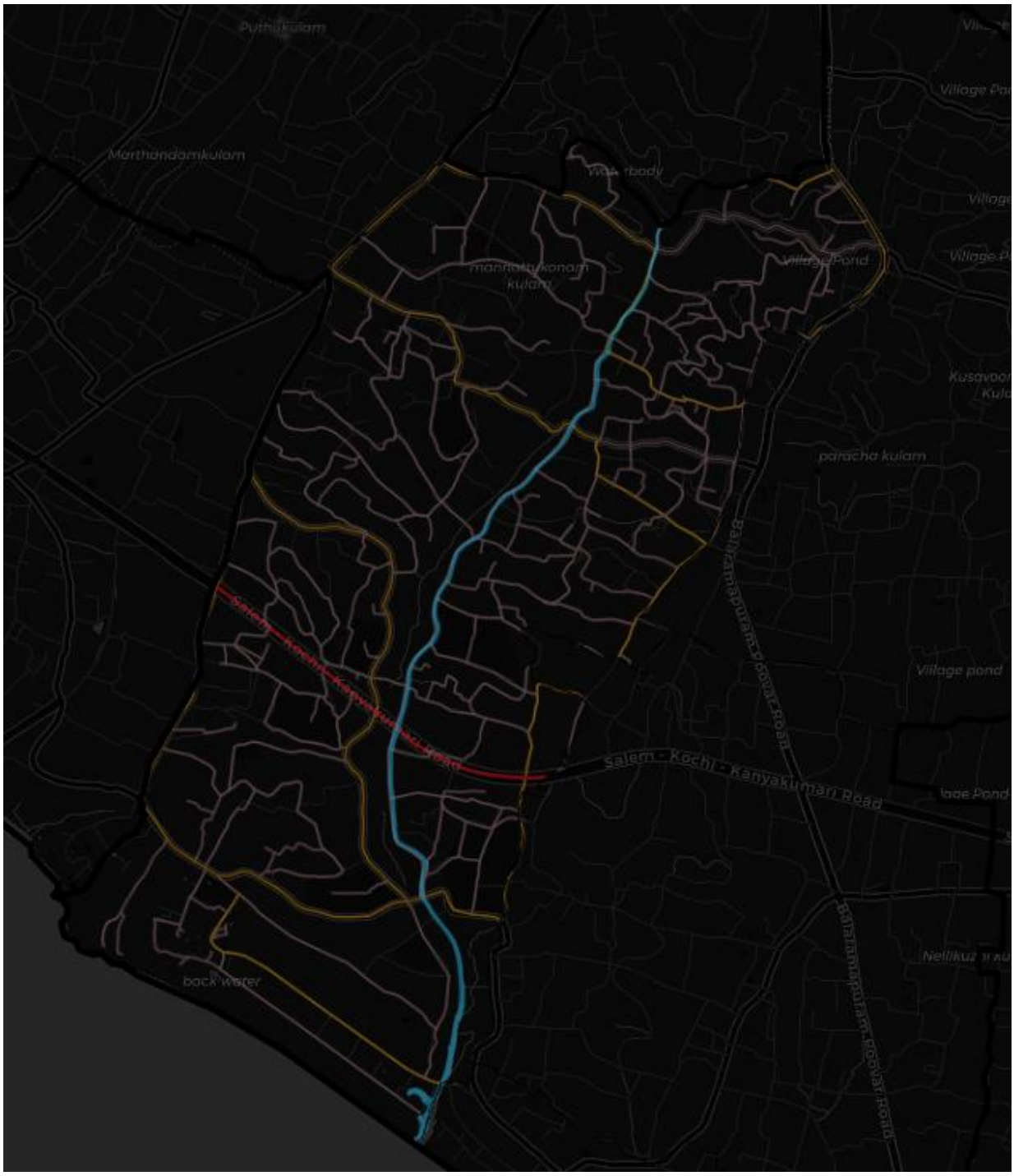
Ward	Houses	Population	Migrants	Wells	Hot spots	Ed. Institutions	Hosp pvt/govt.
21	11725	35657	502	2806	0	5	1

Risk stratification among wards in the context of Communicable diseases and hazards

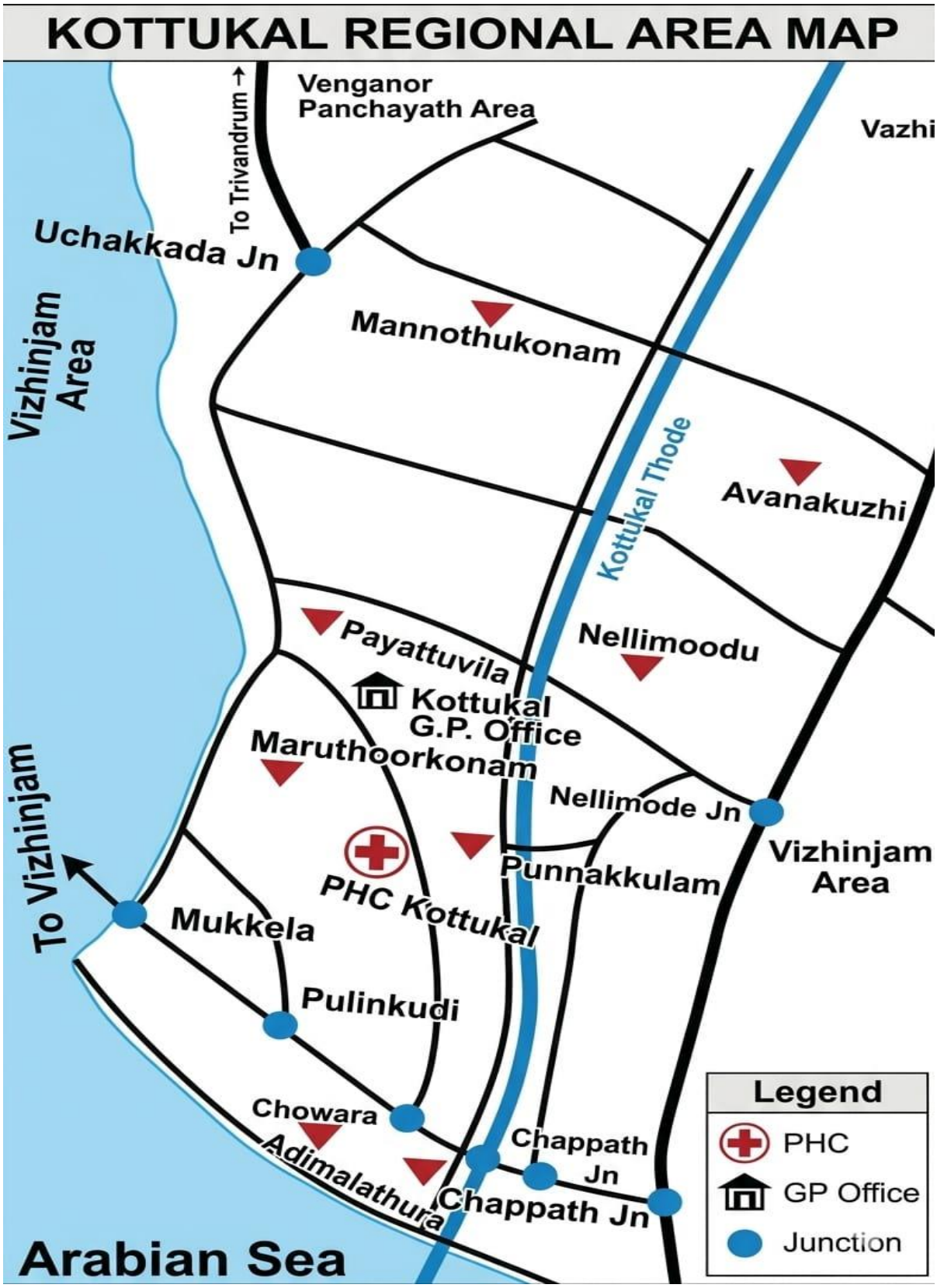
Ward no	Ward name	Level of risk
1	Mannottukonam	Medium
2	Avanakuzhi	Medium
3	Mannakkalle	Medium
4	Kollakonam	Medium
5	Kuzhivilakkonam	High
6	Sreenarayanapuram	Medium
7	Moolakkara	Medium
8	Ambalathmoola	Medium
9	Jubilie Nagar	Medium
10	Adimalathura	High
11	Chowara	High
12	Pulinkkudi	Medium

13	Chappath	High
14	Thekkekkonam	Medium
15	Priyadarshini Nagar	Medium
16	Office Ward	Medium
17	Kottukal	High
18	Maruthoorkonam	Medium
19	Puliyoorkonam	Medium
20	Payattuvila	High
21	Pulivila	Medium

Major Roads/rivers



Major establishments with geospatial mapping



Occupational groups, socio cultural groups, migration & mobility patterns

Category	**Groups**
Occupational	Fishfolks, Healthcare workers, Business, Farmers
Socio-Cultural groups	Diverse
Migration	Migrants, returnees
Mobility	Commuters, travel

Disaster prone areas (geographic vulnerability)

Type of disaster	**Disaster prone areas**	**Vulnerability level**
Tsunami	Adimalathura, Chowra, Chapath	High risk
Cyclone	Adimalathura, Chowra, Chapath	High risk
Flood	Avanakuzhi Mannakkallu Kollakonam Kuzhivilakonam Sreenarayanapuram Moolakkara Ambalathumoola Jubilee Nagar Adimalathura Chowara Pulinkudi Chappath Priyadarshini Nagar Kottukal Punnakulam Maruthoorkonam Puliyoorkonam Payattuvila Pulivila	High risk
Coastal erosion	Adimalathura, Chowra, Chapath	High risk
Storm	Adimalathura, Chowra,	medium risk

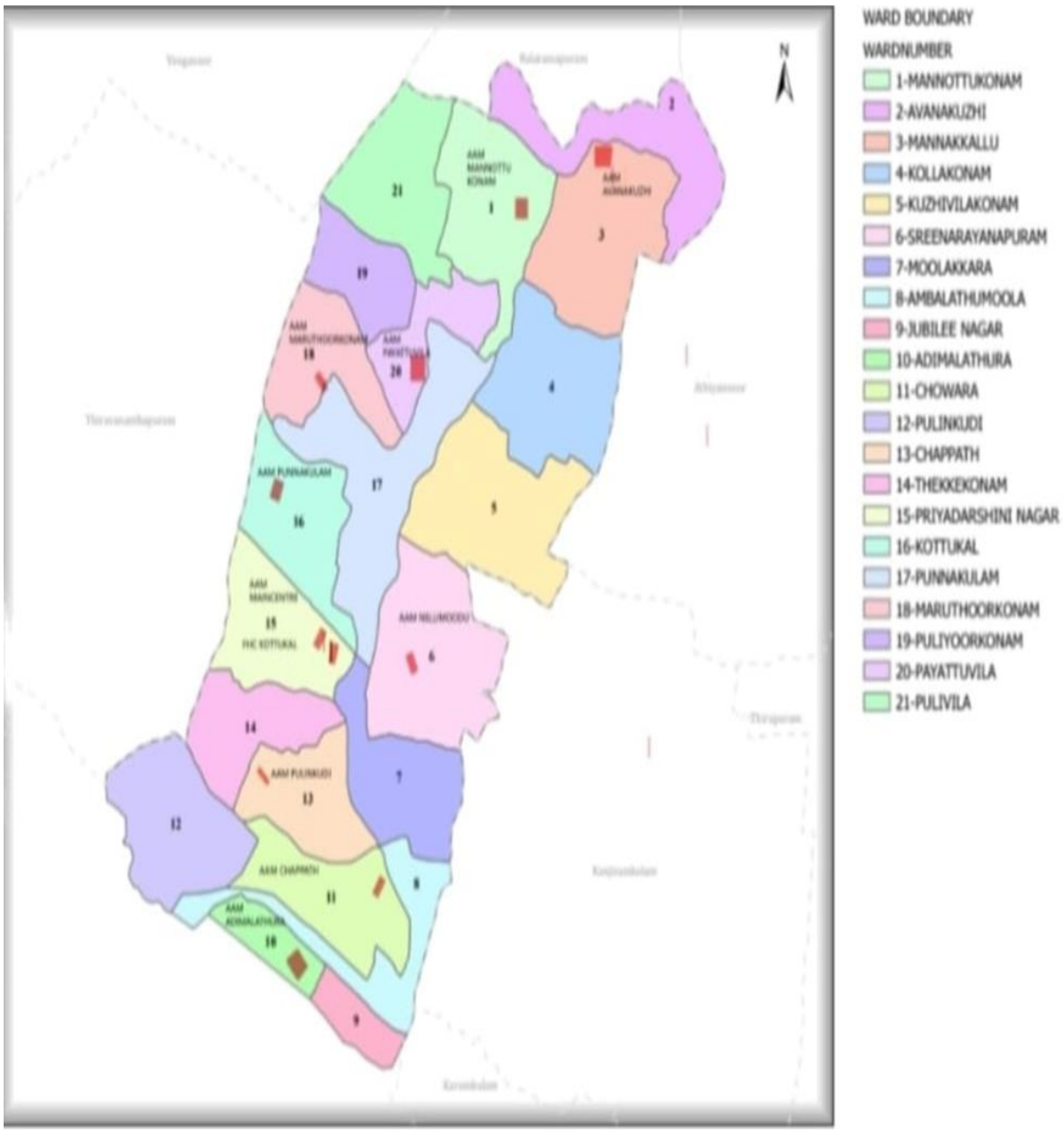
	Chapath, Avanakuzhi Mannakkallu Kollakonam Kuzhivilakonam Sreenarayanapuram Moolakkara Ambalathumoola Jubilee Nagar Adimalathura Chowara Pulinkudi Chappath Priyadarshini Nagar Kottukal Punnakulam Maruthoorkonam Puliyoorkonam Payattuvila Pulivila	

Disaster-Prone Areas Map

Not available

Hotspot Map - Cd & Disasters

INTEGRATED HEALTH INFRASTRUCTURE MAP OF KOTTUKAL PANCHAYAT



GENERAL PROFILE OF THE LSGI'S

Background of the LSGI

Kottukal Panchayat is a coastal rural administrative unit located in the southern part of Thiruvananthapuram district, falling under the Neyyattinkara taluk. The background of this panchayat reflects a blend of geographic diversity, traditional livelihoods, evolving socio-economic conditions, and its strategic proximity to both coastal and urban regions.

Geographically, Kottukal Panchayat is characterized by a mix of plains, coastal stretches, and water bodies. It lies close to the Arabian Sea, with certain parts of the panchayat sharing a direct coastal boundary. This coastal interface significantly influences the lifestyle and economy of the region. Areas such as Adimalathura represent traditional fishing settlements, where marine-based livelihoods are predominant. Alongside the coastline, the presence of ponds, canals, and small streams (thodus) contributes to the ecological richness of the region. The terrain is largely flat, making it suitable for habitation and small-scale agriculture.

Historically, like many regions in southern Kerala, Kottukal evolved as part of the erstwhile Travancore region, though detailed documented local history is limited. Its development into a formal administrative unit occurred through the Panchayati Raj system, which strengthened local governance and decentralized planning. The panchayat today functions under the Athiyannoor Block Panchayat and falls within the Kovalam legislative assembly constituency, indicating its political and administrative integration with the wider district framework.

Demographically, Kottukal is a moderately populated rural area with a population of about 46,915 as per the 2011 Census. The population shows a balanced gender distribution and a relatively high literacy rate of over 90%, reflecting Kerala's overall achievements in education and human development. A significant proportion of the population belongs to working-class groups, including farmers, daily wage laborers, and small traders. This indicates a predominantly lower to middle-income socio-economic profile, with livelihoods closely tied to local resources and informal sectors.

Economically, the panchayat presents a dual character. Inland areas depend on agriculture, small-scale businesses, and local trade, while coastal zones rely heavily on fishing and allied activities. In recent years, tourism has emerged as an important contributor to the local economy, driven by scenic beaches such as Chowara and Azhimala. The development of beach resorts and tourism-related services has created new employment opportunities and improved connectivity, gradually transforming parts of the panchayat from purely rural to semi-urban in character.

Socially, Kottukal reflects the typical Kerala model of development, with strong community networks, access to basic amenities, and relatively high literacy. However, challenges such as dependence on seasonal livelihoods, vulnerability of coastal populations, and the need for improved infrastructure and healthcare access remain important concerns.

Table 1: Background of LSGD	
Description	**Details**
Name of LSGI	Kottukal
Type (GP/Municipality / Corporation etc.)	Grama Panchayath
Block	Athiyanoor
District	Thiruvananthapuram
Number of wards	21
Total area (sq. km)	12.19 sq Km
Population(Projected)	35657
Population density	2925.10 persons/sq km
Terrain (coastal/low-lying/backwaters/foothills, etc.)	Coastal Plain – Mid-land Transition Zone
Number of rivers passing through LSGI	1
Number of water bodies in the LSGI	3
Number of educational institutions	5
Factories / small-scale industries	0
Flood-prone wards	3
Landslide-prone wards	0
Death Management and Disposal Facilities (mortuaries/crematorium, including electric)	0
Auditoriums/Marriage halls/convention centres/community halls	2

Demographic and Vulnerable Population

Understanding the demographic composition and vulnerable population groups is essential for pandemic preparedness. Children, elderly, economically deprived families, migrant workers, and socially vulnerable groups are at increased risk during public health emergencies due to higher exposure, limited access to services, and dependency on public systems..

Description		Details (in numbers)
DEMOGRAPHIC PROFILE		
Total population		35657
Male		17708
Female		17949
Transgender		0
Children under 5		1869
Adolescent		3062
Elderly (>60)		5785
SOCIAL/LIVELIHOOD VULNERABILITY		
Previous EPEP family		83
BPL family		5905
Tribal communities		0
Migration	Immigrant	502
	Emigrant	Not available
Socio-economically deprived		5905
Fisherfolk		Appro. 3000
SC Community		3576
ST Community		9

Graphs: Population pyramid (if possible) for seeing if your LSGI has a high "dependency ratio" (lots of children and elderly compared to working adults).

Clinical Vulnerability

Certain population groups need priority healthcare & are at higher risk of severe illness, complications, and mortality during pandemics. Patients with chronic diseases, those requiring regular medical care, and individuals with mobility or functional limitations face challenges in accessing timely care during emergencies. Mapping these groups helps in prioritizing continuity of treatment, medicine stock planning, oxygen support, referral transport, and targeted home-based care.

Description	Details in numbers
Pregnant women	157
Lactating mothers	389
Bedbound patients	173
Patients under palliative care other than bedbound	318
Patients on Haemodialysis	15
Patients on CAPD	1
Cancer patients (currently on treatment)	131
Haemophilic patients	0
Mentally challenged	148
Differently abled	111
Diabetic patients	2832
Hypertensive patients	3069
TB patients	7

Major Festivals & Events specific to the LSGI

Sl. No.	Name of festival	Month detailing the periodicity
1	Azhimala Pongala	January
2	Chowara Pongala	January
3	Balasubramanya Temple Avanakuzhy	December
4	Sree Krishnaswamy Temple Punnakula	April
5	Karkida Vavu Bali Ambalathumoola	July
6	Thenkavila Temple	March
7	Maruthoorkonam Siva Temple	February
8	Siluvamala Theerthadanam	September

INFRASTRUCTURE & RESOURCE INVENTORY

Health Facility Directory & Basic Capacity in the LSGD

This section provides an overview of the healthcare infrastructure available within the LSGD area. It outlines the distribution and basic capacity of health facilities that form the backbone of service delivery during routine times and public health emergencies.

Family Health Centres (FHCs) and Community Health Centres (CHCs) generally function as the first point of contact for the community, providing essential outpatient and inpatient services. General Hospitals (GH) and Medical College Hospitals (MCH), where accessible, serve as the main referral centres for advanced diagnostics, specialist care, and critical services during public health emergencies. This inventory helps identify existing strengths, gaps, and potential surge capacity that can be mobilised during a pandemic or disaster.

Table 5. Health Facility Resource Summary								
Sl.no.	**Health Facility**	**Type of Facility (MCH/GH/CHC/FHC/SC etc.)**	**Contact Number**	**Total beds**	**ICU Beds**	**Oxygen-Supported Beds**	**No. of Ventilator Support Beds**	**No. of ambulances**
Government Healthcare Facilities								
1	Family Health Centre Kottukal	PHC	0471 226 9070	0	0	0	0	0
2	AAM Adimalathuyra	SC	8129480518	0	0	0	0	0
3	AAM Chappath	SC	9539436623	0	0	0	0	0
4	AAM Pulinkudi	SC	9539436623	0	0	0	0	0
5	AAM Punnakulam	SC	9961829703	0	0	0	0	0
6	AAM Payattuvila	SC	9746978802	0	0	0	0	0
7	AAM Maruthoorkonam	SC	9446751487	0	0	0	0	0
8	AAM Nellimoodu	SC	8921317926	0	0	0	0	0
9	AAM Avanakuzhi	SC	8921317926	0	0	0	0	0
10	AAM Main centre	SC	9497009133	0	0	0	0	0

11	AAM Mannottukonam	SC	9446751487	0	0	0	0	0
Private Healthcare Facilities								
1	Mariyanilayam Hospital	PVT	0471 2266065	0	0	0	0	0
2	Sindhuja hospital	PVT	04712267756	0	0	0	0	0
AYUSH Healthcare Facilities								
	————	————	————	————	————	————	————	
	————	————	————	————	————	————	————	

Private Clinics

Private clinics are an essential part of pandemic preparedness, as they are often the first place people seek care when symptoms begin. In many communities, private clinics manage a significant share of outpatient visits and therefore play a critical role in early case detection, timely referrals, and disease surveillance. Having an up-to-date understanding of where these clinics are located, the services they provide, and how they are linked to the public health system helps ensure that no cases are missed during an outbreak. It also allows health authorities to engage private practitioners more effectively for reporting, risk communication, and coordinated response, strengthening the overall capacity of the health system to manage public health emergencies.

Table 6. Private Clinic Resource Summary

Sl No.	Name of Clinic	Registered (Y/N)	Clinic (General / Speciality)	Speciality (if any)	Address	Contact Number	Diagnostic Facility (Y/N)	Ambulance Linkage (Y/N)
	0	0	0	0	0	0	0	0

Healthcare Education & Training Institutions

This section tracks the educational infrastructure available, which is vital for human resource planning in the health sector.

Category of Institution	Govt	Private	AYUSH	Total
Medical Colleges	0	0	0	0
Nursing Colleges	0	0	0	0
Dental Colleges	0	0	0	0
Para-medical / Allied Health	0	0	0	0
Pharmacy Colleges	0	0	0	0

Specialized Services & Emergency Inventory

This section provides a detailed view of the specialized medical resources available to the community, focusing on emergency response and critical care capabilities. This table tracks the vital assets required for managing severe illnesses and emergencies across Government, Private, and AYUSH sectors.

Item	Govt	Private	AYUSH	Total
Hospital beds	0	0	0	0
Oxygen-generating systems(Y/N)	0	0	0	0
Oxygen-supported beds(Numbers)	0	0	0	0
Ventilator-supported beds	0	0	0	0
ICU beds	0	0	0	0
Burns units	0	0	0	0
Blood centres	0	0	0	0
BLS ambulances	0	0	0	0
ALS ambulances	0	0	0	0
Dialysis facilities	0	0	0	0
Dispensaries	1	0	1	2
Medical store				
Industrial establishments(**Medium-scale industries/small-scale industries establishments to whom we can depend in a worst-case scenario)**	0	0	0	0

Oxygen & Diagnostic Capacity

Monitoring **oxygen and diagnostic capacity** is a critical component of public health preparedness, ensuring that the LSGD can handle both chronic care and sudden surges in respiratory or infectious diseases.

Name of Health Facility	Oxygen-generating System (Y/N)	Backup Oxygen Source (Y/N)	Diagnostic Facilities Available(Y/N)				
			Lab	USG	X-ray	CT/MRI	RT-PCR
Government Healthcare Facilities							
FHC Kottukal	NIL	NIL	NIL	NIL	NIL	NIL	NIL

Diagnostics facility mapping at the LSGI level

The diagnostic capacity of **Kottukal G.P** represents the "intelligence network" of our healthcare system. The speed and accuracy of disease identification depend entirely on the distribution and technical level of these facilities.

Item	Govt	Private	AYUSH	Total
General labs	1	3	0	4
Microbiology labs	0	0	0	0
RT-PCR labs	0	0	0	0
USG units	0	0	0	0
CT/MRI units	0	0	0	0
Research labs	0	0	0	0
Labs of other departments that can be repurposed				

Laboratory Identification & Basic Details

Sl. No.	Name of Laboratory	Ownership (Govt / Private / Academic)	Address	Contact No.	24×7 Services (Yes/No)	NABL / Govt Approved (Yes/No)
1	FHC Kottukal	Govt	Punnakulam	2269070	No	yes
2	ASWAS lab	Private	pulinkudy		NO	NO
3	Mariyanilayam	PVT	Ambalathumoola	09497029185	yes	NO
4	HOPE LAB	PVT	Chappath	9447220134	NO	NO

Social and Community Infrastructure for surge plan

This table serves as our **logistics and shelter inventory.** By mapping these locations, quickly we can identify where to house displaced citizens, where to set up temporary medical clinics, and how to manage the deceased with dignity during a crisis.

Category	Total Count	Ward	Est. Capacity (Persons)	Contact details
Educational Institutions				
Anganwadis	32	21	1850	*See annexure
Schools	19	16	2650	*See annexure
Colleges	0	NIL	NIL	NIL
Healthcare Educational Institutions				
Medical colleges (Govt/Private)	0	NIL	NIL	NIL
Nursing colleges (Govt/Private)	0	NIL	NIL	NIL
Dental colleges (Govt/Private)	0	NIL	NIL	NIL
Paramedical institutes (Govt/Private)	2		500	
Community Gathering Spaces				
Community halls	1			Chinanvila Community hall
Auditoriums	1			Sree Krishna swami temple auditorium

Religious buildings	1			Sree Krishna swami temple
Vulnerable Group Support Facility				
Destitute homes	0	NIL	NIL	NIL
Elderly homes	0	NIL	NIL	NIL
LSGD owned other buildings	0	0	0	0
Mass Fatality Management (MFM) Infrastructure				
Mortuary	0	NIL	NIL	NIL
Crematorium	0	NIL	NIL	NIL

*refer annexure 1 for contact details

Human resources

This section focuses on the **human capital** available within the LSGI. In any emergency—be it a pandemic, flood, or industrial accident—infrastructure is only as effective as the people operating it.

Medical & Clinical Personnel

This table tracks the "Frontline" providers responsible for diagnosis, treatment, and clinical management. Narrative sentence: eg., "Total health workforce: 450 personnel, with 60% in government facilities serving as primary surge capacity." A detailed directory with the contact numbers of all workers is maintained (**Annexure in 1**).

Cadre	Govt (No.)	Private (No.)	Total
Doctors—Modern Medicine	3	3	6
Doctors – AYUSH	1	0	1
Doctors – Veterinary	0	0	0
Doctors – Dental	0	0	0
Nursing officers	3	8	11
Lab technicians	2	2	4
Optometrist	0	0	0
Pharmacists	2	4	6
Psychologists	0	0	0
Counsellors	0	0	0

Public Health & Field-Level Workforce

These individuals are the backbone of surveillance, maternal-child health, and decentralized care.

Cadre	Health services	Municipal common services	Total
HS (Health Supervisors)	0	0	0
HI (Health Inspectors)	1	0	1
PHNS(PublicHealthNurse Supervisor)	0	0	0
PHN (Public Health Nurse)	2	0	2
JPHN (Jr Public Health Nurses)	10	0	10
JHI (Jr Health Inspectors)	4	0	4
MLSP (Mid-Level Service Providers)	10	0	10
Palliative Nurses	1	0	1
RBSK Nurses	1	0	1
PRO	0	0	0
Epidemiologist	0	0	0

Data Manager	0	0	0

Community & Support Cadre

This group represents the surge capacity of the LSGI—people who can be called upon for logistics, rescue, and specialized support.

Cadre	Number
ASHA Workers	32
AWW (Anganwadi Workers)	32
Emergency Medical Volunteers (Trained)	18
Kudumbashree	4100
MNREGS	6217
Purusha Swayam Sahaya Sangham	12
Ex-Servicemen	23
Retired Police Officers	5
NCC/NSS Volunteers	2
Red Cross volunteers	0
One Health Community Volunteers	21

One Health Community Mentors	7

Community Organizations

This section details the presence of community-based organisations (CBOs), non-governmental organisations (NGOs), faith-based organisations (FBOs), Kudumbashree Self-Help Groups (SHGs), and Ayalkootams within the Local Self-Government Institution (LSGI). These groups enhance grassroots mobilization, resource distribution, and support networks crucial for pandemic response and community resilience.

Category	**Total Count**
NGOs	6
Religious based organizations	1
Foreign based organizations	0
Sports Club/youth clubs	12
Kudumbashree SHGs	349
Ayalkootams	349
Political organizations	7
Residential organizations	13

Administrative & Emergency Services

This section outlines the availability of key non-health emergency support services and infrastructure within the LSGI, which are essential for effective pandemic preparedness and response. These facilities support law enforcement, disaster response, water supply, logistics, mobility, and community-level interventions during public health emergencies.

Category	Total Count	Contact details
Police Stations	0	NIL
Fire & Rescue Stations	0	NIL
Water Pumping Points	5	……
Public Distribution System (PDS)	1	…….

Information regarding resources

The availability of essential transport and support resources plays a quiet but critical role in saving lives. Equipment such as ambulances, mobile mortuaries, amphibian ambulances, and motorized boats ensures that patients, samples, and healthcare teams can move swiftly—even in flooded, remote, or difficult terrains. Heavy vehicles like JCBs, cranes, tractors, and torus lorries support logistics, waste management, emergency infrastructure, and rapid conversion of spaces into care or isolation facilities. Taxis, four-wheel-drive vehicles, and trucks help maintain continuity of essential services, reach vulnerable populations, and support home-based care and supply delivery.

Means of transportation	Total Count
JCB	7
Crane	2
Heavy Trucks	0
Tractor	0
Ambulances	3
Mobile mortuaries	0
Boats	15
Taxi service	50

Note: For specific details regarding vehicle owners and contact information, please refer to **Annexure [X]**.

ONE HEALTH & ENVIRONMENTAL SURVEILLANCE

The One Health method integrates environmental, animal, and human health to enable proactive pandemic preparedness. Panchayat-level surveillance needs to be improved in order to detect and treat zoonotic and environmentally generated diseases early. Surveillance is strengthened through systematic assessment of animal populations, veterinary infrastructure, poultry and slaughter facilities, inter-sectoral coordination, and specialised tools like avian influenza seasonality mapping using GIS in previous outbreaks to enable predictive alerts and ward-specific sampling to support effective pandemic preparedness in high-risk areas .

Animal & Bird Population

Mapping animal and bird populations at the Panchayat level is essential for identifying and prioritising zoonotic disease hazards like rabies, avian influenza (H5N1), leptospirosis, anthrax, and Nipah-like spillover occurrences. Risk classification, targeted surveillance, vaccination planning, and early epidemic detection made feasible by comprehensive population mapping all enhance One Health-based pandemic preparedness.

Category	Item	Estimated Population	Wards
Animal Population	Livestock (Cattle/Goats/Buffalo)	2934(cattle-1548, buffalo-67,goat-1319)	Ward1 :cattle-166,buffalo-0,goat-92 Ward 2 :cattle-69,buffalo-0,goat-75 Ward 3 :cattle-196,buffalo-20,goat-156 Ward4: cattle-25,buffalo-0,goat-81 Ward5 :cattle-43,buffalo-21,goat-58 Ward6 :cattle-56,buffalo-12,goat-55 Ward7: cattle-129,buffalo-0,goat-53 Ward8: cattle-25,buffalo-6,goat-23 Ward9: cattle-18,buffalo-0,goat-0 Ward10: cattle-26,buffalo-0,goat-0 Ward11: cattle-15,buffalo-0,goat-109 Ward12: cattle-12,buffalo-0,goat-28 Ward13: cattle-90,buffalo-0,goat-94 Ward14: cattle-124,buffalo-1,goat-16 Ward15: cattle-67,buffalo-2,goat-85 Ward16: cattle-119,buffalo-0,goat-78 Ward17: cattle-67,buffalo-1,goat-99 Ward18: cattle-139,buffalo-3,goat-88 Ward19:cattle-142,buffalo-1,goat-29

	Pet Animals (Dogs/Cats)	850	All wards
	Stray Dog Population	150	All wards
	Pig Farms (Number of heads)	4	4
	Small Units (Sheep / Goats – clustered)	0	NIL
Bird Population	Poultry Units (Birds)	25	—----
	Poultry- (FOWL)	15000	—----
	Wild/Migratory Birds (Observed)	0	NIL
	Crow Mortality Events (Reported)	0	NIL

The main risk of zoonotic diseases in Kottukal panchayat is concentrated in all **wards** which is explained by the high density of pig farms, cattle congregation areas, and poultry units. The stray dog population in **market areas, fish landing sites, bus stations** continues to be a substantial problem for rabies surveillance and bite prevention. There is a considerable risk of avian influenza introduction and amplification during **November - December** due to the seasonal presence of migratory and resident water birds near **ponds/ canal / river / backwater / paddy field**. Clusters of pig farms and animal shelters vulnerable to flooding further raise the risk of leptospirosis and other zoonoses mediated by the environment, especially during monsoon floods.

Veterinary Infrastructure

Veterinary institutions are a core pillar of One Health surveillance, enabling early zoonotic disease detection through vaccination, investigation of unusual animal illness or deaths, sample collection, and timely outbreak reporting. A well-mapped and responsive veterinary network strengthens

coordination with human health and LSGI systems, ensuring rapid response during zoonotic events and pandemics.

Facility Type	Name of Facility	Ownership Govt / Pvt	Location(Ward No)	Contact number
Veterinary Dispensary	Govt. Veterinary	1	……	2267656
Veterinary Hospital / Polyclinic	nil	nil	nil	nil
Private Veterinary Clinics	nil	nil	nil	nil
Mobile / Emergency Vet Service (incl. night services)	nil	nil	nil	nil
Pet Homes / Animal Shelters	nil	nil	nil	nil
Slaughterhouse-linked Veterinary Inspection Unit	nil	nil	nil	nil

Veterinary Doctors & Workforce

Early detection, diagnosis, reporting, and reaction to animal illness epidemics depend on the availability and accessibility of qualified veterinary specialists. By identifying unusual animal morbidity or mortality promptly, collecting samples promptly, and coordinating efficiently with human health and LSGI systems—especially during zoonotic outbreaks and pandemic-prone situations—a clearly defined veterinary workforce enhances One Health surveillance.

Category	Number Available	Type (Govt/Pvt)	Contact number
Government Veterinary Doctors	1	GOVT	0471 2267656
Private Veterinary Doctors	0	NIL	NIL
Livestock Inspectors	1	Govt	
Para-veterinary Staff / Attenders	1	Govt	
Contract / On-call Veterinary Support (if any)	0	NIL	NIL

High-Risk Interface Points (Surveillance Sites)

High-risk interface points for zoonotic disease surveillance in Kottukal Grama Panchayath include *wetland–livestock–human contact zones, backyard poultry farms, cattle sheds near water bodies, fish markets, and areas of high human–animal interaction such as community slaughter points and migratory bird congregation sites*. These are the primary surveillance sites where zoonotic spillover risks are elevated.

Type of Habitat	Type of High risk interface	Geographical vulnerability
Wetlands & Backwaters	NIL	NIL
Backyard Poultry Farms	NIL	NIL
Cattle Sheds near Water Bodies	NIL	NIL
Fish & Meat Markets	NIL	NIL
Community Slaughter Sites	NIL	NIL
Migratory Bird Congregation Areas	NIL	NIL
Rodent-Infested Grain Storage	NIL	NIL

Category	Total Count	Key Locations (wards)
Poultry Farms	15	16,18,19
Backyard / Clustered Poultry Units	0	NIL
Duck Rearing Units (open water access)	0	NIL
Slaughterhouses/ Slaughter Points	0	NIL
Meat/Fish Markets	0	NIL
Live Bird Sale Points	0	NIL
Cattle Markets / Weekly Animal Fairs	0	NIL
Pet Shops / Breeders	5	5,
Animal Shelters / Pet Homes	0	NIL
Waste Disposal Sites near Animal Units	0	NIL

Environmental Risk Mapping

Environmental risk mapping identifies monsoon/flood hotspots for vector-borne (dengue, chikungunya), water-borne (leptospirosis, diarrhoea), and zoonotic diseases in Kerala's wetlands. Systematic surveillance supports early warnings, targeted interventions, and Panchayat pandemic preparedness.

Waterborne exposure: Flood-prone areas and stagnant water bodies facilitate *leptospira survival*, raising leptospirosis risk.

Traditional practices: Informal slaughter and fish markets lack standardized hygiene, creating *spillover opportunities*.

Risk Factor	High-Risk Wards	Key Locations	Risk Level (High/Med/Low)
Flood-prone areas	0	0	0
Water bodies/wetlands	8,9,10	Adimalathura	Medium
Solid waste accumulation	9,10,	Adimalathura	Medium
Animal waste disposal issues	NIL	NIL	NIL
Rodent infestation zones	19	puliyoorkonam	low
Industrial effluent discharge	NIL	NIL	NIL
Construction sites / abandoned buildings	NIL	NIL	NIL
Poor drainage/blocked canals	8,9,10	adimalathura	Medium
Drinking water source contamination risk	7,6,9,10	Sreenaryanapuram Moolakara Adimalathura chappath	Medium

Disease Seasonality Mapping

1, **Flooding & waterlogging** → amplifies leptospirosis, malaria, diarrheal diseases.

.

2, Migratory bird influx (Nov–Feb) → avian influenza risk.

3, Mosquito breeding cycles → vector-borne disease peaks in monsoon.

4, Agricultural practices → close human–animal contact in paddy fields.

Disease	Peak Risk Season	Key Drivers	High-Risk Locations	Surveillance Focus
Avian Influenza	NIL	NIL	NIL	NIL
Leptospirosis	Jun,Jul,Nov	Mnreg ,cultivators	Nellimoodu,payattuvila,puliyoorkonam,punnakulam	Mnreg ,cultivators
Dengue/Chikungunya	June,jul,nov,dec	Children, coastal,outside workers,construction worker	Adimalathura,puliyoorkonam,punnakulam,maruthoorkonam,nellimoodu kollakonam	Coastal, outside workers
Acute Diarrheal Diseases	Jan,june,july nov.dec	Childrens,	Adimalathura,punnakulam,maruthoorkonam,chappath	Children, sangetham
Rabies	NIL	NIL	NIL	NIL
Anthrax (rare)	NIL	NIL	NIL	NIL

Vulnerability Mapping

Vulnerability mapping pinpoints high-risk populations, occupations, and areas exposed via environment, livelihoods, socio-economics, and poor service access. Paired with environmental/seasonality mapping, it enables risk-based surveillance, targeted actions, and optimal resource use in One Health and pandemic planning.

Vulnerability Factor	High-Risk Wards	Key Groups / Locations	Risk Level
Flood-prone households	8,9,10	Adimalathura	Medium
Wetland-adjacent communities	8,9,10,15,16	Adimalathura	Medium
Backyard poultry / duck rearing households	NIL	NIL	NIL
Livestock-rearing households	15	PRIYADARSHINI	Medium
Slaughterhouse & meat market workers	NIL	NIL	NIL
Fisherfolk & fish market workers	8,9,10	Adimalathura	Medium
Sanitation workers	19	Payattuvila	Low
Daily wage / migrant workers	18,19,16	Payattuvila,Maruthoorkonam	Medium
Elderly & chronically ill populations	173	Palliative/Dialysis	Medium
Pregnant Women	6	Punnakulam,Maruthoorkonam,Payattuvila,Mannottukonam	Low
Children (schools, Anganwadi's)	2	Punnakulam	Low
Limited access to safe water & sanitation	8,9	Adimalathura	Low

EPIDEMIOLOGICAL TRENDS (2021–2025)

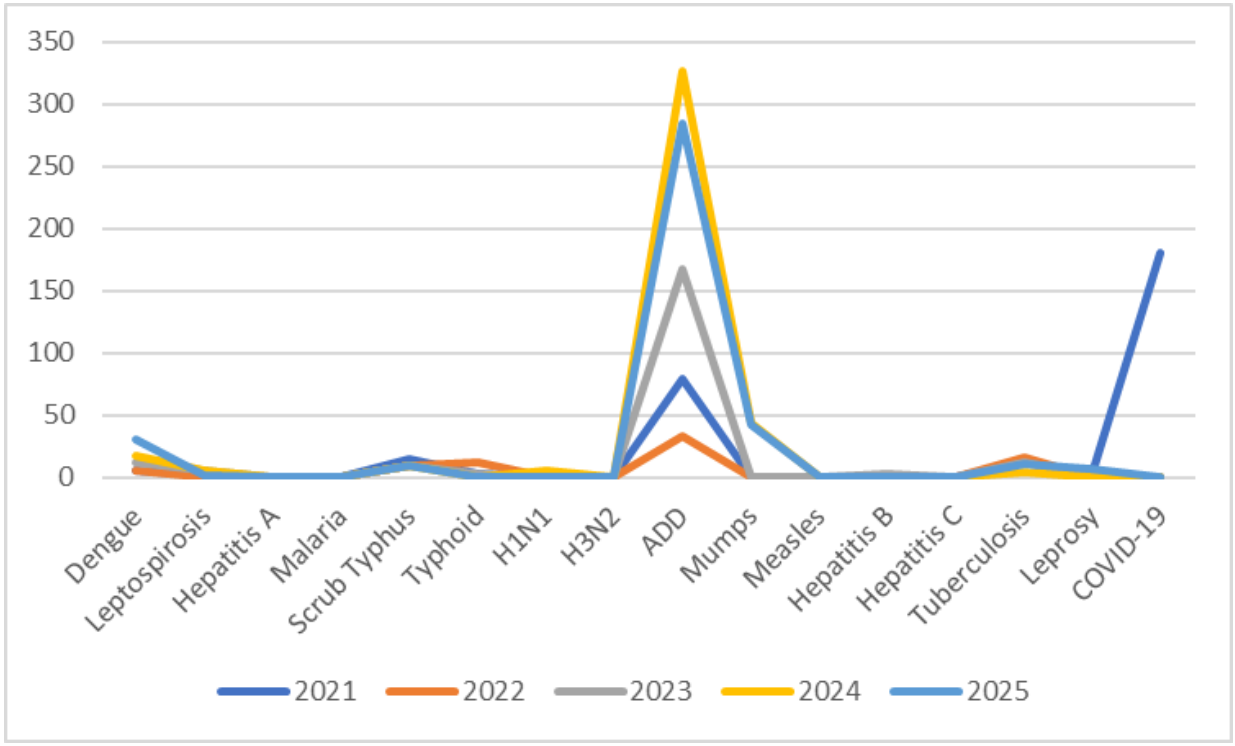
Disease surveillance is the systematic collection, analysis, and interpretation of health data for planning, implementation, and evaluation of public health practice. This section presents the disease surveillance profile of the LSGI based on routine reporting systems and outbreak investigations to identify priority diseases, seasonal patterns, and emerging public health threats.

Disease Burden among human beings(Last 5 Years)

Analysis of disease-wise data for the last five years helps identify persistent public health problems, emerging diseases, and changes in disease burden. This information supports prioritisation of prevention, preparedness, and response activities at the Panchayat level.

Disease	2021	2022	2023	2024	2025	Trend(Increasing/Stable/Decreasing)
Dengue	5	6	12	17	31	**Increasing**
Leptospirosis	2	1	5	6	2	**Decreasing**
Hepatitis A	0	0	0	0	1	**Decreasing**
Malaria	0	0	0	0	0	stable
Scrub Typhus	15	10	9	9	9	**Stable**
Typhoid	3	12	3	1	0	**Decreasing**
H1N1	0	0	1	6	1	**Decreasing**
H3N2	0	0	0	0	0	stable
ADD	79	33	167	327	284	**Decreasing**
Mumps	0	0	0	44	43	**Stable**
Measles	0	0	0	0	0	**Stable**

Hepatitis B	0	0	3	1	0	**Decreasing**
Hepatitis C	0	0	0	0	0	**Stable**
Tuberculosis	12	16	12	4	11	**Stable**
Leprosy	2	0	2	1	7	**Stable**
COVID-19	180	0	0	0	1	**Decreasing**



Seasonal Trend Analysis

Seasonal analysis helps anticipate surges (e.g. dengue in monsoon, leptospirosis after floods, influenza in cooler months) and plan pre-emptive vector control, stockpiling of IV fluids, and awareness campaigns at Panchayat level.

DENGUE

Dengue is a major seasonal vector-borne disease strongly associated with rainfall, water stagnation, and increased mosquito breeding during the monsoon period.

Peak: July–November

Dengue – Ward-wise Yearly Distribution (2021–2025)

Ward	Dengue – Ward-wise Yearly Distribution					
	2021	2022	2023	2024	2025	Total
1	0	0	0	1	1	**1**
2	1	1	1	0	1	**1**
3	0	1	1	1	3	**6**
4	0	0	1	1	1	**3**
5	0	0	0	1	1	**2**
6	0	0	0	1	0	**1**
7	0	0	0	0	0	**0**
8	1	0	2	1	2	**6**
9	0	0	1	2	8	**11**
10	0	1	0	2	5	**8**
11	0	1	0	1	2	**4**
12	0	0	1	1	1	**3**

13	0	0	1	1	0	**2**
14	0	0	0	0	2	**2**
15	02	0	2	2	3	**9**
16	0	0	0	0	0	**0**
17	0	0	1	1	0	**2**
18	0	0	0	0	0	**0**
19	1	1	1	0	1	**4**

LEPTOSPIROSIS

Leptospirosis cases are closely linked to monsoon rains, flooding, and occupational exposure, particularly in low-lying and waterlogged areas.

Peak: June - August

Leptospirosis – Ward-wise Yearly Distribution (2021–2025)

Ward	Leptospirosis – Ward-wise Yearly Distribution					
	2021	**2022**	**2023**	**2024**	**2025**	**Total**
1	0	0	0	0	0	**0**
2	0	0	0	1	0	**1**
3	0	0	0	1	0	**1**
4	1	0	0	1	0	**2**
5	0	0	1	0	1	**2**
6	0	0	1	0	0	**1**
7	1	0	0	1	1	**3**
8	0	0	0	0	0	**0**
9	0	0	0	0	0	**0**
10	0	0	0	0	0	**0**
11	0	00	0	0	0	**0**
12	0	0	0	0	0	**0**

13	0	0	0	0	0	**0**
14	0	0	0	1	0	**1**
15	0	0	0	0	0	**0**
16	0	1	0	1	0	**2**
17	0	0	1	0	0	**1**
18	0	0	1	0	0	**1**
19	0	0	1	0	0	**1**

VIRAL HEPATITIS - A

Hepatitis A cases are commonly associated with unsafe drinking water, food contamination, and breakdowns in sanitation, often presenting as clusters or outbreaks.

Peak: October - December

Hepatitis A – Ward-wise Yearly Distribution (2021–2025)

Ward	Hep A – Ward-wise Yearly Distribution					
	2021	2022	2023	2024	2025	Total
1	0	0	0	0	0	**0**
2	0	0	0	0	0	**0**
3	0	0	0	0	0	**0**
4	0	0	0	0	0	**0**
5	0	0	0	0	0	**0**
6	0	0	0	0	0	**0**
7	0	0	0	0	1	**1**
8	0	0	0	0	0	**0**
9	0	0	0	0	0	**0**
10	0	0	0	0	0	**0**
11	0	0	0	0	0	**0**

12	0	0	0	0	0	**0**
13	0	0	0	0	0	**0**
14	0	0	0	0	0	**0**
15	0	0	0	0	0	**0**
16	0	0	0	0	0	**0**
17	0	0	0	0	0	**0**
18	0	0	0	0	0	**0**
19	0	0	0	0	0	**0**

Outcome-Based Trend Analysis- 2025

Transmission Trend- 2025

For effective management of public health issues, it is important to track the trend of disease transmission mode. It helps identify the population or place at high risk that can be used to predict outbreaks and implement targeted interventions as quickly as possible. Understanding these kinds of trends enables authorities to allocate resources efficiently and change the strategies adequately based on the trend that follows.

Mode of Transmission	No. of cases	No. of Deaths
Vector Borne Diseases	31	0
Water Borne Diseases	284	0
Air Borne Diseases	13	1(covid)
Blood Borne Diseases	0	0
Food Borne Diseases	0	0

Vector-Borne Disease

Disease	No. of Cases	No. of Deaths
Dengue	31	0
Malaria	0	0
Chikungunya	0	0

Water Borne Disease

Disease	No. of Cases	No. of Deaths
Cholera	0	0
Typhoid	0	0
Hep- A	1	0
Dysentery	0	0
Amoebiasis	2	0
E- Coli infections	0	0

Air Borne Disease

Disease	No. of Cases	No. of Deaths
Influenza	0	0
H1N1	1	0
TB	11	0
Chickenpox	4	0
Measles	0	0
Covid-19	1	1
Pertussis	0	0
Mumps	43	0

Blood-Borne Disease

Disease	No. of Cases	No. of Deaths
AIDS	0	0
Hep- B	0	0
Hep- C	0	0

Zoonotic Disease

Disease	No. of Cases	No. of Deaths
Rabies	0	0
Leptospirosis	2	0
Avian influenza	0	0
West nile	0	0
Anthrax	0	0
Nipah	0	0
Scrub Typhus	9	0

Integrated Disease Hotspot Map (2021–2025)

Ward No	Dengue Total (2021-25)	Leptospirosis Total (2021-25)	Hepatitis A Total (2021-25)	Mumps (2021-25)	ADD (2021-25)	Total Cases
1	1	0	0	1	45	**47**
2	1	1	0	03	45	**50**
3	3	1	0	2	54	**60**
4	2	2	0	4	33	**41**
5	1	2	0	4	41	**48**
6	0	1	0	3	49	**53**
7	0	3	0	1	49	**53**
8	6	0	1	1	50	**58**
9	11	0	0	2	45	**58**

10	8	0	0	1	61	**70**
11	4	0	0	2	48	**54**
12	3	0	0	3	52	**58**
13	2	0	0	3	47	**52**
14	2	1	0	2	49	**54**
15	9	0	0	17	43	**26**
16	0	2	0	14	41	**57**
17	2	1	0	10	51	**64**
18	0	1	0	7	42	**50**
19	4	1	0	12	45	**62**

By overlaying five years of data, we have identified Adimalathura ward 'Red Zone' Wards. These are wards where at least two different categories of diseases (e.g., Dengue and Lepto) recurred in consecutive years. Ward **4** is categorized as the **Highest Priority Hotspot** due to its combination of flood vulnerability and high vector density. Future health infrastructure, such as the proposed **R.O plants at Adimalathura** should be prioritized.

Preparedness and Response Protocol at LSG Level

This section describes the operational framework for the LSGI once a pandemic is declared. It explains how the LSGI and health system will move from routine data collection to active response, using a One Health approach.

Constitution of One Health Committee

The LSGD shall constitute a One Health Committee comprising the LSGI President, Medical Officers (Modern Medicine, AYUSH, and Veterinary), the Health Inspector, and the Veterinary Surgeon.

Objective: The One Health Committee coordinates human, animal, and environmental health to prevent and control pandemics.

Sl No	Name	Designation	Department/Institution	Role in Committee	Contact Number
1	Sheeja s	Panchayat President	LSGD	Chairperson	9746071705
2	Dileep das	Medical Officer (PHC/CHC)	Health Dept	Member Secretary	8848578883
3	Indhu lekha	Veterinary Officer	Animal Husbandry	Member	0471 2267656
4	Anjali	Epidemiologist	Health Dept	Member	8891473699
5	Shibu y k	Health Inspector/PHN	Health Dept	Surveillance	7012568788
6	Kumary Kala	ASHA Supervisor	Health Dept	Community link	7907058053
7	Krishnedhu	ICDS Supervisor	Social Welfare	Vulnerable groups	9497427160
8	Reji rakj	Police Station Officer	Police Dept	Law & order	9497987012
9	BINU	Ward Councillor Representative	LSGD	Community coordination	9846612119
10	Bindhu	Kudumbashree CDO	Kudumbashree	Community mobilisation	99959854740
11	…….	NGO/Volunteer rep	Civil Society	Support services	…….

Key Responsibilities:

- Review disease surveillance data (human + animal)
- Conduct ward-wise risk assessment and vulnerability mapping
- Approve quarantine/isolation centre locations
- Coordinate with district for resources (PPE, oxygen, ambulances)
- Periodically review health system surge capacity, including beds, oxygen, human resources, and ambulances.

- Approve and monitor risk communication and community engagement strategies, including rumour management.
- Ensure protection and service continuity for vulnerable groups (elderly, persons with disabilities, dialysis patients, coastal populations).
- Conduct quarterly mock drills
- Monitor equity measures for vulnerable groups

Meeting Schedule:

Quarterly (normal times) | Weekly (outbreak alert) | Daily (pandemic phase)

Pandemic Response Workforce

To ensure a coordinated and timely response during a pandemic, a dedicated Pandemic Response Workforce shall be constituted at the LSG level. The workforce will function under the overall supervision of the One Health Committee and in close coordination with the health authorities. Team-based deployment will enable efficient surveillance, case management, quarantine and isolation management, logistics support, and risk communication. Each team shall have a clearly designated team leader, defined roles, and an identified pool of personnel to allow rapid activation, rotation of duties, and continuity of services during prolonged emergencies.

Total Response Workforce Available: 300 persons

Team Name	Composition	Key Responsibilities	Team Leader
Surveillance and Contact Tracing Team	HI, JHI, JPHN, ASHAs and Volunteers	Case detection, contact listing, home visits, reporting	HI
Case Management Team	Doctors, Nurses, MLSP, Palliative Nurses	Patient care & referral	DOCTOR
Quarantine & Isolation Team	LSGD staff, Volunteers	Facility management	JHI
Psychosocial support	MLSP, Adolescent health counsellor	IEC	HI
Logistics & supply chain Team	LSGD staff, Storekeepers, Drivers 3	Supplies & transport [PPE, medicines, oxygen, transport, waste management]	Ward Member
Communication Team	Ward members, Kudumbashree, Youth clubs, AWW workers and other self help groups	IEC, community meetings, countering misinformation	M.O in charge
Transportation	KSRTC, educational institutional buses	……..	……
Media Surveillance	Social media ,Local network	Through Representatives	HI
Intersectoral coordination and convergence	FIELD LEVEL TEAM& ALLother DEPT	Meeting regularly	HI
Collaborative surveillance	RRT MEMBERS	Communication, Active response	HI

All teams shall be activated immediately upon outbreak alert or pandemic declaration and shall report daily to the LSG Incident Commander/Medical Officer, with consolidated reporting to the Block PHC. Duty rosters and alternate personnel shall be maintained to ensure uninterrupted services during staff shortages or prolonged response periods. Team composition and numbers may be revised based on the magnitude of the outbreak and availability of human resources.

Activities and Measures before and during Pandemic

PHASE 1 - Alert / Preparation

Surveillance and Reporting-Enhanced syndromic surveillance:

1. **Data sources for surveillance:**
2. **Event-based triggers (to be monitored and reported):**
3. **Zoonotic and animal health surveillance**
4. Logistics and Stock Preparedness

- Identify and empanel local vendors and define emergency procurement mechanisms in accordance with existing LSGD and Health Department norms.
- Prepare and maintain an essential logistics checklist covering medical supplies, consumables, and support equipment.
- Pre-identify secure storage locations for emergency stocks and ensure maintenance of stock registers with regular updating.
- Finalise emergency transport arrangements, including availability of vehicles and identified drivers for rapid deployment during alerts.
- Designate a Nodal Officer for Logistics to enable prompt decision-making, coordination, and communication during emergencies.
- Conduct rapid stock verification and ensure availability of minimum buffer stock, including:
    - PPE kits – 0
    - Pulse oximeters – 0 numbers
    - Hand sanitizers – sufficient litres
    - Masks, gloves, disinfectants – adequate quantity

Identify critical gaps in logistics and immediately communicate requirements to the Block and District authorities for timely replenishment and support. Monitor expiry dates and stock rotation.

➢ Identification of Quarantine and Isolation Facilities

- Identify and list suitable buildings for quarantine and isolation (schools, hostels, community halls, etc.).
- Categorise cases as per the severity and allocate to appropriate facilities (for instance, severe cases to classrooms, mild cases to an assembly hall in case of a school).
- Facility readiness checklist needed (beds, toilets, ventilation) etc.
- Find an alternate site if the primary sites are not available or not in use.
- Identify facility managers and support staff
- Prepare basic SOPs for:
  - Admission and discharge
  - Food, water, sanitation
  - Infection prevention and waste disposal
- Ensure availability of basic amenities: water, sanitation, electricity, ventilation, and waste disposal. Prepare a rapid activation plan for these facilities if case numbers increase.

➢ Risk Communication and Community Preparedness

- Disseminate **e**arly warning messages on symptoms, preventive measures, and reporting mechanisms. Display IEC materials both in English and the local language in public places and ensure ward-level awareness.
- Sensitize elected representatives and community leaders on preparedness measures.
- Establish a rumour tracking and misinformation response mechanism to identify, verify, and promptly counter false or misleading information.
- Engage trusted local persons (ward members, ASHA workers, religious leaders, teachers, community volunteers) to communicate official public health messages and reinforce correct practices.
- Develop and deploy targeted IEC materials for:
  - Schools and educational institutions
  - Markets and commercial areas
  - Work sites and labour settings

- Conduct community sensitization meetings at the ward level to promote preventive behaviors, address concerns, and strengthen community participation in preparedness and response.

➢ Protection of Vulnerable Groups

Vulnerable populations require priority protection through targeted line-listing, service continuity, and delivery mechanisms.

- Prepare and regularly update **line-lists** of vulnerable populations, including:
  - Elderly persons living alone
  - Persons with disabilities
  - Pregnant women
  - Migrant workers
  - Dialysis patients

  The detailed line-lists shall be maintained as **Annexure** ___ and updated periodically.

➢ Clinical Dependency Mapping

Develop ward-wise dependency and vulnerability maps to identify households requiring regular support during emergencies. Ensure continuity of essential health services for vulnerable groups, including

- Dialysis services (facility mapping, transport arrangements, and scheduling)
- Continuity of treatment for TB, HIV, and other chronic conditions requiring uninterrupted medication
- Mental health and psychosocial support services

Establish **delivery mechanisms** for food, essential commodities, and medicines to vulnerable households through coordinated action involving ASHAs, JPHNs, Kudumbashree, volunteers, and local administration.

PHASE 2 - Active Response

1. Case Identification and Contact Tracing

Case detection and contact tracing activities will be carried out in coordination with the Health authorities, following disease-specific SOPs and IDSP guidelines.

Field Staff Involved

- Health Inspector (HI)
- Junior Health Inspector (JHI)
- Junior Public Health Nurse (JPHN)
- ASHAs and ASHA Supervisors
- Ward-level volunteers and Kudumbashree members (as required)

2. Screening Checkpoints

Screening checkpoints at high-traffic locations (transport hubs, markets, religious gatherings) for early detection of symptomatic travellers and crowd screening during outbreaks. Potential locations include bus stands, market entry points, and boat jetties, based on local context and risk assessment.

Screening activities will be carried out by trained personnel such as ASHAs, ward members, and volunteers, with support from Health Department staff. Necessary equipment, including non-contact thermometers and appropriate PPE, shall be ensured prior to activation.

Location	Type (Bus stand/Jetty/Market/Railway)	Staff Deployed (ASHAs/Volunteers)	Screening Method	Reporting authority
Bus stand	Transport hub	One JHI One ASHA One health Mentors	1.Swab Collection. 2. Blood smears collection (RDT) 3.Thermal Scanners	Surveillance Nodal Officer in control room
Market entry	Market	One JHI One ASHA Male health volunteers	1.Swab Collection. 2. Blood smears collection (RDT) 3.Thermal Scanners	Surveillance Nodal Officer in control room
Boat jetty	Water transport	One JHI One ASHA Male health volunteers	1.Swab Collection. 2. Blood smears collection (RDT) 3.Thermal Scanners	Surveillance Nodal Officer in control room

Standard Screening Protocol

```
1. TEMPERATURE CHECK        2. VISUAL SYMPTOMS       3. TRAVEL HISTORY
   (Non-contact)              (Cough/Fever/Breathless)  (Last 14 days)

         ↓                          ↓                         ↓

4. QUICK RISK ASSESSMENT     5. ACTION TAKEN
   High Risk → Test/Quarantine   Normal → Allowed
   Suspect → PHC Referral        IEC + Mask provided
```

The screening protocol shall include temperature screening, observation for visible symptoms, and inquiry regarding recent travel or exposure history. Individuals identified as suspects during screening shall be immediately referred to the nearest PHC/FHC for further evaluation, testing, and appropriate action as per prevailing guidelines.

3. Pandemic Control Room

The Pandemic Control Room (PCR) serves as the central nerve center for real-time coordination, data aggregation, decision support, and communication during outbreaks. It consolidates information from all LSGD teams, health facilities and community sources to enable rapid response decisions.

Control Room Infrastructure and Location

Primary Location: Kottukal Panchayath Office.

Backup Location: Community Hall in Kottukal G.P.

Health System Control Room Framework

The PCR is organized into **seven functional pillars** to ensure no aspect of the response is overlooked:

1. ***Rapid Response Team (RRT)***
    - Provides immediate intervention during emergencies, clusters, and field alerts.
    - Coordinates urgent actions such as case investigation, contact tracing, isolation, and inter-facility referrals.
2. ***Data Management & Analytics Team***
    - Collects, validates, and manages key health system indicators (cases, tests, beds, HR, supplies).
    - Analyzes data trends, generates projections, and supports evidence-based decision-making for local authorities.
3. ***Human Resource Deployment Team***
    - Allocates healthcare staff efficiently based on workload and need
    - Ensures adequate and equitable workforce distribution across facilities
4. ***Laboratory Surveillance Team***
    - Oversees diagnostic testing coordination, sample transport, and timely reporting of results.
    - Monitors lab indicators (testing volume, positivity rate, turnaround time) for early detection of outbreaks

5. ***Vaccination Cell (If Required)***
    - Plans and executes vaccination campaigns, including micro-planning and session scheduling.
    - Tracks coverage, identifies gaps, and coordinates corrective actions with field teams and outreach services.
6. ***Infrastructure & Patient Occupancy Team***
    - Monitors facility capacity, earmarked beds, oxygen and critical care resources across all linked facilities.
    - Ensures optimal patient distribution and referral management using updated bed-status and resource data.
    - BMWM
7. ***Communication team***
8. ***Logistics and supply chain***
9. ***Transportation (interfacility & emergency transport)***
10. ***Media surveillance Call centre***
11. ***Management of the deceased***
12. ***Intersectoral coordination and convergence***

Key Control Room Team

The Control Room Team coordinates all pandemic response activities within the LSGD and serves as the single command and communication hub during activation. It integrates information, field actions, logistics, and policy execution across all participating departments and health facilities.

Role	Name	Designation	Contact Number	Responsibility
In-charge/Nodal Officer	Dr. Dileep das	M O	8848578883	Overall coordination, decision-making, and reporting to the District level.
Data Entry Operator	……	Data entry operator	…….	Managing the line list, updating dashboards, and tracking testing results.
Communication Officer	Shibu	HI	7012568788	Handling the public helpline, coordinating ambulance dispatch, and contact tracing calls.
Logistics Coordinator	…….	Pharmacist	……..	Stock Management
Technical Support *(IT/Data)*	Anjaly N T Joly N P	Epidemiologist Data manager	8891473699	Data analysis and management

SOP for Emergency Referral and Ambulance Services

Trigger for Referral: Immediate referral shall be initiated for any occupant showing "red flag" signs (e.g., breathlessness, oxygen saturation below 94%, persistent high fever, or altered consciousness).

Ambulance Readiness:A dedicated Basic Life Support (BLS) or Advanced Life Support (ALS) ambulance shall be available on-call 24/7. Vehicles must be equipped with functional oxygen cylinders, pulse oximeters, and emergency drugs.

Communication & Handover: The Facility Nodal Officer shall notify the receiving hospital in advance to ensure a "warm handover."A referral slip detailing the patient's vitals and treatment given must accompany the patient.

Decontamination: After every trip, the ambulance must be chemically disinfected (e.g., using 1% Sodium Hypochlorite) before the next deployment.

2. **SOP for Human Resource Management and Staff Safety**

Duty Rosters: Staff shall work in a "Batch System" (e.g., 7–14 days on duty followed by a mandatory quarantine/off period) to prevent burnout and monitor for symptoms. PPE Protocols:Specific designated areas for "Donning" (putting on) and "Doffing" (taking off) PPE shall be established.

Doffing areas must have mirrors and a "buddy system" to ensure no accidental contamination occurs during removal.

Health Surveillance: All staff shall undergo daily thermal screening and symptom checks before entering the facility.

Prophylaxis & Vaccination: All personnel shall be up-to-date with mandatory vaccinations as per National Health Guidelines.

3. SOP for Material Management and Logistics

Inventory Control: A "Buffer Stock" of at least 15 days for essential items (masks, gloves, sanitizers, and basic medicines) shall be maintained at all times.

Storage Standards: Medicines shall be stored in a cool, dry place under lock and key.

Flammable items (like alcohol-based hand rubs) must be stored in a fire-safe zone away from heat sources.

Equipment Maintenance: A daily calibration and battery check shall be performed on all digital thermometers, BP apparatus, and pulse oximeters.

Logbook Maintenance: Every item entering or leaving the store must be recorded in a centralized digital or physical ledger for audit purposes.

4. **SOP for Dead Body Management**

Declaration of Death: Death must be formally certified by the Medical Officer, and the exact time and cause must be recorded in the facility register.

Infection Control: All orifices (mouth, nose) shall be plugged to prevent fluid leakage.

The body shall be placed in a leak-proof body bag; the exterior must be decontaminated with 1% Sodium Hypochlorite.

Handover: The body shall be handed over to the designated authorities/family as per specific infectious disease protocols (e.g., no bathing or traditional embalming).

Psychosocial Support: Sensitized staff shall provide immediate psychological support and clear communication to the bereaved family.

5. **SOP for Data Management and Reporting**

Daily Status Report (DSR): A report including total admissions, discharges, referrals, and current bed occupancy must be submitted to the District Health Authority by a fixed time daily.

Confidentiality: Patient records (physical or digital) shall be kept strictly confidential and only shared with authorized health officials.

Incident Reporting: Any "Serious Adverse Event" (SAE), such as a fall, medication error, or security breach, must be documented and reported within 2 hours.

Public Information: Only the Facility Nodal Officer or an authorized spokesperson shall interact with the media to prevent the spread of misinformation or panic.

Key Points:

- The Control Room shall be staffed with a designated In-charge, data entry personnel, and communication staff with clearly defined roles and shift arrangements.
- It shall maintain updated records on daily monitoring indicators including new cases, persons under active quarantine, and hospital bed occupancy.
- All reports and situation updates shall be shared daily with the Block and District Surveillance Unit.

- The Control Room shall act as a single point of contact for coordination with response teams, health institutions, and other departments.

- Contact details of the Control Room shall be widely communicated to field staff and stakeholders during activation.

Daily Monitoring Indicators

To ensure timely decision-making and effective response, the following key indicators shall be monitored and updated on a daily basis by the Pandemic Control Room:

1. **Epidemiological Indicators:**

   New cases reported today, Total active cases, Test Positivity Rate (TPR), Case Fatality Rate (CFR)

2. **Surveillance Indicators:**

   Persons under home quarantine, High-risk contacts identified, Fever, ILI, SARI or other symptoms (syndromic surges), Travellers (symptomatic or high-risk arrivals),Animal husbandry surveillance (zoonotic alerts, unusual animal deaths, poultry/bird flu signals), Mortality surveillance (excess deaths, unexplained fatalities, verbal autopsy reports)

3. **Logistics and Infrastructure Indicators:**

   Hospital / CFLTC beds occupied, Oxygen cylinders/concentrators available, Ambulances on standby

4. **Alert Findings**

   The following table outlines category-specific **trigger points (red flags)** from surveillance indicators and corresponding immediate actions for the Pandemic Control Room. These enable rapid response to alert findings like testing anomalies, positive cases exceeding thresholds, clusters, and WGS reports.

Category	Trigger Point (Red Flag)	Immediate Action
Clusters	**Geographical or facility-based:** 5+ cases linked to one location (office, school, street).	Declare a micro-containment zone; perimeter control and active case finding.
Testing	Sudden drop in testing volume / delay in reporting / unusual testing trends	Review the sample collection process, address lab bottlenecks, deploy additional testing teams, and notify the District Lab.
Lab	Test Positivity rate increases	Increase testing sites in that ward.
Hospital	>80% Oxygen bed occupancy	Activate backup/CFLTC beds.
Travel	Cluster of cases from a single flight/train or high-risk arrival group.	Trace all passengers in adjacent seats; implement mandatory institutional quarantine.
Animal	Mass poultry/wildlife death or unusual sickness	Notify Animal Husbandry, sample the area, and dispatch RRT for environmental sampling and zoonotic check.
Mortality	Sudden spike in home deaths or brought-in-dead (BID) cases	Audit the deaths and Active Case Search drive

Additional investigations like Whole Genome Sequencing (WGS)	Detection of a **Variant of Concern (VOC) or Variant of Interest (VOI)**	Implement strict micro-containment; update clinical protocols to match variant severity.

4. Communication of Public Health Information

A Community Communication Hub shall be established to ensure timely, accurate, and consistent dissemination of information during a pandemic. The Hub will function under the coordination of Nodal officers of the control room and act as the nodal point for public communication, risk messaging, and community engagement. **It will support dissemination of official advisories, promote preventive behaviors, address rumors and misinformation, and ensure that messages reach all sections of the population through trusted local channels and leaders.**

Key communicators

Channel	Responsible Person	Contact
Ward-level announcements	JHI	9895223175
Social media	JHI	9847515759
Local Cable TV/Radio	AMMA Cable	…….

- All messages disseminated through the Hub shall align with advisories issued by the Health Department and District authorities.
- Community leaders shall be sensitized to support behavior change, reduce stigma, and counter misinformation.
- Special efforts shall be made to reach vulnerable and hard-to-reach populations using locally appropriate communication methods.

Rumor Tracking: A designated volunteer will monitor local social media/WhatsApp groups daily to identify misinformation and issue official clarifications via the Communication Hub.

5. Coordination with District/State Authorities & Other Organisations

Effective coordination with Block, District, and State authorities is essential to ensure timely reporting, technical guidance, and uninterrupted supply of essential resources during a pandemic. The LSG shall establish clear communication channels, designate responsible officers, and adhere to prescribed reporting timelines to support coordinated public health action and efficient resource mobilisation.

Key Details:

- **Nodal Officer for Reporting:** Medical Officer in-charge
- **Contact Number:** 8848578883

Reporting Schedule and Protocols:

To Whom	What to Report	Frequency	Nodal Person
Block PHC	Complete Situation Report (Cases, Quarantine, Beds, Screening, Deaths)	within 12 hours	Medical officer in charge
District IDSP Unit	Outbreaks/Clusters/Unusual Events (>5 cases same ward)	within 12 hours	Health supervisor, Epidemiologist
Veterinary Officer	Animal health events/Zoonotic alerts	within 12 hours	Veterinary doctor
State Cell	Zoonotic cross-sector events	within 12 hours	Veterinary doctor, medical officer, panchayat secretary

Supply Chain Coordination

The LSG shall coordinate closely with Block, District, and State authorities (KMSCL) to ensure uninterrupted availability of essential goods, medical supplies, and logistics during a pandemic.

Supply requirements shall be assessed regularly based on case load and communicated promptly to the appropriate authorities for timely replenishment.

Key Points:

- Maintain updated contact details of District and Block nodal officers for health logistics, oxygen supply, ambulances, and essential medicines.
- Submit timely indent requests for PPE, testing kits, medicines, oxygen, and other critical supplies through prescribed channels.
- Monitor stock levels at LSGD facilities, quarantine/isolation centres, and field teams through daily stock registers and dispensing logs to prevent shortages.
- Coordinate with District authorities, Karunya/Neethi medical shops, and local purchase committees for funds allocation and emergency procurement.
- Ensure regular monitoring of dispensing registers at all facilities to track usage, expiry, and pilferage—shortages being a perennial issue requiring proactive weekly audits.
- Activate surge procurement protocols during high caseloads, leveraging local purchase powers under LSGD funds alongside state supplies.

Resource Inventory and Contacts

Resource Category	Source (District/State/Private)	Contact
PPE Kits/Masks/Gloves	KMSCL	04712945600
PPE Kits/Masks/Gloves	Local Vendors	04712945600
Oxygen Cylinders/Concentrators	KMSCL	04712945600
Medicines/Antivirals	KMSCL	04712945600
Medicines/Antivirals	Neethi Shops	……
Test Kits (RTPCR/Rapid)	KMSCL	04712945600

Collaboration with NGOs, PPP, and CSR

To augment government efforts during a pandemic, the LSG shall collaborate with NGOs, voluntary organisations, and private sector partners through public–private partnerships and Corporate Social Responsibility (CSR) initiatives, in coordination with District authorities.

Key Points:

- Engage NGOs and community-based organisations for community outreach, awareness, and support to vulnerable populations.
- Leverage CSR support for procurement of medical equipment, PPE, oxygen concentrators, food kits, and sanitation materials, as permitted.

- Ensure all collaborations align with government guidelines and are routed through approved administrative and financial procedures.

- Maintain transparency and documentation for all external support received and utilised.

Organization	Type	Support Offered	Contact Person
Youth Clubs/Student Unions	CBO	———	————

Interdepartmental Coordination

Coordination among departments during a pandemic shall be ensured through regular review meetings convened by the LSGD President. These meetings will provide a structured platform for sharing situational updates, assessing resource availability, resolving operational gaps, and taking joint decisions to ensure a coordinated and timely response.

Department	Representative	Key Role	Contact
Health (PHC)	Staff Nurse : Nisha	Case management	8129342431
Veterinary	Veterinary Surgeon:	Animal surveillance	2267656
ICDS	Supervisor: Sindhu	Nutrition support	9496747322
Education	Head Teacher: Deepa	School coordination	9961552352
Police	Reji raj	Containment enforcement	9497987012_
Water Authority	Oversear	Water supply	9495634408
LSGD Engineering	Reshma ravi	Quarantine infrastructure	7403270233

PHASE 3 - Surge Capacity

Phase 3 is activated when there is a rapid increase in cases, high test positivity rates, or when existing health facilities and quarantine arrangements approach saturation. The focus of this phase is to expand isolation capacity, augment clinical care services, and mobilise additional resources through district and state support mechanisms.

Conversion of Community Facilities

To manage increased case load, the LSGD shall activate additional isolation facilities by repurposing identified community infrastructure such as community halls, auditoriums, schools, hostels, or other suitable buildings.

Name of facility	Facility Type	No. of Buildings	Ward	Surge Capacity (Beds)	Nodal Person
Betsaida	OLD School	1	3	100	98466121199

- **Recovery and rehabilitation phase**
- **Recovery**
  - Damage & impact assessment
  - Restoration of health services
  - Rehabilitation of affected population
  - Psychosocial & mental health support
  - Disease surveillance during recovery phase
  - Environmental cleanup & sanitation
  - Livelihood restoration
  - Community engagement & confidence building
  - Documentation & after-action review
  - Lessons learned & best practices
  - Health system strengthening
  - Policy revision & preparedness enhancement
  - Research

CONCLUSION

The initiative taken by FHC Kottukal to prepare a comprehensive pandemic preparedness plan at the LSG level, with the support of LSGD and other stakeholders, reflects a proactive and integrated approach to public health planning. The importance of such a plan cannot be overstated, as pandemics pose multidimensional challenges affecting health, economy, and social stability. By outlining clear roles, responsibilities, and response mechanisms, the plan ensures better coordination and preparedness at the community level. This effort strengthens the local governance system's ability to anticipate, prevent, and respond to public health crises effectively.

RECOMMENDATIONS

1. Strengthening Healthcare Infrastructure

- Establish a primary health response unit within the Panchayat with trained staff.
- Ensure availability of basic medical supplies (masks, sanitizers, PPE kits, oxygen cylinders).
- Create tie-ups with nearby hospitals in Kottukal for emergency referral and transport.

2. Community Awareness & Education

- Conduct regular awareness campaigns on hygiene, vaccination, and preventive measures.
- Use local communication channels (community radio, WhatsApp groups, notice boards) to spread verified information.
- Train volunteers to act as health ambassadors in each ward.

3. Emergency Response & Coordination

- Form a Pandemic Preparedness Committee at Panchayat level including health workers, ward members, and NGOs.
- Develop a clear action plan for lockdowns, quarantine, and distribution of essentials.
- Maintain a database of vulnerable groups (elderly, differently-abled, chronically ill) for targeted support.

4. Supply Chain & Food Security

- Identify and support local suppliers and farmers to ensure uninterrupted food supply.
- Create community kitchens during emergencies to serve vulnerable populations.
- Stockpile essential commodities in Panchayat-run outlets for crisis periods.

5. Digital Preparedness

- Promote digital platforms for telemedicine consultations.
- Use Panchayat's website/social media for real-time updates on health advisories.
- Encourage online grievance redressal to reduce crowding in offices.

6. Training & Capacity Building

- Organize mock drills for pandemic response in schools, offices, and public spaces.
- Train Panchayat staff and volunteers in first aid, infection control, and crowd management.
- Collaborate with NGOs and health departments for capacity-building workshops.

7. Long-Term Resilience

- Integrate pandemic preparedness into the Panchayat Development Plan.
- Allocate a dedicated budget for health emergencies.

- Encourage community participation in planning and monitoring preparedness measures.

MOCKDRILL SCENARIOS

To ensure readiness for public health emergencies, periodic mock drills will be conducted involving the health system and supporting departments. These drills will mimic realistic scenarios such as an outbreak of a communicable disease spreading rapidly within the community.

The purpose of these exercises is to examine the functionality of surveillance systems, reporting mechanisms, early response triggers, and interdepartmental collaboration. Participants will include the Health Department, LSGIs, Police, Fire and Rescue Services, Veterinary Department, and other concerned sectors.

During the drill, simulated activities will include identifying suspected cases, initiating emergency response, conducting field investigations, tracing contacts, enforcing infection prevention protocols, and managing referrals to healthcare facilities. The effectiveness of logistics, communication, and grassroots coordination will also be assessed.

A post-drill review will be carried out to analyze performance, identify shortcomings, and recommend improvements. These findings will be integrated into future planning to enhance overall preparedness.

ANNEXURE

1. IMPORTANT PHONE NUMBERS

Phone numbers and particulars of persons responsible for providing guidance, assistance, and support for pandemic preparedness operations may be provided here in a manner that allows easy reference at a glance. The information recorded here could be exhibited elsewhere at the time of emergencies. LSG institutions shall give special attention to collect and record the above data of persons and institutions who/which are supposed to give technical and co-ordination support to reduce the impact of pandemic.

1.1 Details of grama panchayat/municipality/corporation wards

Sl. No	Name of the ward	Ward number	Name of the ward member	Contact number
1	Mannottukonam	I	Biju T V	9447696249
2	Avanakuzhi	II	Binu R	9633583064
3	Mannakkalle	III	Vijayakumar K	8086447118
4	Kollakonam	IV	Sreejith R	9633302868
5	Kuzhivilakkonam	V	Renjithn R	9072224491
6	Sreenarayanapuram	VI	Sarath Kottukal	9567572194
7	Moolakkara	VII	Dhanya S R	9446320487
8	Ambalathmoola	VIII	Physanth Louis	9446247722
9	Jubilie Nagar	IX	Suni S	6238300336
10	Adimalathura	X	Lourde Amma Simon	8129395847
11	Chowara	XI	Mini Mol S	8129067396
12	Pulinkkudi	XII	Smitha Gopan	7306586406
13	Chappath	XIII	Saranya Mohan	8848691285
14	Thekkekkonam	XIV	RAJI MOL O	9633302984

15	Priyadarshini Nagar	XV	Aji Kumar P	9633960072
16	Office Ward	XVI	Punnakkulam Binu	9846612119
17	Kottukal	XVII	Prasanna Kumari S	9495059255
18	MARUTHOORKONAM	XVIII	Ambili M S	8848928636
19	Puliyoorkonam	XIX	Shibu S	9544420714
20	Payattuvila	XX	Sasidharan L	9048144106 7994872883
21	Pulivila	XXI	Sheela S	9746071705

1.2 Other important phone numbers of grama panchayat/municipality/corporation area

Sl. No.	Name	Contact number
1.	Sowmya	8089404086
2.	Loordamma	8129395847
3.	Dilna das	9895871162
4.	Excise department	04712222380, 9400069409
5.	Forest department	08547603701

1.3. **Important offices of grama panchayat/municipality/ corporation**

Sl. No	Name of the office	Contact person	Contact number
1.	Village Office	Village Officer	8547610206
2.	Agriculture Office	Agriculture Officer	9544422846
3.	Animal Husbandry Office	Animal Husbandry Doctor	9446495126
4.	Police Station	Reji Raj	9497987012
5.	BSNL Office	Officer	9188922570
6.	Block Office	Officer	0471 2222289
7.	KSEB Office	Officer A E	9446008769
8.	Fisheries Office	Officer/ ASFEO	9497280336, 9048490827
9.	Fire and Rescue	Officer	…….

1.4. Health Services

Sl. No	Name of the hospital/institution	Location	Phone number
1.	Government hospitals/PHC	Punnakulam	0471 2269070
2.	Private hospitals	Chappath ,Uchakada	----------
3.	Clinical laboratories	0	0
4.	Chemist/pharmacy	0	0
5.	Blood donors	0	0
6.	Other language experts (Bihari, Hindi, Bengali, Asamees ……)	Payattuvila	…….

1.5. **Veterinary Services**

Sl. No	Name of the Clinic	Name of the Surgeon/Doctor	Place/location	Phone number
1	Govt. Veterinary Hospital	……	Kottukal	0471 2267656

1.6. **Helpline numbers**

Helpline	Phone number
Police	04712480245
Fire and Rescue	04712480300
KSEB	0471 2269907

1.7. **Public and Private Schools Contact details**

S.No	Name of School	Institution type	Phone number
1	GVHSS Kottukal	GOVT	04712269208
2	GLPS Kottukal	GOVT	—----
3	GLPS Chowara	GOVT	—----
4	GLPS Kazhivoor	GOVT	—----
5	GLPS Puthalam	GOVT	—----
6	DVLPS Kottukal	AIDED	—----
7	PTMVHSS Maruthoorkonam	AIDED	—----
8	PTM English Medium Punnkulam	PVT	—----
9	PTM LPS Maruthoorkonam	PVT	—----
10	MV UPS Chowara	AIDED	—----
11	ST JOSEPH LPS Chowara	AIDED	—----
12	LM UPS Adimalathura	AIDED	—----
13	BFH LPS Avankuzi	AIDED	—----
14	Bharathiya Vidya Peedam	PVT	—----

1.9. **Anganwadi Contact Details**

Centrer No	Name of Anganwadi Teachers	Phone number
48	Lathika	8593032540
49	Sudha	8606290352
50	Valsala kumary	9633585087
51	Nalini	9995412613
52	Ananthalakshmi	9497888834
53	Sindhu	9539588948

Ward No	Anganwadi No and Name of Teacher	Phone number
54	Ajitha	9400666059
55	Bindhu	9074362401
56	Sreelekha	9047571833
57	Sheeba	9656424914
54	Ajitha	9400666059
55	Bindhu	9074362401
56	Sreelekha	9947571833
57	Sheeba	9656424914
58	Sindhu	8921515531
59	Binusha	9995445157
60	Flori	9995078591
61	Remya	9745615962
62	Remya	8893051117
63	Jayalekshmi	9895429097
64	Sheejakumary	9633622865
65	Geetha kumary	8547001803
66	Sheela	9497011796
67	Sreeja	9400885160
68	Ajitha	7736359197
69	Rejani	8086830348
70	Vijayakumary	9496589073

71	Divya	9400633360
72	Psannakumary	8111910120
73	Shani	9446181726
74	Neethu	9496228669
75	Salini	9746580502
76	Anila	9546580502
77	Treesa	6282502820
78	Saji	8086537802

1.12. **Information regarding resources**

Means of transportation	**Name of Owner**	**Phone Number**
Heavy Trucks	NIL	—----
Tractor	NIL	—------
Ambulances	Mulayanthanni temple	7034323222
Boats	Hycinth	9446247722
Taxi service	Hari Krishnan	7012437032

Annexure 1: LSG Baseline Data Collection Format

A. Baseline data

Sl. No.	Indicator / Field	Baseline Data	Source / Remarks
1	Name of LSG	Kottukal	LSGD Data
2	District	Trivandrum	LSGD Data
3	Block / Taluk	Athiyanoor	LSGD Data
4	Type of LSG (Gram Panchayat / Municipality / Corporation)	GP	LSGD Data
5	Area (sq. km)	12.19	LSGD Data
6	No. of wards	21	LSGD Data
7	GIS boundary file available	(Yes/No)	LSGD Data
8	Key contact person & phone	Panchayat president	

B. Demography

Indicator / Field	Baseline Data	Source / Remarks
Total population	35657	CHC Baseline data
Males	17708	CHC Baseline data
Females	17949	CHC Baseline data
Transgender population	0	CHC Baseline data
Age distribution (<5, 5–14, 15–59, ≥60)	1663	CHC Baseline data
No. of households	11725	CHC Baseline data
Population density (persons/sq.km)		CHC Baseline data
No. of migrant workers	502	CHC Baseline data
Major occupational groups	Daily wags	CHC Baseline data

C. Vulnerable Populations & Social Risks

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	No. of elderly (≥60)	5785	CHC Baseline data
2	No. of persons with disability	111	CHC Baseline data
3	No. of bedridden persons	318	CHC Baseline data
4	No. of chronic disease cases (DM/HTN/COPD/CKD etc.)	2832	CHC Baseline data
5	Pregnant women (current estimate)	157	CHC Baseline data
6	Children <5 years	1663	CHC Baseline data
7	Tribal population (if any)	0	CHC Baseline data
8	Fisherfolk / coastal vulnerable groups (if any)	1641	CHC Baseline data
9	Urban slums / unnotified settlements (if any)	0	CHC Baseline data
10	Homeless population	72	CHC Baseline data
11	Orphanages / old age homes (number & capacity)	0	CHC Baseline data
12	Hostels / prisons / shelters (number & capacity)	2	CHC Baseline data

13	Poverty / BPL estimate	5905	CHC Baseline data
14	Food insecurity hotspots	0	CHC Baseline data
15	Any history of stigma/discrimination issues (Yes/No)	NO	CHC Baseline data

D. Health System & Service Readiness

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	No. of health facilities in LSG (PHC/CHC/TH/DH/Private)	1	CHC Baseline data
2	PHC/Family Health Centre details (name, location)	1	CHC Baseline data
3	Subcentres / Health & Wellness Centres (number)	10	CHC Baseline data
4	Private clinics / hospitals (number)	2	CHC Baseline data
5	Labs available (public/private)	2	CHC Baseline data
6	Availability of ambulance services (Yes/No, number)	1	CHC DATA
7	Availability of isolation/quarantine facilities (Yes/No, details)	NO	CHC DATA
8	Cold chain facilities (Yes/No, details)	NO	CHC DATA
9	Stockpile space available (Yes/No)	NO	CHC DATA
10	PPE / mask / sanitizer availability plan (Yes/No)	YES	CHC DATA
11	Surveillance staff available (JHI/JPHN/ASHA count)	YES	CHC DATA

12	Existing emergency referral pathways (Yes/No)	YES	CHC DATA

E. Points of Entry & Mobility

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Bus stands / depots (number)	0	LSGD DATA
2	Railway stations (number)	0	LSGD DATA
3	Boat jetties / fishing harbours (number)	0	LSGD DATA
4	Ports / airports nearby (specify distance)	1	CHC Baseline data
5	Major highways/roads passing through	NH	CHC Baseline data
6	Border crossings (state/district)	NO	CHC Baseline data
7	Major markets / weekly markets	1	CHC Baseline data
8	Tourism hubs / major event venues	1 Azhimala 2 Beach 3.Resorts	CHC Baseline data
9	Schools/colleges with hostels (number)	21	LSGD data
10	Factories / large workplaces (number)	0	LSGD data

F. Water, Sanitation & Hygiene (WASH)

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Major drinking water sources (piped / wells / borewells / springs)	piped / wells / borewells	LSGD DATA
2	No. of public wells	15	LSGD DATA
3	No. of households with piped water connection	11525	LSGD DATA
4	Water quality testing routine (Yes/No)	Yes	LSGD DATA
5	Common contamination risks (flooding, salinity, industrial waste)	Flooding	LSGD DATA
6	Open defecation free status (Yes/No)	NO	LSGD DATA
7	Solid waste management system (Yes/No)	Yes	LSGD DATA
8	Bio-medical waste disposal mechanism (Yes/No)	YES	LSGD DATA
9	No. of public toilets	6	LSGD DATA
10	Handwashing stations in public places (Yes/No)	YES	LSGD DATA

G. Zoonotic Risks & One Health

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Livestock population (cattle/goats/pigs/poultry) – estimates	750	Veterinary dept
2	No. of dairy farms / poultry farms / pig farms	15	Veterinary dept
3	Slaughterhouses / meat shops (number)	NO	Veterinary dept
4	Animal markets (Yes/No, details)	NO	Veterinary dept
5	Veterinary dispensaries (number)	1	Veterinary dept
6	History of zoonotic outbreaks (rabies, leptospirosis, avian flu etc.)	NO	Veterinary dept
7	Stray dog population management measures (Yes/No)	NO	Veterinary dept
8	Rodent infestation hotspots (Yes/No)	NO	Veterinary dept
9	Wetlands / waterlogged areas prone to leptospirosis	YES	Veterinary dept
10	Bat roosting areas / caves / fruit orchards (if any)	NO	Veterinary dept
11	Human-animal interface hotspots (farms near residences)	NO	Veterinary dept

H. Climate & Disaster Risks (Pandemic Amplifiers)

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Flood-prone wards (list)	2	LSGD DATA
2	Landslide-prone wards (list)	0	LSGD DATA
3	Cyclone/sea surge risk (Yes/No)	0	LSGD DATA
4	Heatwave risk zones (Yes/No)	NO	LSGD DATA
5	Waterlogging areas (list)	2	LSGD DATA
6	Shelter homes / relief camps (number, capacity)	1	LSGD DATA
7	Past disaster displacement history	NO	LSGD DATA
8	Disruption to water supply/transport common (Yes/No)	YES	LSGD DATA

I. Critical Infrastructure & Logistics

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Schools (number)	19	LSGD DATA
2	Anganwadis (number)	32	LSGD DATA
3	Colleges (number)	0	LSGD DATA
4	Community halls (number)	1	LSGD DATA
5	Places of worship with large gatherings (number)	9	LSGD DATA
6	Large markets / shopping areas (number)	0	LSGD DATA
7	Warehouses / cold storages (number)	0	LSGD DATA
8	Telecom/mobile network coverage gaps (Yes/No)	yes	LSGD DATA
9	Power outage frequency (high/medium/low)	Medium	LSGD DATA
10	Availability of generators in key facilities	No	LSGD DATA

J. Risk Communication & Community Networks

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Ward-level rapid response teams (Yes/No)	yes	LSGD DATA
2	Jagratha samithis / committees active (Yes/No)	yes	LSGD DATA
3	Kudumbashree presence and strength (number of units)	yes	LSGD DATA
4	Volunteer network (number, coverage)	yes	LSGD DATA
5	Community-based surveillance mechanisms (Yes/No)	yes	LSGD DATA
6	IEC dissemination channels (WhatsApp groups, community radio, PA systems)	yes	LSGD DATA
7	Rumour tracking mechanisms (Yes/No)	yes	LSGD DATA
8	Languages spoken / literacy considerations	YES	LSGD DATA
9	Vulnerable groups communication strategy available (Yes/No)	yes	LSGD DATA

K. Preparedness Planning & Governance

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	LSG emergency plan available (Yes/No)	YES	LSGD DATA
2	Pandemic preparedness plan available (Yes/No)	YES	LSGD DATA
3	Incident Command System identified (Yes/No)	YES	LSGD DATA
4	Rapid procurement mechanism available (Yes/No)	YES	LSGD DATA
5	Emergency fund available (Yes/No, amount)	YES	LSG
6	Past outbreak response experience (Yes/No, details)	no	LSGD DATA
7	Intersectoral coordination mechanism (Health, Police, LSG, Veterinary, Education)	yes	LSGD DATA
8	Mock drills conducted in last 12 months (Yes/No)	Yes	LSGD DATA
9	Training coverage for staff/volunteers (Yes/No)	YES	LSGD DATA

L. Surveillance & Data Systems

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Digital reporting tools used (e.g., DHIS2, portals)	Yes	LSGD DATA
2	Availability of line-listing format (Yes/No)	Yes	LSGD DATA
3	Contact tracing team identified (Yes/No)	Yes	LSGD DATA
4	Mapping of high-risk households available (Yes/No)	Yes	LSGD DATA
5	Testing sample transport mechanism (Yes/No)	Yes	LSGD DATA
6	Reporting timeline adherence (good/average/poor)	Good	LSGD DATA
7	Data sharing between departments (Yes/No)	yes	LSGD DATA
8	Availability of dashboard for monitoring (Yes/No)	Yes	LSGD DATA

M. Additional Notes & Observations

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Key challenges perceived by LSG	Migrants	LSGD
2	Top 5 high-risk wards (reason)	Adimalathura Kottukal Nellimoodu Payattuvila Puliyoorkonam Kuzhivilakonam	LSGD
3	Any unique local risks (industrial pollution, refugee camps, etc.)	Migrant Residant	LSGD
4	Recommendations for preparedness strengthening	HEC	LSGD