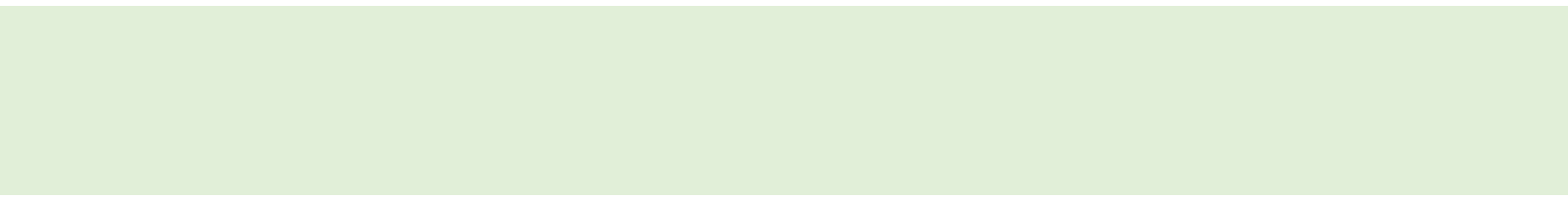


PHC Kunnukara

**PANDEMIC
PREPAREDNESS PLAN**

RCK
[Email address]



MESSAGE OF PANCHAYAT PRESIDENT

Local Self Government Institutions have a crucial role in safeguarding the health and wellbeing of the community during public health emergencies and pandemics. The experiences from recent outbreaks and pandemics have highlighted the importance of preparedness, coordinated action, timely communication, and community participation in reducing the impact of such events.

This Pandemic Preparedness Plan has been developed to strengthen the preparedness of our Kunnukara Grama Panchayat to effectively prevent, detect, respond to, and recover from public health emergencies. The plan has been prepared from our experiences in managing COVID-19 pandemic and other public health emergencies and adopts a One Health approach, recognizing the close interconnection between human health, animal health, and the environment in preventing and managing disease outbreaks. It also outlines the roles and responsibilities of various stakeholder departments, institutions, elected representatives, health workers, volunteers, and community organizations in ensuring a coordinated response.

The success of any such effort depends on the active collaboration between the various departments, organisations and the public. Special attention must be given to vulnerable groups including the elderly, children, persons with disabilities, and individuals with chronic illnesses. Our success in mitigating any such outbreaks and pandemics depends on the collective effort of all.

I sincerely appreciate the efforts of the Health Department in coordinating this major initiative involving Local Self Government across Kerala. I also appreciate the Medical Officer and other officials, healthcare workers, technical experts, and stakeholders who contributed to the preparation of this document. I am confident that this plan will serve as an important guide for strengthening local preparedness and resilience against future public health threats.

Let us work together to build a safer, healthier, and more resilient community.

Panchayat President

Kunnukara Gramapanchayat

MESSAGE FROM MEDICAL OFFICER

Public health emergencies and pandemics remind us that health systems must always remain prepared, responsive, and closely connected with the community. The recent experiences of the COVID-19 pandemic and various other communicable disease outbreaks especially involving newer pathogens have shown that timely preparedness, coordinated response, and strong community participation are essential to reduce health risks and protect lives.

Kerala Health has taken this initiative for the last six months, build capacities of state, district and sub district level functionaries. Addl Chief Secretary conducted series of meetings with DSO, Epidemiologist along with the State Resource Team . This Pandemic Preparedness Plan has been developed to strengthen the readiness of our Grama Panchayat to effectively prevent, detect, and respond to public health emergencies. The plan serves as a framework for coordinated action involving the Health Department and other line departments, organisations, volunteers and other stakeholders at the local self-government level.

The plan follows a One Health approach, recognizing the close relationship between human health, animal health, and the environment in the emergence and spread of diseases. Strengthening disease surveillance, infection prevention and control measures, environmental sanitation, risk communication, and community awareness are all important components of local preparedness. We must also have surge preparedness plans which can be adopted quickly during a public health emergency.

Particular attention must also be given to vulnerable populations including the elderly, children, persons with disabilities, individuals with chronic illnesses, and socially disadvantaged groups who may face greater risks during emergencies. Early reporting, community engagement, and coordinated interdepartmental action are critical for minimizing the impact of outbreaks and ensuring continuity of essential health services.

I sincerely appreciate the leadership and support from our President and other elected representatives and the dedicated efforts of my health team and officers from other departments and community members who contributed to the preparation of this plan. I hope this document will serve as a practical guide for strengthening local resilience and ensuring a timely, effective, and compassionate response during public health emergencies.

Medical Officer

Kunnukara Grampanchayat

EXECUTIVE SUMMARY

Primary Health Centre (PHC) functions as the primary public healthcare institution serving the population of Kunnukara GramaPanchayath. 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.

Kunnukara PHC 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, Kunnukara Primary Health Centre stands as a vital institution in safeguarding public health and improving the quality of life of the residents of Kunnukara GramaPanchayath

LIST OF ABBREVIATIONS

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

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INTRODUCTION

- **Background of the PPP**
- LSGD at a glance

LSGD AT A GLANCE

- Geographical boundaries with political map (based on latest delimitation)
- Baseline data
- Ward division -

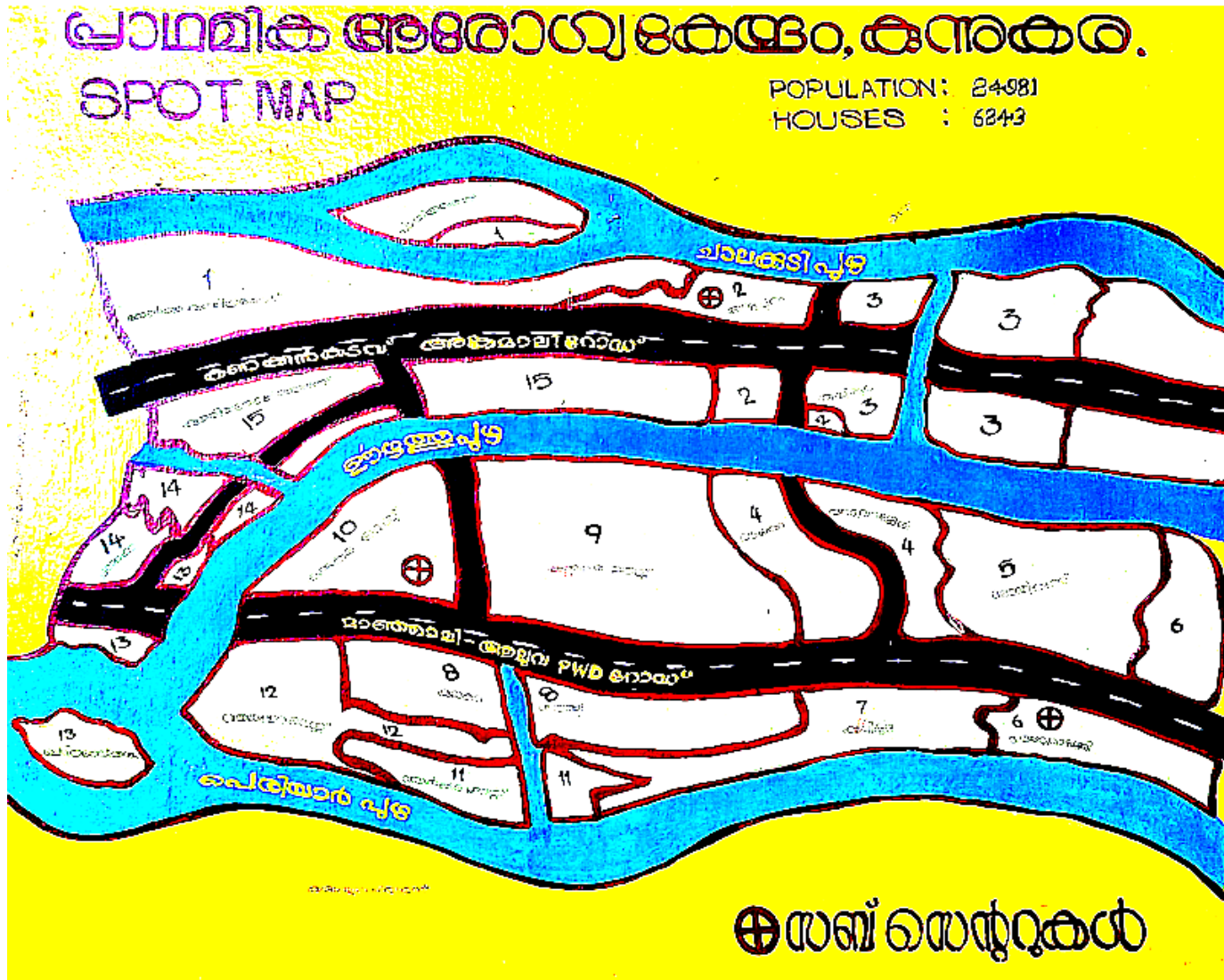
Ward	Houses	Populati on	Migrants	Wells	Hot spots	Ed. Instituti ons	Hosppvt/g ovt.
15	6578	24996	335	5953	3	15	4

- Risk stratification among wards in the context of Communicable diseases and hazards
- Major Roads/rivers
- Major establishments with geospatial mapping
- occupational groups, socio cultural groups, migration & mobility patterns
- *Vulnerability mapping*
- Disaster prone areas (geographic vulnerability)

Maps - ward-based (Mention source also)

1. Geographical boundaries - ward boundaries map
2. Health infrastructure map
3. roads and rivers map
4. major establishments map
5. disaster-prone areas map
6. hotspot map - CD & disasters

INTEGRATED HEALTH INFRASTRUCTURE MAP OF KUNNUKARA PANCHAYATH



GENERAL PROFILE OF THE LSGI'S

Background of the LSGI

Kunnukara GramaPanchayat is situated in Ernakulam district, Kerala. The geographical landscape of the Panchayat is predominantly low-lying, characterized by extensive paddy fields (Kole lands) and a dense network of rivers, canals, and backwaters. This unique terrain plays a significant role in shaping the local microclimate and poses distinct challenges to transportation, emergency response, and service delivery, particularly during monsoon seasons and flood events.

From a public health and disaster management perspective, Kunnukara LSGI has historically been vulnerable to seasonal flooding, waterborne diseases, and vector-borne illnesses such as Dengue and Leptospirosis. The severe floods experienced during recent years, including the 2018 flood disaster, significantly impacted life, livelihoods, and infrastructure within the Panchayat. These recurring emergencies have underscored the importance of strengthening local preparedness, response mechanisms, and inter-departmental coordination.

In this context, the development of a localized, data-driven Auxiliary Infrastructure and Logistical Resource Map is essential to support effective planning, timely emergency response, and sustainable development initiatives. Such mapping enables the Panchayat to identify critical resources, improve accessibility during disasters, and enhance overall resilience of the community.

Table 1: Background of LSGD

Description	Details
Name of LSGI	KUNNUKARA
Type (GP/Municipality / Corporation etc.)	GramaPanchayath
Block	PARAKKADAVU
District	ERNAKULAM
Number of wards	15
Total area (sq. km)	12.65sq km
Population(Projected)	24885
Population density	1576.85/sq km

Table 1: Background of LSGD

Description	Details
Terrain (coastal/low-lying/backwaters/foothills, etc.)	Low lying
Number of rivers passing through LSGI	3
Number of water bodies in the LSGI	3
Number of educational institutions	16
Factories / small-scale industries	7
Flood-prone wards	8
Landslide-prone wards	1
Death Management and Disposal Facilities (mortuaries/crematorium, including electric)	2
Auditoriums/Marriage halls/convention centres/community halls	7

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		24885
Male		13320
Female		11565
Transgender		nil
Children under 5		956
Adolescent		2017
Elderly (>60)		4653
SOCIAL/LIVELIHOOD VULNERABILITY		
Previous EPEP family		20
BPL family		2560
Tribal communities		nil
Migration	Immigrant	335
	Emigrant	888
Socio-economically deprived		0
Fisherfolk		26
SC Community		2814
ST Community		0

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	96
Lactating mothers	119
Bedbound patients	82
Patients under palliative care other than bedbound	364
Patients on Haemodialysis	17
Patients on CAPD	0
Cancer patients (currently on treatment)	48
Haemophilic patients	0
Mentally challenged	76
Differently abled	82
Diabetic patients	2550
Hypertensive patients	2593
TB patients	5

Major Festivals & Events specific to the LSGI (with the possibility of a public gathering)

Sl. No.	Name of festival	Month detailing the periodicity
1	St Sebastian church festival, St Antonys Festival	February, November

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-Support ed Beds	No. of Ventilator Support Beds	No. of ambulances
Government Healthcare Facilities								
1	F H C KUNNUKARA	FHC	9447158688	0	0	0	0	NIL
Private Healthcare Facilities								
1	SNIMS CHALAKKA	MEDICAL COLLEGE	9961104488					
AYUSH Healthcare Facilities								
1	GOVT HOMEO HOSPITAL	DISPENSARY	9995499685					
2	GOVT AYURVEDA HOSPITAL	DISPENSARY	9162827824					

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)
	16 CLINICS	YES	GENERAL	NIL				

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	1	0	1
Nursing Colleges	0	1	0	1
Dental Colleges	0	0	0	0
Para-medical / Allied Health	0	1	0	1
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	
Oxygen-generating systems(Y/N)	0		0	
Oxygen-supported beds(Numbers)	0		0	
Ventilator-supported beds	0		0	
ICU beds	0		0	
Burns units	0		0	
Blood centres	0		0	
BLS ambulances	0		0	
ALS ambulances	0		0	
Dialysis facilities	0		0	
Dispensaries	0		0	
Medical store	0		0	
Industrial establishments(Medium-scale industries/small-scale industries establishments to whom we can depend in a worst-case scenario)				

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 kunnukara	NO	NO	YES	NO	NO	NO	NO

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

Diagnostics facility mapping at the LSGI level

The diagnostic capacity of **kunnukara 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	0	5	0	5
Microbiology labs	0	5	0	5
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	0	0	0	0

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	DDRC AGILUS	private	KUNNUKARA	9496005161	NO	YES
2	DIVINE CARE	private	KUTTIPUZHA	8547939933	NO	YES
3	Health point	private	Chungam	9645244466	NO	YES
4	DIVINE CARE	Private	Kunnukara Chalakka	8547939933	NO	YES
5		private		8086413979	NO	YES

Sl. No.	Name of Laboratory	Ownership (Govt / Private / Academic)	Address	Contact No.	24×7 Services (Yes/No)	NABL / Govt Approved (Yes/No)
	S S MEDICAL LABORATORY					

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	22	ALL	110	9961120483
Schools	12	4,8,9,13, 14,2	3320	
Colleges	4	12,14	560	
Healthcare Educational Institutions				
Medical colleges (Govt/Private)	1	15		
Nursing colleges (Govt/Private)	1	15		
Dental colleges (Govt/Private)	0	0		
Paramedical institutes (Govt/Private)	1	15		
Community Gathering Spaces				
Community halls	7	13,6,5, 4,11,12		
Auditoriums	2	11,6		

Religious buildings	4	11,1,2		
Vulnerable Group Support Facility				
Destitute homes	0			
Elderly homes	1	1		
LSGD owned other buildings	1	10		
Mass Fatality Management (MFM) Infrastructure				
Mortuary	1	15		
Crematorium	1	8		

*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	2		
Doctors – AYUSH	2		
Doctors – Veterinary	1		
Doctors – Dental	0		
Nursing officers	1		
Lab technicians	1		
Optometrist	0		
Pharmacists	3		
Psychologists	0		
Counsellors	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)	1	0	1
HI (Health Inspectors)	1	0	1

Cadre	Health services	Municipal common services	Total
LHS (Lady Health Supervisor)	1	0	1
LHI (Lady Health Inspectors)	0	0	0
JPHN (Jr Public Health Nurses)	3	0	3
JHI (Jr Health Inspectors)	3	0	3
MLSP (Mid-Level Service Providers)	3	0	3
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	9349374934
AWW (Anganwadi Workers)	9961120483
Emergency Medical Volunteers (Trained)	8921311974
Kudumbashree	9747994289
NREGS	7561864299
PurushaSwayamSahayaSangham	

Cadre	Number
Ex-Servicemen	
Retired Police Officers	
NCC/NSS Volunteers	8281818776
Red Cross volunteers	9544408107
One Health Community Volunteers	9995847582
One Health Community Mentors	

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	3
Religious based organizations	6
Foreign based organizations	0
Sports Club/youth clubs	3
Kudumbashree SHGs	205
Ayalkootams	205
Political organizations	1
Residential organizations	3

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	1	0484-2474057
Fire & Rescue Stations	0	NIL
Water Pumping Points	1	9847564937
Public Distribution System (PDS)	15	0484 2442318

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	1
Crane	0
Heavy Trucks	0
Tractor	36
Ambulances	1
Mobile mortuaries	0
Boats	0
Taxi service	36

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 not identified.

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)	500/720/230	ALL
	Pet Animals (Dogs/Cats)	860/925	ALL
	Stray Dog Population	212	
	Pig Farms (Number of heads)	0	
	Small Units (Sheep / Goats – clustered)	10	ALL
Bird Population	Poultry Units (Birds)	1000	ALL
	Poultry- (FOWL)	10000	ALL
	Wild/Migratory Birds (Observed)	0	
	Crow Mortality Events (Reported)	0	

The main risk of zoonotic diseases in NIL is concentrated in **Wards.....NIL.....**, 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 DISPENSARY	GOVT	10	9846979622
Veterinary Hospital / Polyclinic	NIL	N/A	N/A	N/A
Private Veterinary Clinics	NIL	N/A	N/A	N/A
Mobile / Emergency Vet Service (incl. night services)	BASIL ELDHO CLINIC	PRIVATE	ALL	8301017239
Pet Homes / Animal Shelters	NIL	N/A	N/A	N/A
Slaughterhouse-linked Veterinary Inspection Unit	NIL	N/A	N/A	N/A

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	9846979622
Private Veterinary Doctors	NIL	N/A	N/A
Livestock Inspectors	1	GOVT	6238325508
Para-veterinary Staff / Attenders	4	GOVT	
Contract / On-call Veterinary Support (if any)	1	PRIVATE	8301017239

High-Risk Interface Points (Surveillance Sites)

High-risk interface points for zoonotic disease surveillance in KUNNUKARA GramaPanchayath 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	0	N/A
Backyard / Clustered Poultry Units	0	N/A
Duck Rearing Units (open water access)	1	8 KUT'TIPUZHA
Slaughterhouses/ Slaughter Points	0	N/A
Meat/Fish Markets	0	N/A
Live Bird Sale Points	0	N/A
Cattle Markets / Weekly Animal Fairs	0	N/A
Pet Shops / Breeders	1	4 ADUVASSERY
Animal Shelters / Pet Homes	0	N/A
Waste Disposal Sites near Animal Units	0	N/A

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	12,2,14,13,15	CHALAKKA	HIGH
Water bodies/wetlands	5	KUNNUKARA	MEDIUM
Solid waste accumulation			
Animal waste disposal issues			
Rodent infestation zones			
Industrial effluent discharge			
Construction sites / abandoned buildings			
Poor drainage/blocked canals			
Drinking water source contamination risk	1	14 KUTHIATHODE	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	NOV- DEC			
Leptospirosis	JUNE		KUTTIYAL	ON GOING
Dengue/Chikungunya	MAY TO JULY		CHUNGAM	
Acute Diarrheal Diseases	APRIL TO MAY			
Rabies	NIL			
Anthrax (rare)	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	2,14,12,11	River vally areas	high
Wetland-adjacent communities	NIL		
Backyard poultry / duck rearing households	NIL		
Livestock-rearing households			
Slaughterhouse & meat market workers			
Fisherfolk& fish market workers			
Sanitation workers			
Daily wage / migrant workers			
Elderly & chronically ill populations			
Pregnant Women			
Children (schools, Anganwadi's)			
Limited access to safe water & sanitation			

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	9	16	62	86	70	Stable
Leptospirosis	0	3	3	2	1	Stable
Hepatitis A	0	0	0	2	8	Increasing
Malaria	0	0	0	0	0	Stable
Scrub Typhus	0	0	0	0	0	Stable
Typhoid	0	8	0	0	2	Decreasing
H1N1	0	0	2	0	0	Decreasing
H3N2	0	0	0	0	0	Stable
ADD	6	4	5	34	44	Increasing
Mumps	0	0	0	18	48	Increasing
Measles	0	0	0	1	0	Stable
Hepatitis B	0	0	0	0	0	Stable
Hepatitis C	0	0	0	0	0	Stable
Tuberculosis	3	12	10	18	8	Decreasing

Pandemic Preparedness Plan

Leprosy	0	0	0	0	0	Stable
COVID-19		0	0	0	4	Stable

*(use the above table data to create the graph/diagram)

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	0	0	0
2	1	2	6	1	0	10
3	2	1	10	0	0	13
4	1	2	5	8	3	19
5	0	2	8	12	3	25
6	1	5	5	24	20	55
7	1	0	5	9	11	26
8	1	0	1	4	3	9
9	0	0	2	0	2	4
10	0	0	4	7	3	14
11	0	0	6	6	13	25
12	0	0	2	8	12	22
13	0	0	2	3	0	5
14	0	0	2	1	0	3
15	2	4	4	3	0	13
	9	16	62	86	70	243

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	1	0	0	1	0	2
3	2	1	0	1	1	5
4	0	0	0	0	0	0
5	0	0	0	0	2	2
6	0	0	0	0	1	1
7	1	1	0	0	0	2
8	0	0	1	0	0	1
9	0	0	0	0	0	0
10	0	1	0	0	0	1
11	1	0	0	0	1	2
12	0	0	1	0	0	1
13	0	0	0	0	0	0
14	0	0	0	0	1	1
15	0	0	0	0	0	0
	5	3	2	2	6	18

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	2	1	3
5	0	0	0	0	2	2
6	0	0	0	0	2	2
7	0	0	0	0	1	1
8	0	0	0	0	0	0
9	0	0	0	0	1	1
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	1	1
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	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	70	0
Water Borne Diseases	71	0
Air Borne Diseases	2	0
Blood Borne Diseases	0	0
Food Borne Diseases	0	0

Vector-Borne Disease

Disease	No. of Cases	No. of Deaths
Dengue	70	0
Malaria	0	0
Chikungunya	0	0

Water Borne Disease

Disease	No. of Cases	No. of Deaths
Cholera	0	0
Typhoid	2	0
Hep- A	10	0
Dysentery	0	0

Amoebiasis	0	0
E- Coli infections	0	0

Air Borne Disease

Disease	No. of Cases	No. of Deaths
Influenza	2	0
H1N1	0	0
TB	8	0
Chickenpox	51	0
Measles	0	0
Covid-19	0	0
Pertussis	0	0
Mumps	48	0

Blood-Borne Disease

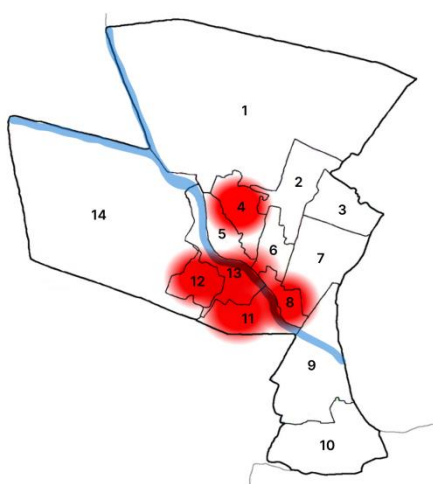
Disease	No. of Cases	No. of Deaths
AIDS	0	0
Hep- B	0	0
Hep- C	0	0

Zoonotic Disease

Disease	No. of Cases	No. of Deaths
Rabies	0	0

Leptospirosis	6	0
Avian influenza	2	0
West nile	0	0
Anthrax	0	0
Nipah	0	0
Scrub Typhus	0	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)	TB (2021-25)	ADD (2021-25)	Total Cases
1	0	0	0	2	1	5	8
2	10	2	0	2	8	4	26
3	13	5	0	3	4	4	29
4	19	0	3	4	3	8	37
5	25	2	2	4	6	6	45
6	55	1	2	7	5	8	78
7	26	2	1	3	0	6	39
8	9	1	0	13	2	9	34
9	4	0	1	9	1	7	22
10	14	1	0	5	4	7	31
11	25	2	0	4	6	6	43
12	22	1	1	3	3	7	37
13	5	0	0	2	4	5	16
14	3	1	0	3	3	5	15
15	13	0	0	2	1	6	22

By overlaying five years of data, we have identified ...ward 6.....'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**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	Geetha Vijayan	Panchayat President	LSGD	Chairperson	9446874610
2	Dr Tintu Sara Raju	Medical Officer (PHC/CHC)	Health Dept	Member Secretary	9447158688
3	DR Shyju	Veterinary Officer	Animal Husbandry	Member	9845979622
4	Nithin	Epidemiologist	Health Dept	Member	9544671967
5	Eldho Phromis	Health Inspector/PHN	Health Dept	Surveillance	9544227044
6	Sangeetha	ASHA Supervisor	Health Dept	Community link	9072041391
7	Anju	ICDS Supervisor	Social Welfare	Vulnerable groups	9961120483
8	Chengamanadu Police Station	Police Station Officer	Police Dept	Law & order	04842474057
9	ANIL R	Ward Councillor Representative	LSGD	Community coordination	8547939933

10		Kudumbashree CDO	Kudumbashree	Community mobilisation	
11		NGO/Volunteer rep	Civil Society	Support services	
12		Line Department representations			

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			
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			
Intersectoral coordination and convergence			
Collaborative surveillance			

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 – numbers
 - Pulse oximeters – _____ numbers
 - Hand sanitizers – _____ 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 early 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 (Non-contact)	2. VISUAL SYMPTOMS (Cough/Fever/Breathless)	3. TRAVEL HISTORY (Last 14 days)
↓	↓	↓
4. QUICK RISK ASSESSMENT High Risk → Test/Quarantine Suspect → PHC Referral	5. ACTION TAKEN Normal → Allowed 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: _____ Panchayath Office.

Backup Location: Community Hall in _____ 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				Overall coordination, decision-making, and reporting to the District level.
Data Entry Operator				Managing the line list, updating dashboards, and tracking testing results.
Communication Officer				Handling the public helpline, coordinating ambulance dispatch, and contact tracing calls.
Logistics Coordinator				
Technical Support (IT/Data)				

SOP for alert escalation/trigger point with mapping of responsibilities.

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 Pophint (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		
Social media		
Local Cable TV/Radio		

- 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:**
- **Contact Number:**

Reporting Schedule and Protocols:

To Whom	What to Report	Frequency	Nodal Person
Block PHC	Complete Situation Report (Cases, Quarantine, Beds, Screening, Deaths)		
District IDSP Unit	Outbreaks/Clusters/Unusual Events (>5 cases same ward)		
Veterinary Officer	Animal health events/Zoonotic alerts		
State Cell	Zoonotic cross-sector events		

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	
PPE Kits/Masks/Gloves	Local Vendors	
Oxygen Cylinders/Concentrators	KMSCL	
Medicines/Antivirals	KMSCL	
Medicines/Antivirals	Neethi Shops	
Test Kits (RTPCR/Rapid)	KMSCL	

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
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Youth Unions	Clubs/Student	CBO		
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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 :	Case management	7994142865
Veterinary	Veterinary Surgeon:	Animal surveillance	9846979622
ICDS	Supervisor:	Nutrition support	9961120483
Education	Head Teacher:	School coordination	9961170789
Police	SHO	Containment enforcement	04842474057
Water Authority	Assistant Engineer	Water supply	04842442592
LSGD Engineering	Health standing committee chairman	Quarantine infrastructure	8547939933

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

- 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

Additional points

- tech support
- relief based commodities
- ham reading operators
- hazard vulnerability mapping
- Kseb& other power source
- HR specific responsibility

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 _____ 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

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 gramapanchayat/municipality/corporation wards

Sl.No	Name of the ward	Ward number	Name of the ward member	Contact number
1	N Kuthiathode	1	Geetha Krishnan	9446874610
2	Attupuram	2	Sheena Jacob	9846669849
3	Ayiroor	3	L A Mohanan	9847441705
4	N Aduvassery	4	Rathy Sabu	9744200583
5	Malayikunnu	5	Rudrakshi Madhavan	7519904779
6	Vasudevapuram	6	Shakkeela P K	9961170622
7	S Aduvassery	7	Seena Santhosh	9349627629
8	Kuttiupuzha	8	K C Jayakumar	9895977369
9	Kunnukara South	9	Anil R	8547939933
10	Kunnukara East	10	Liji Jose	7994979171
11	Kunnukara West	11	Ansiya Basheer	8111815944
12	Vayalkara East	12	C V Bijesh	9847513173
13	Vayalkara West	13	C U Jabbar	9847834568
14	Cheriyatheikkanam	14	Preethi Chandran	9633843015
15	Chalakka	15	Anil Kumar G	9847770730
16	Kuthiyathode South	16	Maya Babu	7306641405

1.2.
Other

important phone numbers of gramapanchayat/municipality/corporation area

Sl. No.	Name	Contact number
1	Excise department	0484243187
2.	Forest department	
3.	Water authority	04842442592

1.3. Important offices of gramapanchayat/municipality/ corporation

Sl.No	Name of the office	Contact person	Contact number
1.	Village Office	Village Officer	8547614112
2.	Agriculture Office	Agriculture Officer	8086850065
3.	Govt Veterinary Hospital	Animal Husbandry Doctor	9846979622
4.	Police Station	Police Officer	04842474057
5.	BSNL Office	Officer	04842444300
6.	Block Office	Officer	04842470630
7.	KSEB Office	Officer	9496008912
8.	Fisheries Office	Officer	9447084759
9.	Fire and Rescue	Officer	04842443101

1.4. Health Services

Sl. No	Name of the hospital/institution	Location	Phone number
1.	Government hospitals/PHC	Kunnukara	04842573087
2.	Private hospitals	Chalakka	04846737777
3.	Clinical laboratories		
4.	Chemist/pharmacy		
5.	Blood donors		
6.	Other language experts (Bihari, Hindi, Bengali, Asamees)		

1.5. Veterinary Services

Sl. No	Name of the Clinic	Name of the Surgeon/Doctor	Place/location	Phone number
1	Govt. Veterinary Hospital	Dr Shyju	Kunnukara	9846979622

1.6. Helpline numbers

Helpline	Phone number
Police	04842474057
Fire and Rescue	04842443101
KSEB	9496008912

1.7. Public and Private Schools Contact details

S.No	Name of School	Institution type	Phone number
1	ST THOMAS HIGH SCHOL, AYIROOR	AIDED	7356626592

2	ST THOMAS H S SCHOOL, AYIROOR	AIDED	7356626592
3	ST ARNOLD CENTRAL SCHOOL, N ADUVASSERY	PRIVATE	8129071968
4	GLPS CHALAKA	GOVT	9446419736
5	GLPS KUNNUVAYAL	GOVT	9645557957
6	GJBS KUTTIPUZHA	GOVT	9961170789
7	ST JOSPEH SCHOOL, AYIROOR	GOVT	9446418327
8	RYAN INTERNATIONAL SCHOOL, KUNNUKARA	PRIVATE	7356111460
9	CHRIST RAJ H S, KUTTIPUZHA	AIDED	9544408107
10	SNEHADEEPAM BUDS SPECIAL SCHOOL, N ADUVASERY	LSGD	9656397843
11	ST FRANCIS L P SCHOOL, KUTTIPUZHA	PRIVATE	7592947752
12	ST ANTONYS L PSCHOOL AYIROOR	PRIVATE	9539117641

1.9. Anganwadi Contact Details

Ward No	Name of Anganwadi Teachers	Phone number
1	Jaya	9567020108
2	1 Lissy	99479257601
	2. Saira	9497042746
3	Gladis	9605089943

Ward No	Anganwadi No and Name of Teacher	Phone number
4	1. Sreedevi	9947614382
	2. Leena	9539294505
6	Renjiini	9544100694
7	1.Vishnupriya	9947195237
	2.Vinija	984740174
8	Susheela	8111873174
9	1 Giriya	9495014047
	2. Anitha	9947639653
11	Resmi	8606830642
12	Lavisha	9656778791
13	Eliyamma	9847101359
5	. Sajitha	9961725925
	Resmi Sreekumar	8086752848
14	Sreeja	9539608893
	Prejimol	8289952857
15	Shaija	9745807296

1.12. Information regarding resources

Means of transportation	Name of Owner	Phone Number
Heavy Trucks		
Tractor	Shihab	9745777554
Ambulances	Kunnukara co-operative society	9387280303
Boats		
Taxi service	Ramesan	9447319203

Annexure 1: LSG Baseline Data Collection Format

A. Baseline data

Sl. No.	Indicator / Field	Baseline Data	Source / Remarks
1	Name of LSG	Kunnukara	
2	District	Ernakulam	
3	Block / Taluk	Paravur	
4	Type of LSG (Gram Panchayat / Municipality / Corporation)	Gramapanchayat	
5	Area (sq. km)	12.65 KM ²	
6	No. of wards	16	
7	GIS boundary file available	(Yes/No)	
8	Key contact person & phone		

B. Demography

Indicator / Field	Baseline Data	Source / Remarks
Total population	248885	
Males	13320	
Females	11565	
Transgender population	0	
Age distribution (<5, 5–14, 15–59, ≥60)	<5=956, ≥60=4653	
No. of households	6578	
Population density (persons/sq.km)	1576.85	
No. of migrant workers	335	
Major occupational groups		

C. Vulnerable Populations & Social Risks

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	No. of elderly (≥60)	4653	
2	No. of persons with disability	82	
3	No. of bedridden persons	82	
4	No. of chronic disease cases (DM/HTN/COPD/CKD etc.)	2550/2593/ 22/17	
5	Pregnant women (current estimate)	96	

6	Children <5 years	956	
7	Tribal population (if any)	24885	
8	Fisherfolk / coastal vulnerable groups (if any)	NO	
9	Urban slums / unnotified settlements (if any)	NO	
10	Homeless population	26	
11	Orphanages / old age homes (number & capacity)	2	
12	Hostels / prisons / shelters (number & capacity)	4/nil/2(50)	
13	Poverty / BPL estimate	2560	
14	Food insecurity hotspots	nil	
15	Any history of stigma/discrimination issues (Yes/No)	NO	

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)	FHC	
2	PHC/Family Health Centre details (name, location)	FHC Kunnukara	
3	Subcentres / Health & Wellness Centres (number)	3	
4	Private clinics / hospitals (number)	9	
5	Labs available (public/private)	Public-1 Private-5	
6	Availability of ambulance services (Yes/No, number)	YES	
7	Availability of isolation/quarantine facilities (Yes/No, details)	No	
8	Cold chain facilities (Yes/No, details)	yes	
9	Stockpile space available (Yes/No)	YES	
10	PPE / mask / sanitizer availability plan (Yes/No)	yes	

11	Surveillance staff available (JHI/JPHN/ASHA count)	JHI-3,JPHN-3,ASHA-15	
12	Existing emergency referral pathways (Yes/No)	YES	

E. Points of Entry & Mobility

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

F. Water, Sanitation & Hygiene (WASH)

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Major drinking water sources (piped / wells / borewells / springs)	4825/5920/845 /NIL	
2	No. of public wells	33	
3	No. of households with piped water connection	4825	
4	Water quality testing routine (Yes/No)	YES	
5	Common contamination risks (flooding, salinity, industrial waste)	Flooding	
6	Open defecation free status (Yes/No)	YES	

7	Solid waste management system (Yes/No)	YES	
8	Bio-medical waste disposal mechanism (Yes/No)	YES	
9	No. of public toilets	1	
10	Handwashing stations in public places (Yes/No)	YES	

G. Zoonotic Risks & One Health

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Livestock population (cattle/goats/pigs/poultry) – estimates	500/720/0/1000	
2	No. of dairy farms / poultry farms / pig farms	0/0/0	
3	Slaughterhouses / meat shops (number)	0/0	
4	Animal markets (Yes/No, details)	NO	
5	Veterinary dispensaries (number)	Govt (1)	
6	History of zoonotic outbreaks (rabies, leptospirosis, avian flu etc.)	NIL	
7	Stray dog population management measures (Yes/No)	NO	
8	Rodent infestation hotspots (Yes/No)	NO	
9	Wetlands / waterlogged areas prone to leptospirosis	NIL	
10	Bat roosting areas / caves / fruit orchards (if any)	NO	
11	Human-animal interface hotspots (farms near residences)	NIL	

H. Climate & Disaster Risks (Pandemic Amplifiers)

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Flood-prone wards (list)	1,12,13,15,4,3,2,14	
2	Landslide-prone wards (list)	10, Anakkulam	
3	Cyclone/sea surge risk (Yes/No)	NO	
4	Heatwave risk zones (Yes/No)	NO	
5	Waterlogging areas (list)	NIL	
6	Shelter homes / relief camps (number, capacity)	2(50 in each shelter homes)	
7	Past disaster displacement history	NIL	
8	Disruption to water supply/transport common (Yes/No)	no	

I. Critical Infrastructure & Logistics

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Schools (number)	11	
2	Anganwadis (number)	22	
3	Colleges (number)	4	
4	Community halls (number)	7	
5	Places of worship with large gatherings (number)	10	
6	Large markets / shopping areas (number)	NIL	
7	Warehouses / cold storages (number)	NIL	
8	Telecom/mobile network coverage gaps (Yes/No)	yes	
9	Power outage frequency (high/medium/low)	Low	
10	Availability of generators in key facilities	YES	

J. Risk Communication & Community Networks

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Ward-level rapid response teams (Yes/No)	yes	
2	Jagrathasamithis / committees active (Yes/No)	Yes	
3	Kudumbashree presence and strength (number of units)	Yes	
4	Volunteer network (number, coverage)	150	
5	Community-based surveillance mechanisms (Yes/No)	Yes	
6	IEC dissemination channels (WhatsApp groups, community radio, PA systems)	Yes	
7	Rumour tracking mechanisms (Yes/No)	Yes	
8	Languages spoken / literacy considerations	Good	
9	Vulnerable groups communication strategy available (Yes/No)	yes	

K. Preparedness Planning & Governance

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

L. Surveillance & Data Systems

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

M. Additional Notes & Observations

Sl. No.	Indicator / Field	Baseline Data (Value / Description)	Source / Remarks
1	Key challenges perceived by LSG		
2	Top 5 high-risk wards (reason)	6,7,11,12(DENGUE FEVER)	
3	Any unique local risks (industrial pollution, refugee camps, etc.)	NO	
4	Recommendations for preparedness strengthening		