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Public Health Emergency and Disaster Management Professional Development Programme (PHEDM-PDP) Tier-III Training, Pune (Batch - 2)

Pune, Maharashtra
29th – 31st May 2024

Organized By:

Centre of Excellence on Public Health Emergency and Disaster Management,
National Institute of Disaster Management (NIDM)
Ministry of Home Affairs (MHA), Government of India (GoI)

National Centre for Disease Control (NCDC)
Directorate General of Health Services (Dte.GHS),
Ministry of Health and Family Welfare (MoHFW), Government of India (GoI)

Public Health Department, Government of Maharashtra

and

U.S. Centers for Disease Control and Prevention (CDC), Country Office, India

Contents

Executive Summary

In an attempt to cover the whole of the Maharashtra state, a 4-day Public Health Emergency and Disaster Management-Professional Development Programme (PHEDM-PDP) Tier-III Training (Batch-2) was conducted in Pune, Maharashtra, from May 28-31, 2024. The training was jointly organized by various institutions, including the National Institute of Disaster Management (NIDM), Ministry of Home Affairs (MHA), Government of India (GoI); National Centre for Disease Control (NCDC), Directorate General of Health Services (Dte.GHS), Ministry of Health and Family Welfare (MoHFW), GoI; Public Health Department, Government of Maharashtra; and CDC, Country Office India. These collaborative efforts aim to enhance emergency management capabilities and strengthen public health response in India.

Within the comprehensive PHEDM-PDP five-tiered framework, Tier-III targets operational-level functionaries from various departments such as Health, Disaster Management, Animal Husbandry, Revenues and Law Enforcement. These functionaries serve as the vital link between frontline workers, communities, and decision-makers.

The learning objectives of the training were to equip participants with essential knowledge, skills, and tools necessary for managing public health emergencies effectively at an operational level within their respective departments.

A preparatory meeting was organized by Integrated Disease Surveillance Program (IDSP) officials of Maharashtra state on 27th May 2024, and this meeting helped to secure the mentee's and mentor's participation and finalize the training agenda. Consequently, a prep op workshop involving PHEDM faculties, resource persons, and state organizing was conducted on 28th May 2024 in Pune, Maharashtra. The objectives of this workshop were to foster acquaintance and collaboration, discuss initiatives in PHEDM, and share learning objectives and expected outcomes from this training. Additionally, to prevent overlap in course content and manage time effectively. The workshop was followed by a Mentor workshop aimed at enhancing the mentoring capabilities of the mentors.

Throughout the training from 29-31 May 2024, seven modules (Module I: Overview of Public Health Emergency Preparedness and Response; Module II: Principles of PHEDM and Its Applications; Module III: Public Health Emergency Operations Centre (PHEOC); Module IV: Organizational Model for Managing Response; Module V: International Health Regulations and Roles at Points of Entry; Module VI: Risk Communication and Community Engagement; Module VII: Psychosocial Aspects of PHEDM) were comprehensively covered and discussed with the participants. A session to sensitize the participants on the PHEDM Assessment Tool was also conducted to equip participants with the necessary skills and knowledge to strengthen or develop the District Disaster Management Plan.

The training program for PHEDM-PDP Tier-III is designed to empower operational-level personnel through various interactive activities. Technical sessions, quizzes, group activities, and simulation exercises were conducted to enhance their knowledge and skills. A tabletop exercise focusing on the application of an Incident Response System (IRS)/Incident Management System (IMS) was carried out to prepare participants for potential emergencies.

To further equip them with essential skills, the National Disaster Response Force (NDRF) conducted a mock drill. This drill covered first aid, Cardiopulmonary Resuscitation (CPR), and evacuation techniques during emergencies and disasters. Yoga sessions were also incorporated into the training program to promote physical and mental well-being among participants. This holistic approach aimed to enhance their overall effectiveness in carrying out their roles and responsibilities.

The PHEDM-PDP Tier-III Training was honoured by the presence and guidance of distinguished dignitaries and speakers. These included Smt. Sujata Saunik, IAS, Additional Chief Secretary, Home, Government of Maharashtra (virtual); Dr Nitin Ambadekar, Director of Health Services (DHS), Government of Maharashtra (virtual); Dr Subhash Salunkhe, Former Director General of Health Services (DGHS), Government of Maharashtra; Dr Muzaffar Ahmed, Former Member, National Disaster Management Authority (NDMA), MHA, GoI; Dr Sujeet K Singh, Distinguished Public Health Expert and Former Director NCDC; Prof. Surya Parkash, Head, CoE on PHEDM, NIDM; Dr Jugal Kishore, Director Professor and Former Head at Vardhman Mahavir Medical College & Safdarjung hospital (VMMC & SJH); Dr Saurabh Goel, Joint Director, IDSP, NCDC; Dr Radha Kishan Pawar, Joint Director- Health Services, State of Maharashtra; Dr Babita Kamalapurkar and Dr Rekha Gaikwad from State Family Welfare Bureau (SFWB); and Dr Rajeev Sharma as the Public Health Specialist and Lead-Emergency Management, Division of Global Health Protection (DGHP), CDC-India.

Some key takeaways from the training are as follows:

- The state should finalize the schedule for upcoming PHEDM Tier III Training cohorts.
- The state needs to establish a follow-up mechanism to ensure continued progress and implementation of the training outcomes.
- Mentors and mentees should maintain regular collaboration, with monthly and quarterly meetings, to strengthen or develop the District Disaster Management Plan (DDMP).
- Participants should share their learnings from the training with lower-level personnel and support the strengthening or development of Village Public Health Emergency and Disaster Management Plans.
- States should explore opportunities to integrate PHEDM-PDP within their existing systems to ensure its long-term sustainability.

The training benefited 38 participants, including 6 Mentors and 32 Mentees, from 8 districts and 5 municipal corporations in Maharashtra state. These officials represented various departments such as Integrated Disease Surveillance Programme (IDSP) Units, Disaster Management, Animal Husbandry, Revenue Department, and Medical Colleges.

During the training program, distinguished guests were honoured with E-Tree Certificates as a symbol of their contribution towards offsetting their carbon footprint and promoting a healthier and safer future. The participants also received skilfully crafted kits (bags) that were made by the Women's Community-Based Organization (WCBO), an initiative led by women living with HIV/AIDS. This organization focuses on providing care and support services to women and children affected by HIV/AIDS.

Certificates of participation were presented to the participants upon completion of the course. The State IDSP recognized the organizing team, which consisted of NCDC, NIDM, and CDC-India, with a certificate of contribution for their valuable efforts in conducting the training.

Abbreviations

ADHS	Assistant Director of Health Services
AHSSOH	Animal Health System Support for One Health
CAPFs	Central Armed Police Forces
CBRN	Chemical, Biological, Radiological, and Nuclear
CDC	Centers for Disease Control and Prevention
CDRI	Coalition of Disaster Resilient Infrastructure
CERC	Crisis and Emergency Risk Communication
CoE	Centre of Excellence
CONOPs	Concept of Operations
CPR	Cardiopulmonary Resuscitation
CPRI	Comprehensive Priority Risk Index
CSR	Corporate Social Responsibility
DDMO	District Disaster Management Officer
DDMP	District Disaster Management Plan
DEOC	District Emergency Operations Center
DGHS	Director General of Health Services
DRR	Disaster Risk Reduction
DM	Disaster Management
Dte.GHS	Directorate General of Health Services
EM	Emergency Management
EOC	Emergency Operations Centre
EOP	Emergency Operations Plan
GoI	Government of India
GHSA	Global Health Security Agenda
GMR	Geo-meteorological Risks Management
HAP	Heat Action Plan
HPC	High Power Committee
ICS	Incident Command System
IDSP	Integrated Disease Surveillance Programme

IHIP	Integrated Health Information Platform
IH	International Health
IHR	International Health Regulations
IIT	Indian Institute of Technology
IMS	Incident Management System
IRCS	Indian Red Cross Society
IRS	Incident Response System
IT	Information Technology
KFD	Kyasanur Forest Disease
MHA	Ministry of Home Affairs
MoHFW	Ministry of Health and Family Welfare
NAPHS	National Action Planning for Health Security
NCDC	National Centre for Disease Control
NDMA	National Disaster Management Authority
NDMP	National Disaster Management Plan
NIDM	National Institute of Disaster Management
PDNA	Post-Disaster Needs Assessment
PH	Public Health
PHE	Public Health Emergencies
PHECP	Public Health Emergency Contingency Plan
PHEIC	Public Health Emergency of International Concern
PHEOC	Public Health Emergency Operations Centre
PHEDM	Public Health Emergency and Disaster Management
PHEM	Public Health Emergency Management
PHEDM-PDP	Public Health Emergency and Disaster Management Professional Development Programme
PM ABHIM	Pradhan Mantri Ayushman Bharat Health Infrastructure Mission
PoE	Points of Entry
PSFA	Psychological First Aid
RoHFW	Regional Offices of Health and Family Welfare

RRCs	Regional Response Centers
SDGs	Sustainable Development Goals
SEOC	State Emergency Operations Center
SOP	Standard Operating Procedure
SWOC	Strengths, Weaknesses, Opportunities, and Challenges
THIRA	Threat and Hazard Identification and Risk Assessment
US	United State
USDMA	Uttarakhand State Disaster Management Authority
VMMC	Vardhman Mahavir Medical College
YASHADA	Yashwantrao Chavan Academy of Development Administration

Overview of Maharashtra

Maharashtra, a state in India, occupies a significant portion of the Deccan plateau in the western peninsular region of the subcontinent. Its shape resembles a triangle, with a 450-mile (725-km) western coastline forming the base and the interior narrowing to a blunt apex approximately 500 miles (800 km) to the east. Gujarat borders Maharashtra to the northwest, Madhya Pradesh to the north, Chhattisgarh to the east, Telangana to the southeast, Karnataka to the south, Goa to the southwest, the union territory of Dadra and Nagar Haveli, and the Arabian Sea to the west.

In Maharashtra, people are vulnerable to a wide range of hazards that threaten communities, businesses, government, and the environment. The west coast is the most seismically active region in Maharashtra, particularly the Western Ghats. The state is also prone to floods, with many being attributed to man-made factors. An analysis of floods in Maharashtra reveals that most are flash floods caused by nallah overflows and inadequate drainage systems. The coastal areas are at risk of cyclones, especially the Konkan region, including Mumbai, part of a 720-kilometer coastal belt stretching between Gujarat and Goa. This area is home to many marine fishing villages and hamlets engaged in fishing activities.

Landslides are another hazard in Maharashtra, often triggered by heavy rains in the Western Ghats. Major landslide incidents typically occur during the monsoon seasons and are exacerbated by anthropogenic developments in landslide-prone areas.

The Latur earthquake, which struck the Indian state of Maharashtra on 30th September 1993, remains a significant event in India's seismic history. With a magnitude of 6.3, the earthquake caused widespread devastation in the Latur district and its surrounding areas, severely damaging infrastructure and homes and claiming over 10,000 lives. Originating from 12 kilometres below the Earth's surface, the tremors led to the collapse of poorly constructed buildings and structures, leaving tens of thousands homeless. In the aftermath, there was a remarkable display of resilience and solidarity as local communities, emergency responders, and governmental agencies quickly mobilized to provide aid, medical assistance, and shelter to the affected population.

The public health system in Maharashtra offers a comprehensive range of services to promote and protect its population's health. These services include preventive measures, health promotion campaigns, disease surveillance, outbreak response, and healthcare delivery. However, Maharashtra faces significant challenges in combating infectious diseases due to various factors, including its size, population density, environmental conditions, socio-economic disparities, and demographic complexities.

Addressing these issues requires a multifaceted approach, integrating efforts across different sectors and emphasizing key components such as strengthened surveillance, rapid response mechanisms, partnership building, and research initiatives. Communicable diseases like malaria, dengue, chikungunya, and influenza are prevalent across the state, while others, such as leptospirosis, Kyasanur Forest Disease (KFD), measles, and scrub typhus, are limited to specific districts (Source- Integrated Health Information Platform (IHIP)). These diseases pose significant health risks to the population of Maharashtra and require continuous monitoring,

surveillance, and effective public health interventions to control their spread and minimize their impact on public health.

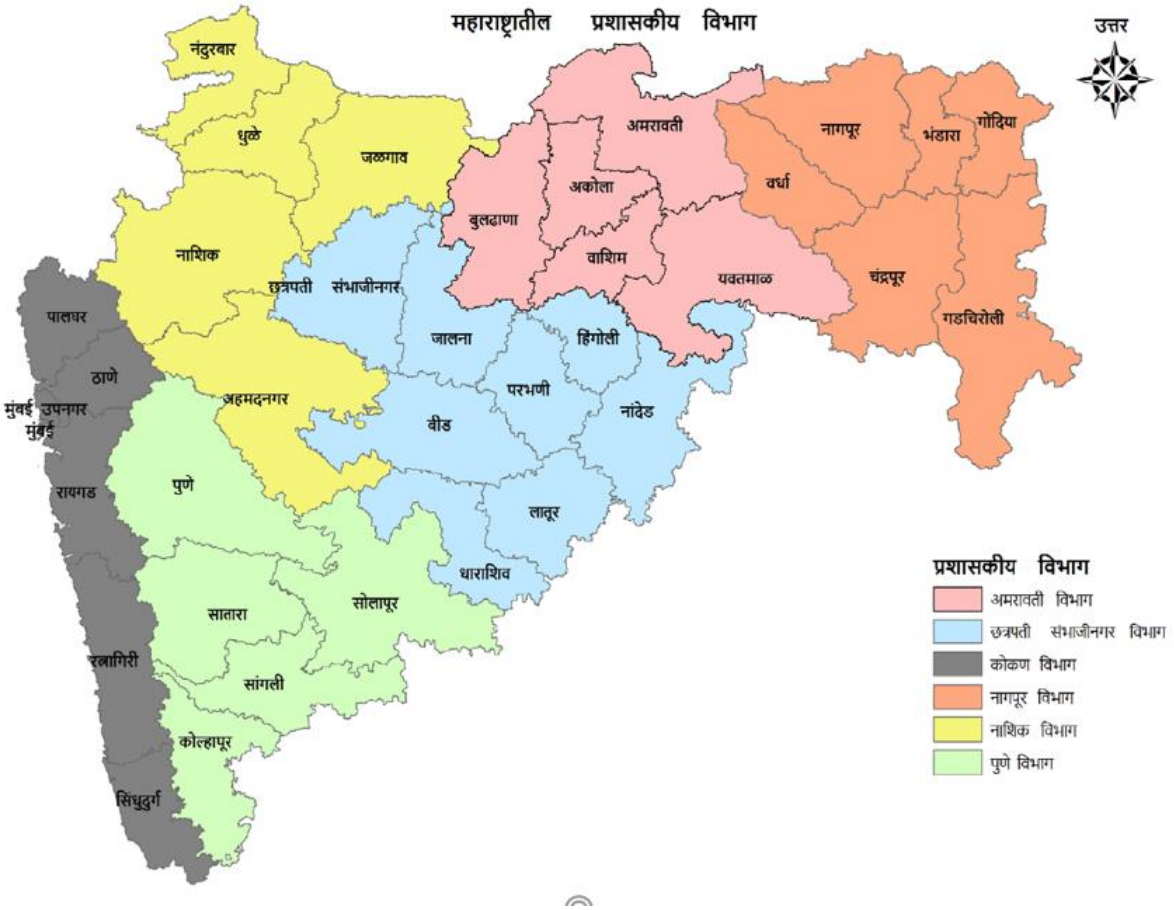


Figure 1: Administrative Division of Maharashtra
Source: https://www.maharashtra.gov.in/Site/1620/About-Us

Background of the Training Programme

Public Health Emergencies (PHEs) and disasters often occur unexpectedly, threatening public health, infrastructure, and communities. Despite their challenges, these crises also serve as critical learning opportunities. They compel us to evaluate and strengthen our human resources, infrastructure, and operational systems, including policies, plans, and guidelines.

Recognizing the lessons and needs highlighted by recent PHEs and disasters, the Centre of Excellence on Public Health Emergency and Disaster Management, National Institute of Disaster Management (CoE-PHEDM, NIDM), Ministry of Home Affairs (MHA), Government of India (GoI); National Centre for Disease Control (NCDC), Directorate General of Health Services (Dte.GHS), Ministry of Health and Family Welfare (MoHFW), GoI and U.S. Centers for Disease Control and Prevention (CDC), Country office India collaborated and integrated Public Health Emergency Management (PHEM) and Disaster Management (DM) constituencies.

NIDM, NCDC, and CDC-India have developed a comprehensive five-tiered framework to bolster the capacities of public health emergency and disaster management (PHEDM). The Public Health Emergency and Disaster Management Professional Development Programme (PHEDM-PDP) Tier III training package was developed within this framework. This training package has undergone various stages of implementation: it was piloted in Tamil Nadu, validated in Uttarakhand, launched in Rajasthan, and partially implemented in Gujarat and Maharashtra.

Figure 2: Public Health Emergency and Disaster Management - Professional Development Programme

The second batch of the 4-day Public Health Emergency and Disaster Management Professional Development Programme (PHEDM-PDP) Tier-III Training was conducted in Pune, Maharashtra, from May 28-31, 2024. This training session benefited 38 participants, comprising 6 mentors and 32 mentees from 8 districts and 5 municipal corporations across Maharashtra. These officials represented diverse departments, including Integrated Disease Surveillance Programme (IDSP) Units, Disaster Management, Animal Husbandry, Revenue Department, and Medical Colleges.

Maharashtra was selected for this training due to its designation as a priority state under the Pradhan Mantri-Ayushman Bharat Health Infrastructure Mission (PM-ABHIM) by the Government of India. This selection aligned with the nationwide expansion of the PHEDM-PDP Tier-III Training, making it a fitting choice for this crucial initiative.

At the heart of the training was the Tier-III training package, a pivotal element within the comprehensive five-tiered framework for PHEDM. This tier specifically targets operational-level functionaries, providing them with essential knowledge and skills to act as critical links between communities and higher authorities during emergencies. The training underscored the importance of collaboration with key stakeholders and offered participants the opportunity to interact with experts from both national and state levels. This platform facilitated sharing experiences, exchange of best practices, and discussion of challenges, fostering mutual learning and growth.

Learning Objectives

The Tier-III training programme had specific learning objectives, which included:

- Understanding the concept of Public Health Emergency and Disaster Management (PHEDM), emphasizing the One-Health Approach and the five-tiered Institutional PHEDM Capacity-Building Model.
- Describing the process of Threat and Hazard Identification and Risk Assessment.
- Explaining the purpose and significance of the WHO Framework for Public Health Emergency Operations Centre, Emergency Operations Plan (EOP), and Concept of Operations (CONOPs).
- Gaining knowledge about different organizational models utilized for effective response during emergencies.
- Illustrating the International Health Regulations (IHR) and understanding the concept of Points of Entry (PoE).
- Outlining the development of Risk Communication and Community Engagement (RCCE) strategies.
- Highlighting the importance of mental health support and psychosocial assistance during and after public health emergencies and disasters.

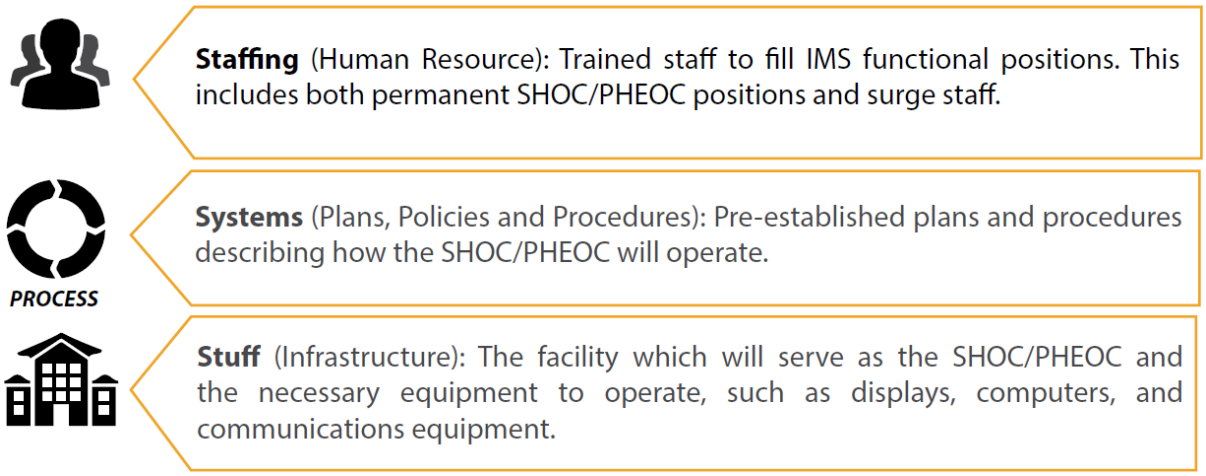


Figure 3: Three elements for PHEDM

Methodology

A prep op workshop involving PHEDM faculties, resource persons, and state organizers was held to foster collaboration, ensure familiarity, and prevent overlap in course content, thereby managing time effectively. A mentor workshop was conducted to enhance the mentors' mentoring capabilities.

The PHEDM-PDP Tier-III training was designed to facilitate comprehensive discussions and knowledge-sharing on PHEDM. Technical sessions played a central role, where participants engaged in PowerPoint presentations, group activities, tabletop exercises, mock drills and topical discussions. The course adopted a participatory approach, encouraging bilateral sharing of experiences among the attendees. Additionally, yoga sessions were incorporated to promote the physical and mental well-being of the participants.

Assessments and feedback mechanisms were implemented to evaluate the training's effectiveness and processes. Pre and post-course assessments and Kahoot quizzes were conducted to gauge participants' knowledge and skills before and after the training. Feedback was also gathered from the participants to assess the training's outcomes and identify areas for improvement. This comprehensive evaluation approach ensured the training met its objectives and provided valuable insights for future enhancements.

Participants were organized into four groups on Day 1 to foster coordination and enhance learning, with seating arrangements and group names rotated throughout the program. This approach allowed individuals from different districts to interact closely, promoting collaboration and inclusivity in the learning environment. The focus was on creating opportunities for participants to engage with peers from various regions, facilitating greater understanding and cooperation within the state.

For further details, please refer to Annexure-I, which includes the agenda of the training program. Additionally, Annexure II lists the participant groups, highlighting the initiative's commitment to promoting interaction and coordination among diverse stakeholders.

Participants and Mentors

The training benefited 38 participants, comprising 6 mentors and 32 mentees, from 8 districts and 5 municipal corporations in Maharashtra. These officials represented various departments, including Integrated Disease Surveillance Programme (IDSP) Units, Disaster Management, Animal Husbandry, Revenue Department, and Medical Colleges.

For a comprehensive list of mentors and participants, please refer to Annexure III.

Day-1: Wednesday, 29th May 2024

Course Overview and Objectives

Dr Rajeev Sharma, PHS and Lead-EM, DGHP, CDC-India, offered insightful perspectives on the PHEDM-PDP Tier-III training package. He underscored the critical integration of Public Health Emergency Management (PHEM) and Disaster Management (DM), emphasizing that a cohesive approach to both fields is essential for effectively addressing and managing Public Health Emergencies (PHEs) and disasters. Dr Sharma detailed that the Tier-III training is meticulously designed for middle-level functionaries from various disciplines, fostering a cross-disciplinary approach to address PHEs and disasters comprehensively. He said these individuals operate at the grassroots level as a vital link between communities and higher levels of authority. He said the objective of the training is to equip these individuals with the necessary knowledge and skills to carry out their roles and responsibilities effectively.

Special Address: Dr Subhash Salunkhe, Former Director General of Health Services (DGHS), Government of Maharashtra

Dr Subhash Salunkhe, Former Director General of Health Services (DGHS), Government of Maharashtra shared his extensive experience of managing PHEs in Maharashtra, emphasizing the crucial role of cooperation among various sectors. He highlighted past challenges, such as the lack of public health laboratory support and limited virological capabilities, noting the significant improvements made over time. Dr Salunke also discussed the "One Health" programme, which integrates human, animal, and environmental health for comprehensive public health solutions. He commended the PHEDM initiative, recognizing its potential to enhance coordination and collaboration among different departments. Dr Salunke suggested developing a follow-up mechanism to evaluate the training programme's impact, ensuring its long-term sustainability and effectiveness. He urged participants to absorb the knowledge from this Tier-III training program and actively disseminate it within their respective districts, fostering widespread improvement in disaster management capabilities.

Overview of Current Status, Challenges, Opportunities, and Best Practices of PHEDM in Maharashtra

Mr Vithal Banote, District Disaster Management Officer (DDMO) of Pune, provided an in-depth analysis of Maharashtra State's multi-hazard profile. He highlighted several significant recent disasters, including floods, COVID-19, Cyclones Nisarg and Tauktae, the Bhandara hospital fire, landslides, the Dombivli blast, and severe thunderstorms and lightning incidents. Mr Banote noted that in 2023, accidental drowning was the leading cause of human fatalities, while gusty winds and heavy rainfall claimed the lives of 4,012 animals. He also discussed the existing disaster management workforce and their capacity-building programs. In terms of the disaster management system, Mr Banote provided insights into the Disaster Management Act of 2005, the state and district-level Disaster Management Plans, the State Heat Wave Action Plan, the Post-Disaster Needs Assessment (PDNA) Plan for loss and damage assessment, and the Slope Master Plan initiative. Furthermore, he elaborated on the available infrastructure for disaster management, such as the State Emergency Operations Center (SEOC) and the District Emergency Operations Center (DEOC).

Mr Banote emphasized the potential for Corporate Social Responsibility (CSR) funding for disaster management initiatives, the importance of a robust network of institutions, and the use of advanced technology. Moving forward, he identified key areas for improvement,

including enhanced coordination with stakeholders, strengthening the SEOC and DEOC, promoting community-based disaster management activities, and establishing a repository for learning and training based on specific approaches.

Dr Sunil Lahane, Joint Commissioner, Animal Husbandry, Pune, provided a comprehensive overview of the current state of the Department of Animal Husbandry in managing animal and zoonotic diseases in Maharashtra. He highlighted the crucial role of the Animal Husbandry Rapid Response Teams (RRTs) in operations such as vaccination, supervision, and disinfection. Dr Lahane discussed various animal health emergencies, including Glanders and Avian Influenza, and elaborated on the state's existing surveillance systems for animal and zoonotic diseases.

Furthermore, Dr. Lahane introduced the Animal Health System Support for One Health (AHSSOH) project, outlining its expected outcomes. These include strengthening institutional capacity and One Health coordination, enhancing veterinary diagnostic capacity at the district, regional, and state levels, increasing access to quality veterinary services, improving disease surveillance capacity, and bolstering community-level animal health management.

Module I: Overview of Public Health Emergency and Disaster Management (PHEDM)

Dr Sujeet K Singh, Distinguished Public Health Expert and Former Director NCDC, Dte.GHS, MoHFW, and GoI provided an overview of Module I on Public Health Emergency and Disaster Management (PHEDM). He provided an in-depth understanding of managing public health emergencies and disasters. Dr Singh highlighted the One Health approach, emphasizing the critical interconnections between human, animal, and environmental health. He elaborated on the five-tiered PHEDM framework and its objectives, which include developing a network of PHEDM professionals, establishing a core group of trainers to advance and disseminate training, increasing public awareness, and building capacity at all levels—from community to national. Additionally, Dr Singh discussed various international and national frameworks related to PHEDM, outlining their significance and roles. These frameworks include the International Health Regulations (IHR), the Global Health Security Agenda (GHSA), the National Action Plan for Health Security (NAPHS), the Sustainable Development Goals (SDGs), the Sendai Framework, the High Power Committee (HPC) on Disaster Management (Pant Committee), the Disaster Management Act, the National Disaster Management Plan, and the Epidemic Diseases Act.

PHEDM Assessment Tool

Dr Rajeev Sharma, PHS and Lead-EM, DGHP, CDC-India, provided valuable insights into the Public Health Emergency and Disaster Management (PHEDM) assessment tool. He explained that the tool systematically identifies, analyzes, and prioritizes threats, hazards, and risks that communities face. It offers an evidence-based understanding of vulnerabilities and assesses capability requirements to effectively address potential impacts. Dr Sharma mentioned that this assessment tool empowers communities by providing knowledge about their vulnerabilities, allowing them to make informed decisions on risk reduction strategies, resource allocation, emergency planning, and collaborative efforts.

Mr Anil Kathait, PHEDM Team, supported the session by briefly outlining the assessment process. This process includes compiling a general profile, identifying and describing threats and hazards, conducting key informant interviews, and establishing core capabilities. He also discussed the methodology for calculating the Comprehensive Priority Risk Index (CPRI) score and the steps for implementing the PHEDM assessment tool. These steps involve forming an assessment team, defining clear roles and responsibilities, compiling and synthesizing information, and disseminating the findings.

Team Building Exercise

Participants tackled an engaging challenge: building a tower using only a stack of papers and a stapler. This activity fostered teamwork and creativity while sharpening problem-solving skills. Team members collaborated to design and construct the tallest, most stable tower possible within the constraints.

Activity: Building a tower with a stack of 12 papers and a stapler containing one set of pins.
Duration: 15 min
Materials provided: A4 size paper (12 Nos.) and stapler with pins

The tower-building team exercise had several key objectives. It aimed to inspire participants to use their creativity and critical thinking to build the tallest tower with limited resources. This focus on resourcefulness and adaptability highlighted the importance of maximizing available materials to achieve collective goals.

Additionally, the exercise sought to promote collaboration, effective communication, and strong team cohesion. As participants worked together to design and construct the tower, they needed to share ideas, delegate tasks, and coordinate their efforts seamlessly. This encouraged teams to leverage each member's strengths, establish clear roles and responsibilities, and communicate efficiently to overcome challenges.

Glimpse Team Building Exercise




Special Address: Smt. Sujata Suanik, IAS, Additional Chief Secretary (Home), Govt. of Maharashtra

During her address virtually, Smt. Sujata Suanik, IAS, Additional Chief Secretary (Home), Govt. of Maharashtra, said, I'm grateful for this opportunity to address all the participants from different departments of Maharashtra. She said that she was glad this kind of training programme had been organized and that she was sure participants would benefit from it. Further, Smt. Suanik shared her experience working with the National Disaster Management Authority (NDMA), MHA, GoI in disaster management and climate change. While speaking for Maharashtra, she said that several events are happening simultaneously in different parts of

our state, and the administration sometimes does not know how to respond to these various events.

Furthermore, Smt. Suanik urged that when disaster strikes, one nation, one health, and an all-hazard approach must be taken. She said that responders must also be fully trained to manage all kinds of Public Health Emergencies (PHEs) and disasters. She noted that it's time to raise awareness about how everyone can manage disasters at a community and individual level. Another point she mentioned was that today, disasters do not happen in a localized area. They spread more widely, and the impact is also higher. Therefore, awareness and preparedness must go hand in hand.

She stated, "I want to stress one more crucial point: conducting data analysis today is essential. Analyzing data beyond a two-year scope is no longer meaningful, as everything is so topical and current data holds more value than past data. Additionally, forecasting more than one or two years ahead is impractical due to rapid changes. Therefore, it is imperative to leverage the data you have now. If internal resources are insufficient, seek assistance from institutes like the Indian Institute of Technology (IIT) Mumbai, Yashwantrao Chavan Academy of Development Administration (YASHADA), and Wadhwani AI."

She conveyed a sense of urgency and the need to manage information to feed into the proper management of the PHEs and disaster events happening around us. She urged participants that we would have to live with them and deal with them. Therefore, each of us has to become a responsible citizen who understands and then performs to make sure that the impact is manageable.

Module VII: Psychosocial Aspects of Public Health Emergency and Disaster Management (PHEDM)

Dr Jugal Kishore, Professor and Head of Community Medicine at VMMC&SJH, New Delhi, presented Module VII: Psychosocial Aspects of Public Health Emergency and Disaster Management (PHEDM). He highlighted that the psychological and social challenges arising from emergencies or disasters often exceed the coping capacity of affected communities. Therefore, providing psychosocial support to victims is crucial. Dr Kishore detailed individuals' reactions and explained the key factors influencing these responses. He discussed Psychological First Aid (PSFA), emphasizing the importance of offering compassionate and practical support to distressed people. Dr Kishore elaborated on how adults and children react to crises, the factors affecting psychological responses, and the role of mental health professionals in these scenarios. He underscored that adequate psychosocial support and preparedness require a coordinated effort across various sectors to ensure a comprehensive response to the needs of individuals and communities.

Day 2: Thursday, 30th May 2024

Yoga Session

The day began with a refreshing yoga session led by expert instructors in the early morning. Participants engaged in various yoga poses and breathing exercises, enhancing their physical and mental well-being. This energizing start gave attendees a revitalizing boost, creating a positive and conducive atmosphere for learning and collaboration throughout the day.

A similar session was held on day four to reinforce the importance of health and well-being. This ensured that participants had continuous opportunities for physical rejuvenation and mental relaxation, enriching their experience throughout the program.

Recap of the Day 1

Participants provided a brief of the proceedings of Day 1. The recap highlighted several key sessions, including an overview of the course and its objectives. It also covered discussions on the current status, challenges, opportunities, and best practices of Public Health Emergency and Disaster Management (PHEDM) in Maharashtra. Additionally, the recap encompassed Module I, which provided an overview of PHEDM and detailed the assessment tool introduced during the day. The team-building exercise and Module VII, which focused on the psychosocial aspects of PHEDM, were also thoroughly discussed. This comprehensive recap ensured that all participants were aligned on what was learned from the day's sessions.

Presentation of Group Exercise (SWOC analysis of PHEDM)

Participants were assigned a group exercise focused on conducting a SWOC (Strengths, Weaknesses, Opportunities, and Challenges) analysis of Public Health Emergency and Disaster Management (PHEDM). They were divided into four groups (refer to Annexure II), each tasked with analyzing a specific topic related to PHEDM:

- Group 1: Staff (Capacity Building)
- Group 2: System (System Strengthening)
- Group 3: Stuff (EOC/PHEOC)
- Group 4: Experience Sharing on PHEDM

This exercise was designed to foster collaboration and critical thinking among participants. It provided an opportunity to assess each topic's strengths, weaknesses, opportunities, and challenges. This hands-on activity gave participants valuable insights and perspectives, enhancing their understanding and proficiency in public health emergency and disaster management strategies. The key points from each group's presentation are as follows:

Group 1: Staff (Capacity Building)

Group 1 provided a detailed SWOC analysis for staff capacity building in disaster management, emphasizing the formation of task forces at various levels. They discussed the classification of disasters, assessment of risk levels, enhancement of existing systems, and updating training programs at each level to ensure preparedness.

Key Points from Group 1's SWOC Analysis:

Strengths:

- Legal Framework: A robust legal framework supports disaster management initiatives, providing a solid foundation for operations.
- Good Practices and Learning: The incorporation of best practices and continuous learning helps improve strategies and responses.
- Availability of Funds and Manpower: Adequate funding and manpower resources are crucial strengths that facilitate effective disaster management.

Weaknesses:

- Lack of Vision: A clear and unified vision is often missing, which can hinder long-term planning and effectiveness.
- Policy Practices Missing: There are gaps in the implementation of policies, leading to inconsistencies and inefficiencies.
- Training Policy Gaps: Existing training programs have gaps, and there is a need for updated and comprehensive training policies.
- Need-Based Assessments of Manpower: Assessments are not always need-based, leading to mismatches in manpower allocation and utilization.

Opportunities:

- Effective Emergency Management: Proper management of emergencies presents an opportunity to streamline processes and enhance response effectiveness.
- Technological Advancements: Leveraging new technologies can significantly improve training and operational efficiency.
- Collaboration with Stakeholders: Building strong partnerships with various stakeholders, including private sectors and NGOs, can bolster capacity building efforts.
- Challenges:
- Increasing Complexity of Disasters: The growing complexity and frequency of disasters pose significant challenges.
- Resource Constraints: Despite available funds, resource allocation and optimization remain challenging.
- Resistance to Change: Institutional inertia and resistance to adopting new practices can impede progress.

By addressing these strengths, weaknesses, opportunities, and challenges and focusing on the recommended strategies, disaster management systems can be significantly improved, ensuring better preparedness and response to future emergencies.

Group 2: System (System Strengthening)

Group 2 provided a comprehensive SWOC analysis of the system for Public Health Emergency and Disaster Management (PHEDM). Their presentation emphasized the critical importance of effective disaster management in mitigating the impacts of disasters. They highlighted the necessity of a robust policy framework and a well-prepared system to achieve this goal.

The group underscored that conducting a SWOC analysis—examining strengths, weaknesses, opportunities, and challenges—offers valuable insights into the system's preparedness for emergency situations. It also identifies areas for improvement, ensuring the system is ready to respond promptly and appropriately. Additionally, a SWOC analysis fosters collaborative and coordinated efforts across various departments to mitigate disasters and strengthen disaster management policies.

Key Points from Group 2's SWOC Analysis:

Strengths:

- Comprehensive Frameworks: Well-established disaster management frameworks and protocols.
- Advanced Technology: Utilization of cutting-edge technology for disaster response and management.
- International Cooperation: Engagement with global partners and adherence to international standards.
- Community Engagement: Active involvement of communities in disaster preparedness and response activities.

Weaknesses:

- Resource Limitations: Insufficient resources, including funding and personnel.
- Coordination Challenges: Difficulties in ensuring seamless coordination among various agencies and departments.
- Lack of Training: Inadequate training programs for disaster management personnel.
- Policy Gaps: Inconsistencies and gaps in existing policies and regulations.

Opportunities:

- Policy Integration: Potential for integrating disaster management policies with other public policies.
- Technological Innovation: Opportunities to adopt and implement new technologies for disaster management.
- Public-Private Partnerships: Collaboration with private sector entities to enhance disaster preparedness and response.
- Capacity Building: Efforts to strengthen the capabilities of disaster management teams through training and development programs.

Challenges:

- Increasing Disaster Frequency: Rising occurrence of natural and man-made disasters.
- Resource Competition: Competition for limited resources among various sectors.
- Misinformation: Spread of false information during disaster events, leading to confusion and panic.

The group's presentation concluded that strengthening disaster management policies requires a holistic approach. This approach should leverage existing strengths, address weaknesses, seize opportunities, and mitigate threats. By doing so, policymakers can enhance the resilience and effectiveness of disaster management systems, ultimately safeguarding lives and livelihoods.

Group 3: Stuff (EOC/PHEOC)

Group 4: Experience Sharing on PHEDM

Group 4 provided an insightful overview of the Heat Action Plan (HAP) for Nagpur District in 2023. They noted that the Nagpur Municipal Corporation prepared the HAP under the guidance of the Municipal Commissioner in 2016, aiming to mitigate and reduce the impact of heat waves. Nagpur stands out as the first city in Maharashtra and the second in India to develop such a plan, with assistance from the Directorate of Health Services, Maharashtra. The group also discussed the stages of developing a HAP and its institutional arrangement.

Group 4 highlighted several key strategies for Nagpur's Heat Action Plan (HAP). They emphasized establishing early warning and communication systems to provide timely and effective communication to the public and relevant agencies. They called for developing inter-agency response plans and coordination to ensure efficient field operations, strengthening local-level preparedness for heatwave health emergencies, and enhancing the healthcare system's capacity to manage heat-related health issues. Public awareness and community outreach were also underscored, and partnerships with private, non-government, and civil society organizations were fostered to enhance the plan's effectiveness. Continuous impact assessment and feedback for plan review and updating were deemed crucial. The group recommended creating a single data repository for easy access, promoting cost-effective personal coolants, and developing strategies for natural cooling agents like lakes and forests. They suggested issuing regular bulletins on heat conditions, encouraging community efforts to increase forest cover, retrofitting old buildings to improve heat resilience, and installing sensors to monitor heat levels. Building public awareness of urban heat risks was also highlighted.

These strategies and recommendations aim to enhance the effectiveness of the Heat Action Plan, making Nagpur more resilient to heatwaves and safeguarding public health and well-being.

Inaugural Session

Dr Radha Kishan Pawar, Joint Director, Health Services, Government of Maharashtra, warmly welcomed the distinguished dignitaries and participants to the second batch of the PHEDM-PDP Tier-III training programme that is organized with the support of NCDC, NIDM, and CDC-India. He expressed his gratitude to the national and state-level dignitaries for attending and adding prestige to the training event. Dr Pawar expressed confidence that the participants would take full advantage of this opportunity to learn from the expertise of the distinguished panel of experts. He encouraged them to absorb the knowledge shared during the training and to disseminate these insights to others in their districts, ensuring that the benefits of the training extend beyond the immediate audience.

Dr Rajeev Sharma, PHS and Lead-EM, DGHP, CDC-India, expressed his passion for working in the crucial field of PHEDM, emphasizing its vital role in safeguarding the community. He pointed out that in our increasingly interconnected global village and rapid climate change, PHEs and disasters are becoming more frequent and complex. Dr Sharma elaborated on the aims of PHEDM, which include building capabilities for preventing, preparing for, responding to, and recovering from PHEs and disasters. He said this framework enables the coordination of various stakeholders. Dr Sharma noted that the primary goal of PHEDM is prevention, which involves identifying potential vulnerabilities and risks and implementing measures to mitigate them. These measures may include developing emergency response plans, conducting risk assessments, and promoting public awareness. He underscored that preparedness is another critical aspect of PHEDM, focusing on capacity building at all levels. Dr Sharma concluded by highlighting that PHEDM is essential for ensuring our communities and societies remain resilient in the face of adversity.

Dr Saurabh Goel, JD, IDSP, NCDC, Dte.GHS, MoHFW, GoI thanked the Health Department, Government of Maharashtra, for their support in organizing the PHEDM Tier-III (Batch-2) training. He commended Maharashtra's proactive approach towards PHEDM and its various initiatives, such as establishing a fully functional Metropolitan Surveillance Unit in a short span of time. He emphasized that PHEDM provides a platform to unite various stakeholders, ensuring effective response, especially during the crucial golden hours of any PHE or disaster. Dr Goel noted that Tier-III training has demonstrated success across different states, piloted in Tamil Nadu, validated in Uttarakhand, implemented in Rajasthan, partially in Gujarat, and now in Maharashtra. He

explained that this training helps states and districts to map vulnerable populations, identify threats, and map resources effectively. Additionally, he highlighted that climate change has increased the likelihood of new PHEs and disasters. Therefore, PHEDM Tier-III is crucial, as it is designed around a mentor-mentee concept, which ensures consistent capacity enhancement and professional growth.

Dr Sujeet K Singh, Distinguished Public Health Expert and Former Director NCDC emphasized that the PHEDM-PDP Tier-III training is highly beneficial, given India's vulnerability to various public health emergencies (PHEs) and disasters. He urged Maharashtra to build multi-sectoral and multi-dimensional capacity to eliminate or minimize the impacts of these hazards. Discussing biological threats, Dr Singh pointed out that while some threats are known, others are not, necessitating heightened vigilance due to the extensive human-animal interface. He noted that future pandemics will likely be 75% zoonotic, originating from pathogens transmitted from birds like bats or other animals. Dr Singh noted that PHEDM Tier-III is designed to bring together stakeholders from different departments. It focuses on active discussions by experts and involves group deliberations on strengths, challenges, gaps, and opportunities. He suggested consolidating the recommendations from this training and forwarding them to the state government for meaningful implementation. He also recommended cascading the training's learnings to lower levels and strengthening the capacities of frontline workers. Dr Singh highlighted this training as an opportunity to develop competencies, ensuring preparedness and effective management of any adverse situation.

Prof. Surya Parkash, Head, CoE-PHEDM, NIDM, MHA, GoI highlighted the importance of this training programme, emphasizing its relevance in addressing current issues such as heat waves, which lead to numerous health emergencies. He also noted that with the approaching monsoon, it is crucial to enhance flood preparedness, as floods can exacerbate health issues due to contamination of drinking water and other resources. Prof. Parkash shared his experience with various disasters that have led to health emergencies. He mentioned that this summer saw a significant increase in fire accidents in hospitals, houses, and hotels, nearly double compared to the previous year. He attributed these incidents to the impacts of climate change, which are contributing to both disasters and PHEs. He stressed the need for integrating disaster and PHE management efforts and highlighted the PHEDM's five-tiered approach. According to Prof. Parkash, this approach effectively bridges the understanding from the grassroots level to top-level decision-makers and legislators. He concluded by wishing participants a fruitful training experience.

Dr Subhash Salunkhe, Former DGHS, Government of Maharashtra, expressed his happiness with the PHEDM Tier-III training programme, emphasizing its comprehensive approach. Unlike other training focusing exclusively on a single department, it is designed for officials from multiple departments. Dr Salunkhe noted that this multi-departmental approach is vital for breaking down operational silos that often lead to isolated working practices. By integrating officials from various sectors, the training promotes cross-sector learning, which is essential for improving collaboration and coordination during emergencies and disasters. He further acknowledged that while disasters are not new, the frequency and intensity of these events have been exacerbated by human actions, including environmental degradation and unsustainable practices. Dr Salunkhe stressed that sustaining and building upon the knowledge gained through the training program is crucial. He encouraged disseminating this knowledge from the district to the taluka level to ensure widespread understanding and preparedness. Additionally, Dr Salunkhe highlighted the importance of engaging communities in all aspects of emergency management. He emphasized that effective preparedness, prevention, and response initiatives must involve community participation. Engaging local communities ensures that they are informed, prepared, and capable of responding effectively to emergencies and disasters, thus enhancing overall resilience.

Dr Muzaffer Ahmed, Former Member, NDMA, MHA, GoI commended the Public Health Emergency and Disaster Management (PHEDM) initiative and development of a comprehensive five-tiered approach, which spans community engagement to policy-making. He highlighted the importance of this framework in addressing various disaster management levels. Dr Ahmed shed light on several significant disasters that have impacted Maharashtra, including the ship explosion in 1944, floods in 2005, landslides in the Western Ghats, earthquakes, and chemical factory explosions. He pointed out that the state is home to over 380 Major Accident Hazard (MAH) units, which expose the population to risks from chemical and industrial disasters. Given these risks, Dr Ahmed emphasized the need to enhance capabilities across all hazard types and to develop an all-hazard plan. This approach will be instrumental in minimizing the impact of disasters and reducing loss of life. He also stressed the importance of disseminating the knowledge gained from this training to the community level. He said strengthening community resilience is crucial for mitigating the impacts of PHEs and disasters.

Dr. Nitin Ambadekar, Director of Health Services (DHS), Government of Maharashtra, stated in his address that combining Public Health Emergency Management (PHEM) and Disaster Management (DM) is a very appropriate initiative. He emphasized that this training is timely, as the monsoon season is approaching, making it an ideal period to sensitize people and enhance their capabilities for PHEDM. DHS Mumbai urged participants undergoing the PHEDM training to disseminate their knowledge, helping the state effectively manage any emergency or disaster. He highlighted that PHEDM Tier-III training is designed for operational functionaries from various departments and will be instrumental in framing or updating management plans at the district level for any disaster or public health emergency. He stressed the importance of prevention and emergency preparedness planning, citing the example of COVID-19, where the initial period revealed significant unpreparedness. DHS Mumbai encouraged participants to coordinate with the disaster management department of their respective districts and to plan and prepare for any PHEs or disasters. He urged everyone to cascade the training in their districts proactively. He congratulated NCDC, NIDM, and CDC-India for developing this training program and thanked GoI for implementing it in Maharashtra.

Demonstration by 5th Battalion, National Disaster Response Force (NDRF)

The 5th Battalion of the National Disaster Response Force (NDRF) provided a detailed overview of the NDRF's crucial role in disaster management. They highlighted the establishment of NDRF under Chapter VIII of the Disaster Management Act of 2005, specifically Section 44 (i), designating NDRF as a specialized force for responding to disasters.

They elaborated on the composition of the NDRF, detailing its 16 battalions and 28 Regional Response Centers (RRCs), with plans for further expansion. The strategic placement of these battalions enables prompt responses to disasters across the country.

Key features of the NDRF were underscored, including its status as the primary field responder for the Government of India, its amalgamation of different Central Armed Police Forces (CAPFs), and its multi-skilled, high-tech capabilities to handle various disasters. The presentation emphasized NDRF's minimal response time and highlighted their proactive availability to states and pre-positioning in threatening disaster scenarios. The NDRF operates as self-contained, all-in-one units, contributing to its efficiency.

Additionally, the NDRF engages in collaborative capacity building, extending its capabilities for all natural disasters and Chemical, Biological, Radiological, and Nuclear (CBRN) emergencies. The NDRF is also equipped to carry out disaster response operations within the country, regionally, and internationally.

Following the presentation, survival procedures were demonstrated, covering first aid, Cardiopulmonary Resuscitation (CPR), and evacuation techniques during emergencies and disasters. The demonstration focused on improvised life-saving methods when resources are limited, including techniques for lifting and transporting injured individuals. Participants observed a one-man rescuer in a scenario-based exercise, learning various rescue techniques and knots. The session provided hands-on experience, emphasizing the importance of improvisation, communication, and evaluation in emergencies, enhancing participants' understanding of practical life-saving methods.

Demonstration by 05th Battalion, NDRF

Module II: Principles of PHEDM and its Applications

Dr Ruchi Jain, Regional Director, Regional Offices of Health and Family Welfare (RoHFW), Kerala, virtually led the session on Module II: Principles of Public Health Emergency and Disaster Management (PHEDM) and Its Applications. She emphasized the factors used to gauge the nature of an emergency, including its scope, geographical location, and repercussions. Dr Jain discussed the fundamental principles of emergency management, highlighting the importance of a comprehensive approach to hazards, the adaptability and scalability of incident management systems, the use of shared terminology and technology, partner engagement, clear delineation of roles and responsibilities, the establishment of policies and procedures, adoption of standardized structures, and a central focus on communication and community involvement. She elaborated on the difference between tactical and strategic operations, explaining that

strategic operations involve doing the right things, while tactical operations involve doing things right. The session addressed the key components of an emergency management program, including risk assessment, prevention and mitigation, preparedness, response, and recovery. Dr Jain introduced the three-step risk assessment process known as Threat and Hazard Identification and Risk Assessment (THIRA). This process helps communities understand risks and determine the necessary actions to address them.

Module IV: Organizational Model for Managing Response

Dr Muzaffer Ahmed, Former Member, NDMA, MHA, GoI, provided insights on Module IV: Organizational Model for Managing Response. The learning objectives were to understand different organizational models for response and identify the symmetry between these models. The session shed light on Incident Command System (ICS), Incident Management System (IMS), and Incident Response System (IRS). Dr Ahmed discussed the universal applicability of the IRS/IMS, emphasizing standardized principles and an expanded framework that includes operations, planning, logistics, and finance/administration. He briefed participants on the expanded IMS framework, providing a detailed overview of its structure and sections. Dr Ahmed presented the IRS as a comprehensive solution adaptable to all incidents and hazards, moving away from ad hoc approaches. He highlighted the importance of documentation for planning and analysis to establish clear lines of action. He stated that an organizational model is more than just a team of people; it combines facilities, equipment, personnel, procedures, and communications, ensuring they all operate within a standard organizational structure.

Module V: International Health Regulations and Roles at Points of Entry

Dr Sujeet K Singh, Distinguished Public Health Expert and Former Director NCDC, Dte.GHS, MoHFW, and GoI took a session on Module V: International Health Regulations (IHR) and Roles at Points of Entry (PoE). He provided a comprehensive understanding of the IHR and the essential components of preparedness and response at PoE. The session covered several key learning objectives, including the regular functioning of PoEs and their role in managing Public Health Emergencies of International Concern (PHEIC). Dr Singh explained the surveillance and monitoring mechanisms at PoE and introduced the concept of the Public Health Emergency Operations Centre (PHEOC) concept at these points. Dr Singh detailed the national IHR core capabilities, emphasizing the operational meaning of the capacities required to detect, assess, notify, and report events and respond to PHEICs. He provided insights into past events declared as PHEICs and the mechanism for declaring such events. Additionally, he discussed the Public Health Emergency

Contingency Plan (PHECP) maintained at designated PoE for responding to events that may constitute a PHEIC.

Day 3: Friday, 31st May 2024

Recap of the Day 2

Participants highlighted the key lessons learned from the previous day's discussions. A summary of the modules and activities was provided, including a group exercise on the SWOC analysis of PHEDM, key takeaways from the inaugural session, a demonstration by the 5th Battalion of the NDRF, principles of PHEDM and their applications, the organizational model for managing responses, and international health regulations and roles at points of entry. Participants were grateful to the resource persons for sharing their valuable experiences and knowledge.

Module III: Public Health Emergency Operations Centre (PHEOC)

Dr Muzaffer Ahmed, Former Member, NDMA, MHA, GoI, led the session on Module III: Public Health Emergency Operations Centre (PHEOC). He delved into various facets of PHEOCs, emphasizing their key components and the importance of security and risk assessments. Dr Ahmed described the two primary types of PHEOC facilities: dedicated and multi-purpose. Dedicated facilities, solely used for PHEOC purposes, are considered ideal, while multi-purpose facilities can be adapted for emergency use when necessary. He underscored the critical need for robust security measures, highlighting the necessity of firewalls, encryption, password protection, antivirus software, and redundant data and hardware to prevent breaches. Dr. Ahmed also stressed the significance of data security and confidentiality.

In terms of infrastructure, Dr Ahmed recommended a comprehensive information and communications technology setup, including teleconferencing, media monitoring, and video capabilities. He reiterated the necessity of a thorough risk assessment for all PHEOC facilities and their surroundings. The session concluded with a discussion on the Emergency Operations Plan (EOP), a vital document to be prepared and maintained before any incident. Dr Ahmed introduced the concept of operations (CONOPs) as a core element of EOPs, which outlines incident management processes, transparent decision-making, and hazard-specific response plans based on comprehensive risk assessments.

Module VI: Risk Communication and Community Engagement

Dr Saurabh Goel, Joint Director, IDSP, NCDC, Dte.GHS, MoHFW, GoI, delivered a talk on Module VI: Risk Communication and Community Engagement. The session's learning objectives were to outline the development of risk communication and community

engagement (RCCE), describe the concepts, principles, and phases of crisis and emergency risk communication, and explain the roles and responsibilities of spokespersons and the media during crises, disasters, or emergencies. Dr Goel emphasized that risk communication goes beyond merely transmitting information; it fosters a two-way dialogue that empowers communities to participate actively in decision-making. He highlighted that community engagement is about working collaboratively with and through groups of people connected by geographic proximity, special interests, or similar situations to address issues affecting their well-being. He provided insights into the principles of Crisis and Emergency Risk Communication (CERC), urging participants to focus on the three "C" s of communication: content, context, and connection. Dr Goel underscored the importance of the media during emergencies and explained the roles and responsibilities of spokespersons and the media in crisis communication.

Mock Exercise on Incident Response System (IRS)

A mock exercise on the application of the Incident Response System (IRS) during a train accident was conducted to provide participants with a realistic scenario and hands-on experience. The exercise began with participants being presented with a train accident scenario and discussion points such as immediate concerns, initial actions, optimal utilization of available resources, and strategies for ensuring the free and uninterrupted movement of personnel and materials.

Participants were assigned roles and responsibilities according to the IRS structure, including positions such as Responsible Officer, Incident Commander, Deputy, Information and Media Officer, Safety Officer, and Liaison Officer.

Each group developed and presented their respective plans and approaches during the exercise. The functional groups made a concerted effort to address all essential areas of operation, logistics, and finance. The facilitator provided clarifications and guidance to ensure a comprehensive understanding of each functional responsibility.

A Glimpse of Mock Exercise

The primary objective of the exercise was to simulate a realistic emergency, offering participants practical experience in applying IRS principles to formulate an efficient and coordinated response plan. By assuming various roles within the IRS structure, participants gained valuable insights into the decision-making process and the coordination required to address potential impacts effectively.

Dr Bimlesh Joshi, Additional Director, Directorate of HealthGovernment of Uttarakhand, and Dr Rajeev Sharma, PHS Lead-EM, DGHP, CDC-India, facilitated the mock exercise on IRS.

The Incident Commander shared the challenges encountered during the exercise and outlined the necessary steps and activities each functional group undertook. Based on feedback from the different groups, the Incident Commander took proactive measures to address any issues.

Meetings were conducted with appointed section heads and sub-section heads to enhance coordination and effectiveness. This decentralized approach aimed to optimize resource utilization and streamline the overall response effort, allowing for more effective decision-making and activity management.

Course Summary and Way Forward

Dr Rajeev Sharma, PHS and Lead-EM at DGHP, CDC-India, delivered a comprehensive summary of the PHEDM-PDP Tier III (Batch-2) training, emphasizing the valuable knowledge exchange between experts and participants. He noted that the training program for PHEDM-PDP Tier III is designed to empower operational-level personnel through various interactive activities and to prepare future officials at all levels, from community roles to leadership positions. Dr Sharma mentioned that the training included technical sessions, quizzes, group activities, and simulation exercises to enhance participants' knowledge and skills. A tabletop exercise focused on the application of the Incident Response System (IRS)/Incident Management System (IMS) was conducted to prepare participants for potential emergencies. The National Disaster Response Force (NDRF) also led a mock drill covering essential skills

such as first aid, Cardiopulmonary Resuscitation (CPR), and evacuation techniques during emergencies and disasters. Further, he said that yoga sessions were also incorporated into the training programme to promote physical and mental well-being. This holistic approach aimed to enhance participants' effectiveness in carrying out their roles and responsibilities.

Some key recommendations from the training include:

- **Finalizing Training Schedules:** The state should finalize the schedule for upcoming PHEDM Tier III Training cohorts.
- **Establishing Follow-Up Mechanisms:** The state needs to establish a follow-up mechanism to ensure continued progress and implementation of the training outcomes.
- **Regular Mentor-Mentee Collaboration:** Mentors and mentees should maintain regular collaboration through monthly and quarterly meetings to strengthen or develop the District Disaster Management Plan (DDMP).
- **Knowledge Sharing:** Participants should share what they learned from the training with lower-level personnel and support the strengthening or development of Village Public Health Emergency and Disaster Management Plans.
- **Sustaining PHEDM-PDP Tier-III Training:** States should explore opportunities to integrate PHEDM-PDP within their existing systems to ensure long-term sustainability.

Participants Engagement

Throughout the training program, participants were actively engaged through various activities and sessions designed to enhance their learning experience. Pre- and post-course assessments were conducted to evaluate participants' knowledge and monitor their progress. Kahoot quizzes at the end of each module ensured understanding and retention of key concepts.

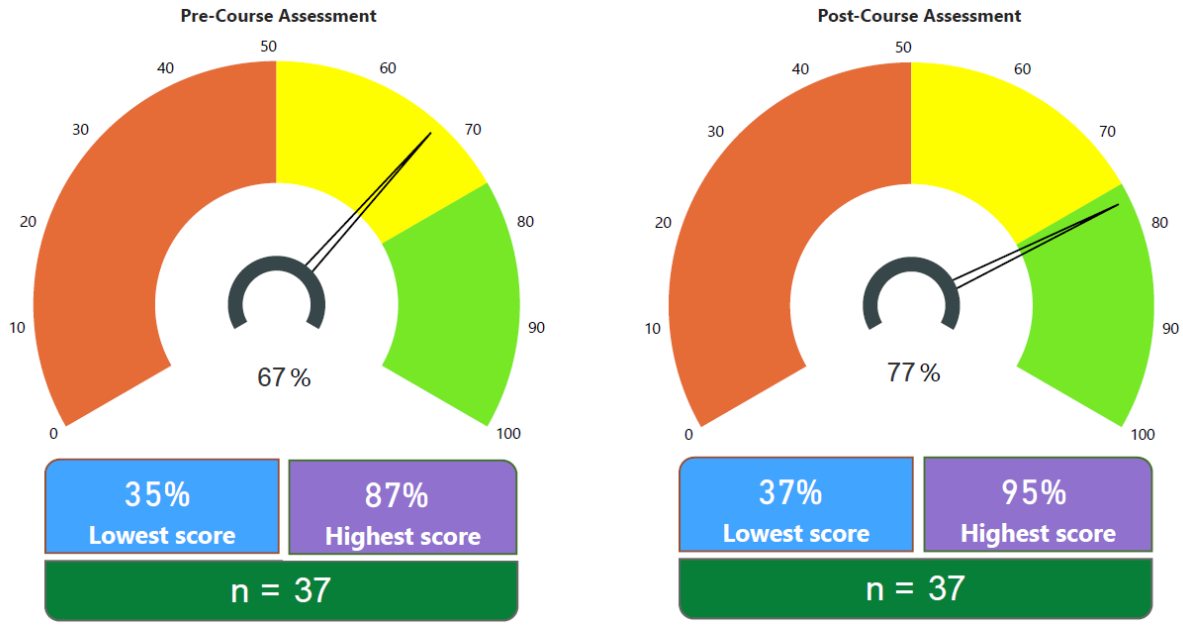
Group activities promoted collaboration and teamwork, allowing participants to apply their learning in practical scenarios. Evening group exercises offered additional opportunities for interaction and problem-solving. Early morning yoga sessions promoted physical and mental well-being, emphasizing the importance of holistic health for emergency responders.

Mock exercises simulated real-life situations, enabling participants to practice their skills and knowledge in a controlled setting. Q&A sessions provided a platform for participants to clarify doubts and engage in discussions, creating an interactive learning environment.

These engaging elements enriched the training programme, enhancing participants' learning experience and preparing them to handle public health emergencies and disaster situations effectively.

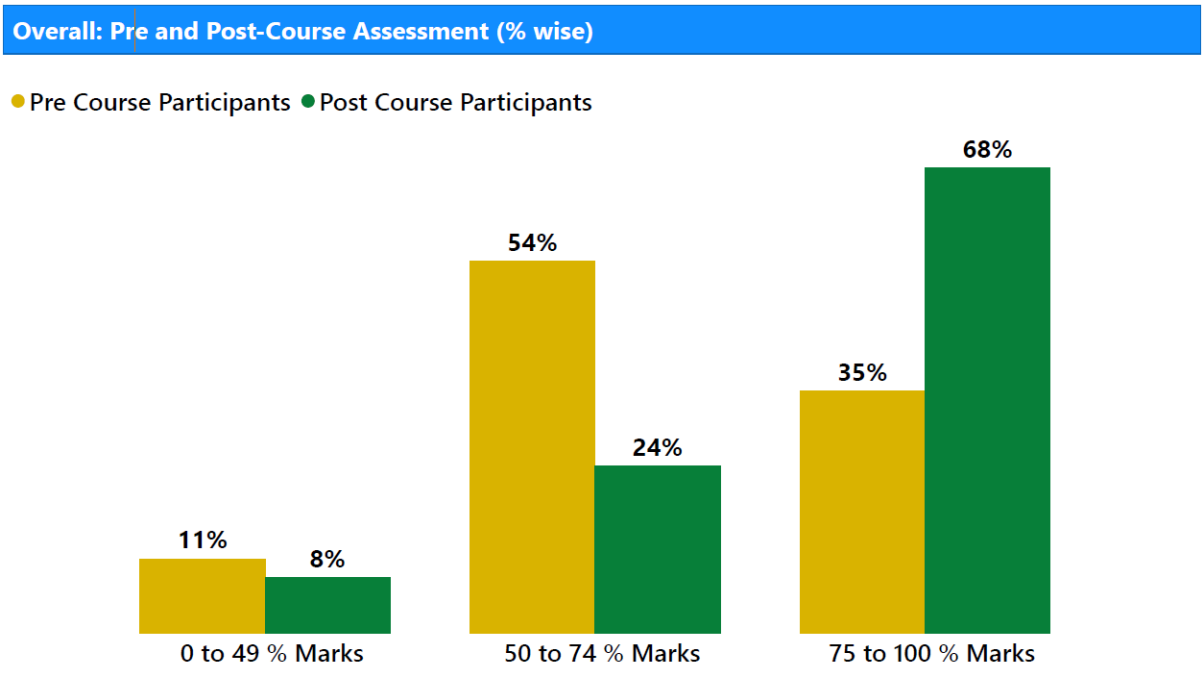
Pre-Post Course Assessment

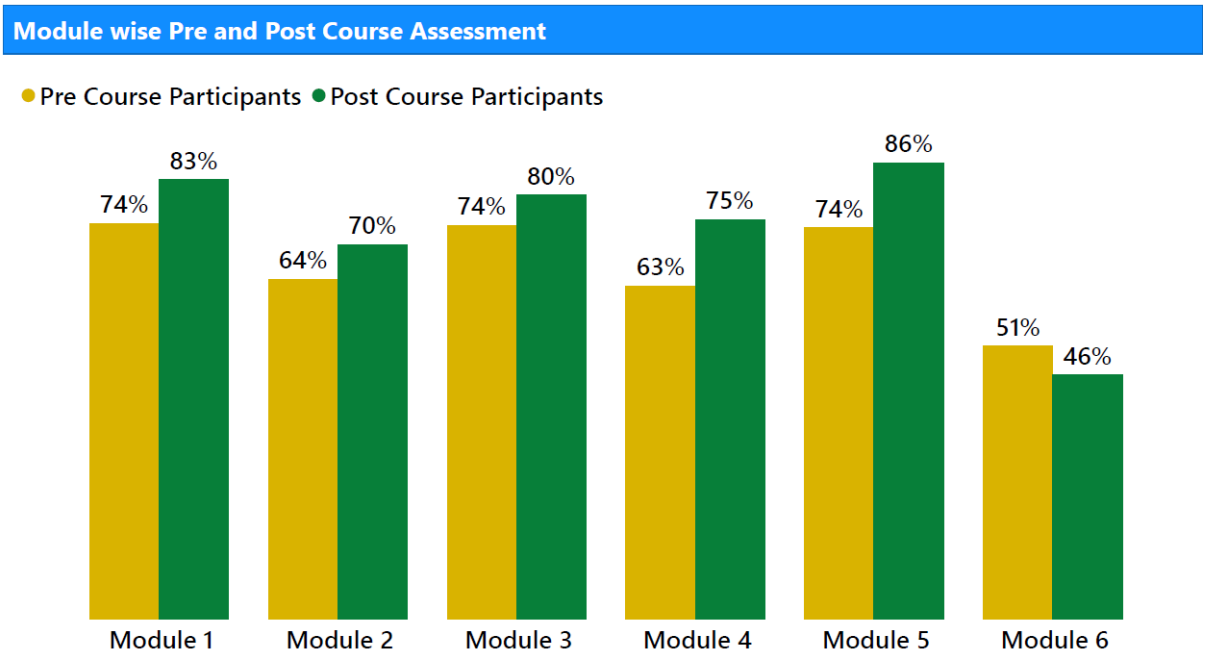
Pre- and post-course assessments were used to evaluate the effectiveness of the training and measure the knowledge gained throughout the event. The primary goal of the pre-course assessment was to assess participants' baseline knowledge of PHEDM.



The pre-course assessment included general and specific questions related to the Tier-III training modules. In the pre-course assessment, scores ranged from a low of 37% to a high of 87%. In contrast, the post-course assessment showed a lowest score of 37% and a highest score of 95%. Notably, the average score increased from 67% in the pre-assessment to 77% in the post-assessment.

A module-by-module analysis revealed substantial improvement in participants' scores in the post-assessment compared to the pre-assessment. This significant increase underscores the training course's success in effectively enhancing participants' knowledge and understanding of public health emergency and disaster management.





Participants Feedback

Participants' feedback was collected via feedback forms or Google Forms to evaluate their satisfaction with the training's relevance to their professional roles and to gather suggestions for course improvement. The feedback was overwhelmingly positive, with participants highlighting the value of training in effectively enhancing their capability to address Public Health Emergencies (PHEs) and disasters.

Distribution of Course Completion Certificates

Certificates of Participation were awarded to participants upon successful completion of the PHEDM-PDP Tier-III training programme.

Certificate distribution

Conclusion

The second batch of the PHEDM-PDP Tier-III Training Programme was successfully held in Pune, Maharashtra, from 28th - 31st May 2024. This training was jointly organized by the NIDM, NCDC, the Public Health Department, Government of Maharashtra and CDC-India.

The preparatory meeting, prep workshop, and mentor workshop played crucial roles in successfully executing the training programme. The preparatory meeting was essential for securing the participation of mentees and mentors and finalizing the training agenda. The prep workshop facilitated enhanced collaboration, prevented content overlap, and ensured effective time management. Additionally, the mentor workshop focused on strengthening the mentors' capabilities and clarifying their role in PHEDM, further contributing to the programme's success.

The technical sessions comprehensively covered seven modules (Module I: Overview of Public Health Emergency Preparedness and Response; Module II: Principles of PHEDM and Its Applications; Module III: Public Health Emergency Operations Centre (PHEOC); Module IV: Organizational Model for Managing Response; Module V: International Health Regulations and Roles at Points of Entry; Module VI: Risk Communication and Community Engagement; Module VII: Psychosocial Aspects of PHEDM).

Key aspects of the training included pre-and post-assessments, Kahoot quizzes, group activities, simulation exercises, and mock drills covering first aid, Cardiopulmonary Resuscitation (CPR), and evacuation techniques during emergencies and disasters. Yoga sessions were also included to promote physical and mental well-being.

The program actively sought participant engagement and feedback to enhance the effectiveness of the modules for future cohorts. Given the growing frequency and intensity of diverse public health emergencies and disasters, the PHEDM Tier-III program is crucial for significantly enhancing relevant stakeholders' readiness and response capacities. It aims to bolster resilience and ensure effective management of potential emergency and disaster scenarios.

Key Takeaways

- **Comprehensive Coverage and Collaboration:** The 4-day PHEDM-PDP Tier-III training was a collaborative effort by multiple national and state-level institutions aimed at strengthening public health emergency management in Maharashtra, enhancing the state's emergency response capabilities.
- **Operational-Level Focus:** The training targeted operational-level functionaries across various departments such as health, disaster management, animal husbandry, and law enforcement, bridging the gap between frontline workers, communities, and decision-makers to effectively manage emergencies.
- **Diverse Learning Modules:** Participants were trained on seven comprehensive modules, including emergency preparedness, risk communication, psychosocial aspects, and international health regulations, equipping them with essential knowledge and tools to strengthen District Disaster Management Plans (DDMP).
- **Interactive Learning:** The training employed interactive methods like technical sessions, quizzes, group activities, and a tabletop exercise on the Incident Response System (IRS)/Incident Management System (IMS) to build practical skills for handling public health emergencies.
- **Mock Drills and Holistic Well-being:** The National Disaster Response Force (NDRF) conducted mock drills on first aid, CPR, and evacuation techniques, while yoga sessions were integrated to promote mental and physical well-being among participants, enhancing their overall effectiveness in emergency roles.
- **Sustainability and Follow-up:** Emphasis was placed on sustaining training outcomes through regular mentor-mentee collaboration and establishing mechanisms for follow-up. States were encouraged to integrate PHEDM-PDP within their existing systems for long-term sustainability, and participants were urged to share their learnings to strengthen local disaster management plans.

Photo Gallery









CDC
HEDM-PDP
31st May 2024

Annexure I: Programme Schedule

Public Health Emergency and Disaster Management-Professional Development Programme (PHEDM-PDP) Tier-III Training

Time	Subject	Dignitaries/Resource Person
DAY 1: 29th May 2024, Wednesday		
0900 - 0930 hrs	Registration	IDSP Maharashtra, NIDM, NCDC, CDC, and PHEDM Team
0930 – 1000 hrs	Course Overview and Objectives	Dr Rajeev Sharma, Public Health Specialist, and Lead-Emergency Management, DGHP, CDC-India
1000 - 1020 hrs	Special Address	Dr Subhash Salunkhe, Former Director General of Health Services (DGHS), Government of Maharashtra
1020 - 1115 hrs	Overview of current status, challenges, opportunities, and best practices of PHEDM in Maharashtra	Mr. Vithal Banote, District Disaster Management Officer, Pune Dr Sunil Lahane, Joint Commissioner, Animal Husbandry, Pune
1115 - 1130 hrs	Tea Break	
1130 - 1200 hrs	Pre-course Assessment	IDSP Maharashtra, NIDM, NCDC, CDC, and PHEDM Team
1200 - 1210 hrs	Ground Rules and House Keeping	Dr Raju Thapa, PHEDM Team
1210 – 1300 hrs	Module I: Overview of Public Health Emergency and Disaster Management (PHEDM)	Dr Sujeet K Singh, Distinguished Public Health Expert and Former Director of NCDC, MoHFW, GoI Dr Rajeev Sharma, Public Health Specialist, and Lead-Emergency Management, DGHP, CDC-India
1300 - 1400 hrs	Lunch Break	
1400 - 1500 hrs	PHEDM Assessment Tool	Dr Rajeev Sharma, Public Health Specialist, and Lead-Emergency Management, DGHP, CDC-India Mr Anil Kathait, PHEDM Team
1500 - 1600 hrs	Module I: Activity (Team Building Exercise)	IDSP Maharashtra, NIDM, NCDC, CDC, and PHEDM Team

Time	Subject	Dignitaries/Resource Person
1600 - 1620 hrs	Tea Break	
1620 – 1650 hrs	Special Address and Experience Sharing (Virtual)	Mrs. Sujata Saunik, IAS, Additional Chief Secretary, Home, Government of Maharashtra
1650- 1730	Psychosocial aspects of PHEDM	Dr Jugal Kishore, Director Professor and Former Head, Vardhman Mahavir Medical College & SJH, New Delhi
1730 - 1745 hrs	Group Exercise: (SWOC analysis of PHEM) Allocation of tasks to group	IDSP Maharashtra, NIDM, NCDC, CDC, and PHEDM Team
1745 - 1800 hrs	Feedback on the Day 2	By the Participants
DAY 2: 30th May 2024, Thursday		
0600 - 0700 hrs	Yoga Session	All Participants and Organizers
0900 - 0915 hrs	Recap of the Day 2	By the Participants
0915 - 1000 hrs	Presentation of Group Exercise (SWOC analysis of PHEM)	All Participants
Inaugural Session		
1000 – 1100 hrs	**Inaugural Session**	
1000 – 1005 hrs	Welcome and opening remarks	IDSP Maharashtra Representative
1005 – 1015 hrs	Opening Remarks	Dr Radha Kishan Pawar, Joint Director-Health Services, State of Maharashtra
1015 – 1020 hrs	Address	Dr Rajeev Sharma, Public Health Specialist, and Lead-Emergency Management, DGHP, CDC-India
1020 - 1025 hrs	Address	Dr Saurabh Goel, JD, IDSP, NCDC, MoHFW, GoI
1025 – 1035 hrs	Address and Experience Sharing	Dr Sujeet K Singh, Distinguished Public Health Expert and Former Director NCDC, MoHFW, GoI
	Special Address	Prof. Surya Parkash, Head CoE on PHEDM NIDM, MHA, GoI
1035- 1040	Special Address	Dr. Subhash Salunkhe, Former DGHS, Government of Maharashtra

Time	Subject	Dignitaries/Resource Person
1040 – 1045 hrs	Special Address	Dr Muzaffar Ahmed, Former Member, National Disaster Management Authority, Govt. of India
1045-1055	Inaugural Address	Dr. Nitin Ambadekar, DHS, Government of Maharashtra
1055 – 1056 hrs	National Anthem	
1056 – 1058 hrs	Vote of Thanks	IDSP, Maharashtra
1058-1100 hrs	Group Photograph	
1100 - 1115 hrs	Tea Break	
1115 - 1300 hrs	Demonstration by 5th Battalion, NDRF	NDRF Representative
1300 - 1400 hrs	Lunch Break	
1400 – 1445 hrs	Module II: Principles of PHEDM and its Applications	Dr Ruchi Jain, RD, RoHFW, Kerala (Virtually) Dr. Rajeev Sharma, Public Health Specialist, and Lead-Emergency Management, DGHP, CDC-India
1445 - 1530 hrs	Module IV: Organizational Model for Managing Response	Dr Muzaffar Ahmed, Former Member, National Disaster Management Authority, Govt. of India Dr Rajeev Sharma, Public Health Specialist, and Lead-Emergency Preparedness & Response, DGHP, CDC-India
1530 - 1545 hrs	Tea Break	
1545 – 1715 hrs	Module V: International Health Regulations and Roles at Points of Entry	Dr Sujeet K Singh, Distinguished Public Health Expert and Former Director NCDC, MoHFW, GoI
1715 - 1730 hrs	Feedback on the Day 3	By the participants
DAY 3: 31st May 2024, Friday		
0600 - 0700 hrs	Yoga Session	All Participants, All Organizers
0900 - 0915 hrs	Recap of the Day 2	By the Participants
0915 – 1015 hrs	Module III: PHEOC	Dr Muzaffar Ahmed,

Time	Subject	Dignitaries/Resource Person
		Former Member, National Disaster Management Authority, Govt. of India
1015 - 1100 hrs	Module VI: Risk Communication and Community Engagement	Dr Saurabh Goel, JD, IDSP, NCDC, MoHFW, GoI
1100 - 1115 hrs	Tea Break	
1115 - 1200 hrs	Group exercise on IRS	By the participants, All Organizers
1200 - 1230 hrs	Post-course Assessment and Participant's Feedback	IDSP Representative and PHEDM Team
1230 - 1300 hrs	Course Summary and Way Forward	Dr Rajeev Sharma, PHS and Lead-EM, DGHP, CDC-India
1300 – 1400 hrs	Lunch Break	
1400 - 1500 hrs	Valedictory Session followed by Certificate Distribution	
1500 hrs onwards	Closure of workshop followed by Tea	

Annexure II: Group

Sl No.	Group 1	Group 2	Group 3	Group 4
1	**Dr Pradip Awate**	**Dr Shuma Rathod**	**Dr. Kalpana M. Kale**	**Dr Ramesh Pawar**
2	Dr. Sanjay Gaware	Dr. Sanjay Mule	Dr Dilip Saundale	Dr Harsha Meshram
3	Dr. Ranjeet G. Lad	Dr.Maruti Mhaske	Dr Pravin Parise	Dr. B. D. Rathodkar
4	Dr. I. Khan	Dr. Govind Khatal	Dr Prakshit Katkhede	Dr. A.Tupsundare
5	Dr. Santosh Kanedkhedkar	Dr.Varsha Dilip Vasu	Dr. Shashikant Pawar	Dr.Anandrushi Parimella
6	Dr. Prashant P. Tangde	Dr. Deepak Kajalkar	Dr. Swapnil Vinayakrao Kukade	Omprakash Bahiwal
7	Dr. Sopan R. Chopde	Dr. Sujata Kachave	Dr. Viru Manvar	Dr Arun M. Dagade
8	Dr Satisj Tajne	Dr. Sana Ammarah	Shri Anil Ghode	Dr. Ashish S. Girhe
9	Gaurav Sureshrao Deshmukh			Dr. Manoj Radheshyam Yadav

Annexure III: List of Participants

Sl. No.	District	Name of the Participants	Designation	Email & Contact Details	Group	Level	Organization/ Institution
1	Ch. Sambhajinagar	Dr Sanjay Mule	Medical Officer (ZP)	9420812909, jayshreesshelke12@gmail.com	A	13	DHO Office,Chh.Sambhajinagar
2		Sh Maruti Mhaske	DDMO	7350335104, ddmoaurangabad16@gmail.com	Contract	Contract	District Collector Office, Chhatrapati Sambhajinagar
3		Dr Govind Khatal	Veterinary Doctor	8692872524, k.govind@gmail.com	A	11	Animal Husbandry Dept.Z.P.Chh.Sambhajinagar
4	Jalna	Dr Varsha Dilip Vasu	Epidemiologist	8806239801, varshavasu15@gmail.com	A	13	DHO Office Jalna
5		Dr Sujata Kachave	LDO ZP Jalna	9403762005, jalnaddmodcr@gmail.com	A	14	Animal Husbandry Department Z P Jalna
6	Parbhani	Dr Sanjay Gaware	EPIDEMIOLOGIST	8408818148, dahojalna@gmail.com	A	13	DHO Office Parbhani
7		Dr Ranjeet G. Lad	LDO ZP Parbhani	9527715254, idspparbhani@gmail.com	A	14	Animal Husbandry Department Z P Parbhani
8	Hingoli	Dr Inmmyathulla Khan	Epidemilogist	9975013726, ddmoparbhani3363@gmail.com	A	13	Zp hingoli
9		Dr SV Kandekar	LDO	9420635133, ranjeet.lad@gmail.com	A	14	zp Hingoli
10	Buldhana	Dr Prashant P. Tangde	EMO/DSO	8308105657, idsphingoli@gmail.com	Contract	Contract	DHO Office, ZP Buldhana

11		Dr Sopan R. Chopde	Livestock Development Officer	9405408939, ddmahingoli@gmail.com	A	14	Animal Husbandary office, Buldhana
12	**Amravati**	Dr Pravin Parise	District Surveillance Officer	9850737324, dsoamravati@gmail.com	A	12	DHO Office Amravati
13		Dr Parikshit Katkhede	Livestock Development Officer	9011303040, idspbuldana@gmail.com	A	14	DAH Office ZP Amravati
14	**Akola**	Dr Shashikant Pawar	Add. District Health Officer	7020435954, buldhanaddmo@gmail.com	A	13	DHO Office Akola
15		Dr Swapnil Vinayakrao Kukade	Livestock Development Officer	8329978997, drsopanc@gmail.com	A	12	Veternary Dispesary Ghusal Akola
16	**Washim**	Dr Viru Manvar	Epidemiologist	9096323895, amrawatiidsp@rediffmail.com	A	12	DHO Office Washim
17		Shri Anil Ghode	NT	9545463450, surendra.ramekar@gmail.com	C	8	Collector Office Washim
18	**Ch. Sambhajinagar Corporation**	Dr B D Rathodkar	Medical Officer	9373219301, dahoamravati@gmail.com	A	13	Chh.Sambhajinagar Municipal Corporation
19		Mr Swapnil Sardar	DMO	9421753141, idspakola@gmail.com	Contract	Contract	Chh.Sambhajinagar Municipal Corporation
20	**PCMC**	Dr Anandrushi Parimella	EPIDEMIOLOGIST	7972974560, rdc_akola@rediffmail.com	A	13	Medical Department PCMC, Pune
21		Sh Om Prakash Bahiwal	CDMO	9503780458, swapnil.vetpharma@gmail.com	Contract	Contract	Disaster Management Dept, PCMC

22		Dr Arun M. Dagade	Chief animal husbandry officer	7057140552, idspwashim@gmail.com	A	12	veterinary department PCMC
23	Parbhani Corporation	Dr Sana Ammarah	EPIDEMIOLOGIST	9049271363, rdcwashim@gmail,com	A	13	Health Depratment Parbhani MC
24	Akola Corporation	Dr Ashish S Girhe	EPIDEMIOLOGIST	9765000674, asgirhe@gmail.com	A	13	MEDICAL DPT AMC
25	VVCMC	Dr Manoj Radheshyam Yadav	Medical Officer	8446271494, swapnil85sardar@gmail.com	A	13	Sarvoday Vasahat UPHC
26		Yogeshwari Sonawane	Project Officer	9850140014, aurangabadzoo@gmail.com	Contract	Contract	Akola Division
27		Sumit Kumar	DDMS, PMU	9673813662, pcmc.health@pcmcindia.gov.in	Contract	Contract	DMU, R&R
28		Abhyuday S Rupsundre	CSS	7276771077, disastermgmt@pcmcindia.gov.in	Contract	Contract	DMU, R&R
29		Dr Ganesh R Pawar	Livestock Development Officer	9049190817, a.dagade@pcmcindia.gov.in	A	12	ZP Washim
30		Vitthal Banote	DDMO Pune	9850171459, sammarah02@gmail.com	Contract	Contract	Pune
31		Gaurav Deshmukh	Parbhani Fire brigade	9822779816, epidem.akolacorporation@gmail.com	C	7	Parbhani
32		Amit Verma	Program Officer	8655784859, mohvvcmc@gmail.com	Contract	Contract	Jhpiego

33		Dr Ramesh Pawar	Asst. Professor	9702523062, ramesh.pawar@gmail.com	A	12	Dept.of Community Medicine (psm) GMC, Akola
34		Dr Kalpana M. Kale	Associate Professor	9421792820, drkmkale@gmail.com	A	13	Dept. of Community Medicine (PSM) GMC, Miraj
35		Dr Shuma Rathod	Principal	9323351677, rshuma@gmail.com	A	14	HFWTC, Thane
36		Dr Harsha Meshram	MO , Nagpur	9657862116, harshameshh@gmail.com	A	14	HFWTC, Nagpur
37		Dr Saundale	Principal, HFWTC, Amravati	8275178348, drsaundale21@gmail.com	A	14	Principal, HFWTC, Amravati
38		Dr Pradip Awate	ADHS,	9423337556, drpradipawate@gmail.com	A	15	DDHS office ,Nagpur