HEALTH EMERGENCY OPERATIONS CENTRE – KERALA

Part I – DESIGNATED POSTS, THEIR ROLES AND RESPONSIBILITIES

The following posts are hereby designated for the State HEOC. Each post is assigned specific IRS-aligned functions under the Watch Mode, Alert Mode, and Response Mode (Grade 1, 2, and 3) of HEOC activation.

POST 1 │ **Team Leader (Health Analytics)** *IRS Alignment: Command & Planning — Technical Advisor to Incident Commander*
A. Strategic & Command Support Functions
☐ Function as Technical Advisor to Incident Commander during HEOC activation.
☐ Assist Responsible Officer (Addl. Chief Secretary / Principal Secretary – Health) in strategic decision-making.
☐ Lead preparation and periodic revision of State Disaster Management Plan (Biological & Public Health Emergencies).
☐ Ensure compliance with IRS structure and chain of command during activation.
B. Planning & Preparedness Functions (Watch Mode)
☐ Ensure continuous situational awareness of disease outbreaks and disasters with health impacts.
☐ Supervise resource mapping: human resources, logistics, hospital surge capacity, oxygen availability, ICU beds, and ventilator-supported beds.
☐ Oversee GIS-based hazard and vulnerability mapping on approved platforms (Bharatmaps / open-source GIS).
☐ Ensure state of readiness of District HEOCs, Control Rooms, and Rapid Response Teams (RRTs).
☐ Coordinate conduct of mock drills, tabletop exercises (TTX), and simulation exercises.
C. Response Mode Responsibilities
☐ Support development and approval of Incident Action Plan (IAP) for each operational period.

☐	Guide determination of activation level (Grade 1 / Grade 2 / Grade 3) based on risk assessment findings.
☐	Supervise epidemiological risk assessment and validate situation reports (SITREPs) before submission to State EOC / MoHFW.
☐	Coordinate surge staff deployment in alignment with IRS requirements.
☐	Oversee inter-sectoral coordination with SDMA, Home Department, Animal Husbandry, IMD, and other stakeholders.

D. Capacity Building & Supervision

☐	Conduct and oversee training and refresher training programmes for district RRTs and field epidemiologists.
☐	Conduct periodic assessment of district-level preparedness gaps.
☐	Ensure systematic documentation of all response activities and conduct After Action Reviews (AAR).

POST 2 | DATA SCIENTIST (1 POST)
IRS Alignment: Planning Section — Situation Unit

A. Data Management & Analytics

☐	Conduct trend analysis of disease surveillance data from IDSP, IHIP, and other sources.
☐	Develop predictive models and outbreak projection dashboards for evidence-based decision support.
☐	Generate real-time analytics dashboards for use by the Incident Commander and Section Chiefs.
☐	Maintain centralized archives of disease outbreak reporting, investigation reports, and response data.

B. GIS & Spatial Analysis

☐	Undertake GIS mapping of outbreaks, affected population, containment zones, and response resources.

☐	Generate spatial analysis products for risk assessment and resource deployment decisions.
☐	Map hazard-vulnerability overlays for priority area identification.

C. Media & Intelligence Monitoring

☐	Conduct daily media scanning across print, electronic, and social media platforms.
☐	Identify and flag informal outbreak alerts and unusual health events from open-source intelligence.
☐	Prepare media alert briefs and submit to Public Health Consultant for verification.

D. Response Mode Functions

☐	Provide 6-hourly / 12-hourly data updates to the Operations and Planning Sections during HEOC activation.
☐	Support preparation and formatting of Situation Reports (SITREPs).
☐	Maintain centralized and backed-up data repository for the duration of the response.
☐	Ensure data privacy and confidentiality compliance as per provisions of the Information Technology Act, 2000.

IRS Alignment: Operations Section & Planning Section Support

Geospatial Database Management and Development

- **Designing and maintaining geodatabases:** Specialists design, develop, and populate regional geodatabases to support ongoing activities like public health analysis and emergency response.
- **Data Storage Structures:** They are responsible for creating and maintaining the necessary structures for GIS data storage.
- **System Integration:** This includes developing tools to load or transfer GIS data between different systems and ensuring data security through regular backups.

Data Analysis and Visualization

The transformation of raw data into actionable intelligence is a critical function.

- **Spatial Analysis:** They perform geospatial analysis on collected datasets to investigate patterns, such as estimating the number of people affected by a particular event like a cyclone or a disease outbreak.
- **Targeted Mapping:** In humanitarian settings, they provide analysis for specific needs, such as targeting indoor residual spraying (IRS), siting WASH (Water, Sanitation, and Hygiene) infrastructure, or mapping the prevalence of neglected tropical diseases (NTDs).
- **Cartographic Products:** A major task is the creation of maps, infographics, and other visual reports to help team leads and partners make strategic, evidence-based decisions.

Data Collection, Cleaning, and Harmonization

GIS professionals ensure that data from disparate sources is accurate and compatible.

- **Harmonization:** They map, collate, and clean datasets from various entities (such as ministries of health, country offices, and international partners) to ensure consistency and alignment with international standards.
- **Digitizing Information:** They undertake desk-based data capture to convert existing information into maps and GIS datasets.
- **Standardization:** This involves standardizing geospatial datasets and their associated attributes across specific management systems.

Technical Support, Integration, and Capacity Building

They act as a bridge between technology and end-users.

- **Decision Support:** They assist in integrating geospatial data into digital platforms and decision-support systems for humanitarian and health emergencies.
- **Technical Training:** This role often involves developing and updating training materials and education programs to build GIS capacity among staff and partner organizations.
- **Support to Partners:** They provide technical support to country offices and partners in data collection, validation, and visualization.

Field Operations and Coordination

In emergency contexts, the role extends to active field management.

- **Field Data Collection:** They lead field data collection efforts, often utilizing mobile data collection devices and specialized applications.
- **Activity Planning:** They oversee the planning and coordination of GIS activities to meet specific project goals and work plans.
- **Emergency Deployment:** They may be required to deploy promptly to suspected disease outbreaks or acute public health events to support rapid assessments and surveillance

POST 4 | IT SPECIALIST - SOFTWARE(1 POST)
IRS Alignment: Logistics Section — ICT & Communication Unit

A. ICT Infrastructure Management

- Maintain and ensure operability of all HEOC communication systems: landline, mobile, satellite, VHF/UHF wireless, and internet connectivity.

- Ensure redundancy of the communication network with functioning backup channels (VSAT, Radio, alternate ISP).

- Maintain and operate video conferencing systems for inter-agency and inter-state coordination.

- Ensure 24/7 helpline functionality and technical availability during HEOC activation.

B. Portal & Data Systems Management

- Manage IHIP portal connectivity and ensure real-time data transmission between districts and State HEOC.

- Maintain cybersecurity protocols, user access controls (Role-Based Access Control — RBAC), and IT security compliance.

- Manage backup servers, disaster recovery systems, and data integrity protocols.

C. Technical Support During Activation

- Conduct full ICT systems check and certification prior to each HEOC activation.

- Provide continuous technical support for virtual coordination meetings, video conferences, and briefings.

- Maintain and support GIS platforms and data analytics dashboard integration.

- Ensure cybersecurity monitoring and incident response during Grade 2 / Grade 3 activation.

POST 5 | NETWORK ADMINISTRATOR (1 POST)
IRS Alignment: Logistics Section — ICT & Communication Unit

Infrastructure Management and Maintenance

- **Hardware and Software Support:** They must ensure that all PHEOC hardware (workstations, display screens, projectors) and software systems are maintained and functional at all times.
- **Telecommunications:** They manage the infrastructure that enables internal and external communication, including **local area networks (LAN), internet connectivity, and electronic mail capabilities**.
- **Specialized Systems:** They oversee the operation of diverse communication tools such as **satellite telephony (e.g., Thuraya), high-frequency professional radio, and mobile phones**.
- **System Checks:** They are often tasked with performing **regular facility checks** on PCs, servers, and external/internal phone lines to ensure the center is always ready for immediate activation.

Data Security and Access Control

- **Security Protocols:** The IT Officer is responsible for the overall **security of the PHEOC IT system**. This includes managing entrance authorizations and physical security measures like surveillance cameras.
- **Information Access:** They provide response personnel with authorized **access to relevant PHEOC information systems** and digital platforms.
- **Virtual Private Networks (VPN):** Sources recommend the creation of a **VPN** to allow stakeholders to securely access, update, and share information at all times.

Redundancy and Continuity of Operations

- **Data Backup:** To prevent information loss, they must implement and manage **data backup systems** (such as external double hard disks or cloud-based solutions) and develop recovery plans.
- **Communication Backups:** In the event of a primary system failure, they manage **backup communication systems**, which may include satellite links, radio, and wireless walkie-talkies.
- **Power Redundancy:** They ensure equipment is protected from surges via **uninterrupted power supply (UPS) units** and oversee the automatic transition to **power generators** during commercial electricity cuts.

Support to Field Operations

- **Field Equipment:** They are responsible for equipping **Rapid Response Teams (RRT)** with necessary mobile technology, including laptops, satellite phones, and **GPS devices**.
- **Technical Training:** They conduct training sessions for staff on how to properly operate communications equipment deployed in t

POST 6 | MULTITASKING OPERATOR (HEALTH ALERTS)
IRS Alignment: Documentation & Operational Support Unit

A. Data Processing & Database Maintenance

☐ Enter and validate surveillance and outbreak data into HEOC information systems in a timely and accurate manner.

☐ Maintain updated directory of district health officials, IRS personnel, stakeholder contacts, and partner agencies.

☐ Support maintenance of resource databases and stock registers.

B. Documentation & Reporting Support

☐ Assist in preparation and formatting of Situation Reports (SITREP), activity logs, and IAP documents.

☐ Maintain systematic incident logs with timestamps for all key actions and decisions during response.

☐ Archive official communications, circulars, orders, and response documentation in both digital and physical formats.

C. Help Desk & Communication Support

☐ Support operation of the 24/7 HEOC dedicated helpline during activation.

☐ Maintain comprehensive records of all calls received, issues reported, and escalations made.

☐ Forward technical queries and specialized requests to the appropriate HEOC officer.

D. Administrative Support

☐ Assist in organizing HEOC meetings, training programmes, webinars, and simulation exercises.

☐ Maintain digital and physical document management systems, including secure storage of confidential records.

☐ Provide general administrative support to all HEOC sections as directed by the HEOC Nodal Officer.

PART-II – FUNCTIONAL MAPPING OF HEOC STAFF WITH INCIDENT RESPONSE SYSTEM STRUCTURE

The following table provides the comprehensive IRS-aligned functional mapping for all designated HEOC posts, incorporating their roles and responsibilities in a structured tabular format for ease of reference during activation.

Sl.	Post	IRS Alignment	Key Roles & Responsibilities
1	**Team Leader (Health Analytics)**	*Command & Planning(Technical Advisor to IC)*	• Provide strategic technical support to Responsible Officer and Incident Commander. • Oversee preparation and revision of State DM Plan (Biological & Public Health Emergencies). • Ensure IRS compliance during HEOC activation. • Supervise statewide situational awareness and outbreak monitoring. • Oversee GIS-based hazard and resource mapping, based on district and panchayats pandemic preparedness plans, • Ensure preparedness of District DEOCs, RRTs, and Control Rooms. • Guide preparation and approval of Incident Action Plan (IAP) at par with the pandemic preparedness plan. • Supervise risk assessment and recommend activation level (Grade 1 / 2 / 3). • Coordinate surge staffing and inter-sectoral collaboration. • Conduct mock drills, TTX, and After Action Reviews (AAR).

2	**Data Scientist & Geospatial Scientist**	*Planning Section –Situation Unit*	• Conduct trend analysis of disease surveillance data. • Develop dashboards and predictive models for outbreak projection. • GIS mapping of outbreaks and resources. • Maintain centralized outbreak archive. • Conduct daily media scanning (print, electronic & social media). • Prepare media alert briefs. • Provide periodic data updates (6-hourly / 12-hourly) during activation. • Support preparation of Situation Reports (SITREP). • Ensure data privacy compliance under IT Act, 2000.
3	**IT Specialist (Software) & Network Administrator (1 Post)**	*Logistics Section –ICT & Communication Unit*	• Maintain HEOC ICT infrastructure (telecom, video conferencing, VSAT, wireless). • Ensure redundancy of communication systems. • Maintain IHIP portal connectivity and real-time data transmission. • Provide 24/7 technical support during activation. • Ensure cybersecurity and data access control (RBAC). • Maintain backup servers and recovery systems. • Support virtual coordination meetings and dashboard operations.

| 4 | **Multi Tasking Operator (Health Alerts)** | *Documentation &Operational Support Unit* | • Enter and validate surveillance and outbreak data.
• Maintain updated directory of district health officials and stakeholders.
• Assist in preparation and formatting of SITREPs.
• Maintain incident logs and communication records.
• Support HEOC 24/7 helpline operations.
• Archive official communications and documentation.
• Assist in organization of meetings, trainings, and webinars. |

All officers and staff designated under this notification shall be bound by the following institutional obligations:

	MANDATORY OBLIGATIONS FOR ALL HEOC PERSONNEL
1	Function under the Incident Response System (IRS) chain of command during all phases of HEOC activation (Alert Mode, Grade 1, Grade 2, and Grade 3 Response Mode).
2	Maintain documentation discipline and use only standardized reporting formats (SITREP, IAP, Activity Log, Resource Status Report) as prescribed under the HEOC Operational Module.
3	Participate in all periodic IRS training programmes, simulation exercises, tabletop exercises (TTX), and capacity-building programmes as scheduled by the HEOC Nodal Officer.
4	Ensure 24×7 operational readiness and availability for duty during Grade 3 activation, including night shifts as per the shift roster.
5	Support inter-sectoral coordination as per the State Disaster Management Plan (SDMP) and the HEOC Operational Module.
6	Maintain confidentiality of all sensitive health information, patient data, and strategic response plans in compliance with the Information Technology Act, 2000.
7	Report immediately to the HEOC Nodal Officer / Incident Commander upon receipt of activation notification and within the prescribed timelines (≤120 minutes for Grade 3).
8	Attend all mandatory shift handover briefings and ensure proper transfer of responsibilities, pending tasks, and situational updates to the incoming shift.