

**3 days Face to Face**  
**“Training Programme on Chemical, Biological, Radiological and Nuclear and  
PHEDM (CBRN DRR & PHEDM)”**



**Date- 31<sup>st</sup> Jan- 2<sup>nd</sup> Feb 2024**

**National Institute of Disaster Management  
Ministry of Home Affairs, Govt. of India  
Plot no. 15, Pocket-3, Block-B, Sector-29,  
Rohini, Delhi -110042**

## Programme Report

Day-1 of the Training Programme Inaugural Session Mr Shubham Badola, Young Professional, NIDM welcomed all the dignitaries and participants. He set the context of the training programme. He briefed about the CBRN & PHEDM.

Col. P.S Reddy, Joint Director NIDM presentation highlighted the contemporary significance of awareness and knowledge in the field of disaster management. Attendees gained a deeper understanding of CBRNE threats, acknowledging the imperative nature of preparedness and experiences and anecdotes enriched the training program by providing a practical perspective on CBRNE response



The Head of CBRN at INMAS DRDO focuses on Chemical, Biological, Radiological, and Nuclear (CBRN) threats and Public Health Emergency and Disaster Management (PHEDM). It outlines the evolving CBRN landscape, emphasizing preparedness, detection, and response strategies. Addressing PHEDM, it underscores the importance of coordinated, multi-agency approaches to mitigate public health crises. The brief highlights INMAS DRDO's research, development, and collaborative efforts in advancing technologies and protocols to safeguard against CBRN incidents and enhance PHEDM capabilities. It aims to inform stakeholders, policymakers, and the public on crucial measures for national security and public health resilience.



District Collector Dr. Kinny Singh about Chemical, Biological, Radiological, and Nuclear (CBRN) threats and Public Health Emergency and Disaster Management (PHEDM). CBRN highlights potential hazards, emphasizing preparedness, detection, and response strategies. PHEDM focuses on managing health-related crises, including pandemics and natural disasters, emphasizing coordination, resource allocation, and community engagement. Integrating CBRN and PHEDM frameworks ensures comprehensive emergency preparedness and effective response capabilities. The briefing provides insights into risk assessment, mitigation measures, and inter-agency collaboration, empowering Dr. Singh to lead proactive measures safeguarding public health and safety in the district.



Prof. Surya Parkash, as the Head of GMR and CBRNE Division, highlighted the paramount significance of the CBRNE Awareness Centre. Attendees gained a deep understanding of the critical role of awareness and knowledge dissemination in addressing CBRNE disasters.

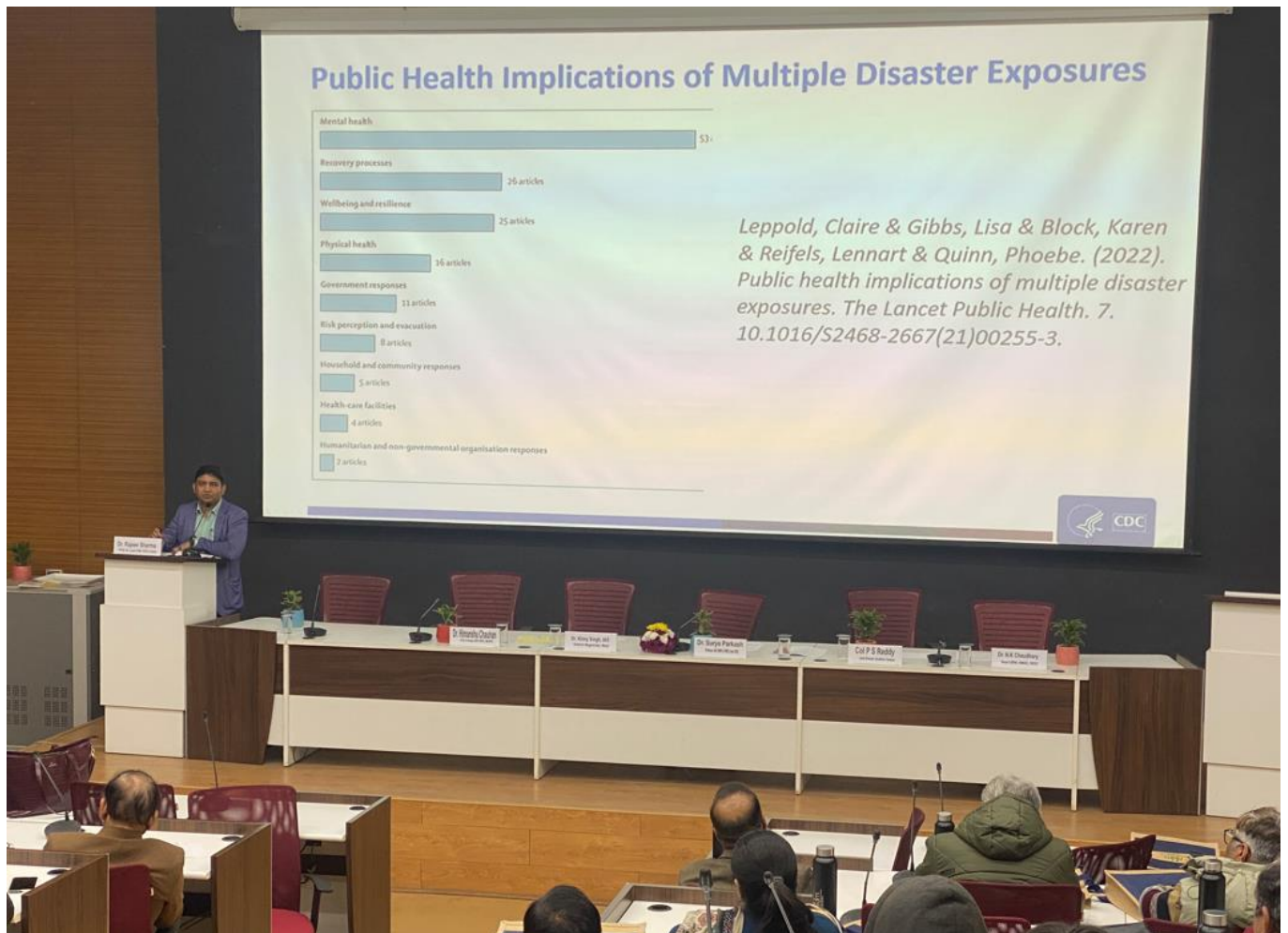
The central goal of the training programs, underlined by Prof. Parkash, is to facilitate the exchange of experiences, knowledge, and information among participants. Prof. Surya Parkash's presentation enriched the CBRNE Training Program by emphasizing the essential role of the CBRNE Awareness Centre and the overarching objective of knowledge and experience sharing.



## Programme Aim

### Programme details

The attendees were introduced to the fundamental ideas and institutional mechanisms of catastrophe in India throughout the first day's sessions by Dr. Rajiv Sharma, Public Health Specialist and lead Emergency Management, CDC, Delhi, Delhi. Disaster Risk Reduction & Response (DRR&R) focuses on minimizing vulnerabilities to hazards and enhancing resilience. It involves proactive planning, preparedness, and effective response to natural and human-made disasters. CBRN (Chemical, Biological, Radiological, and Nuclear) incidents require specialized preparedness to mitigate risks and protect communities from hazardous materials and agents.



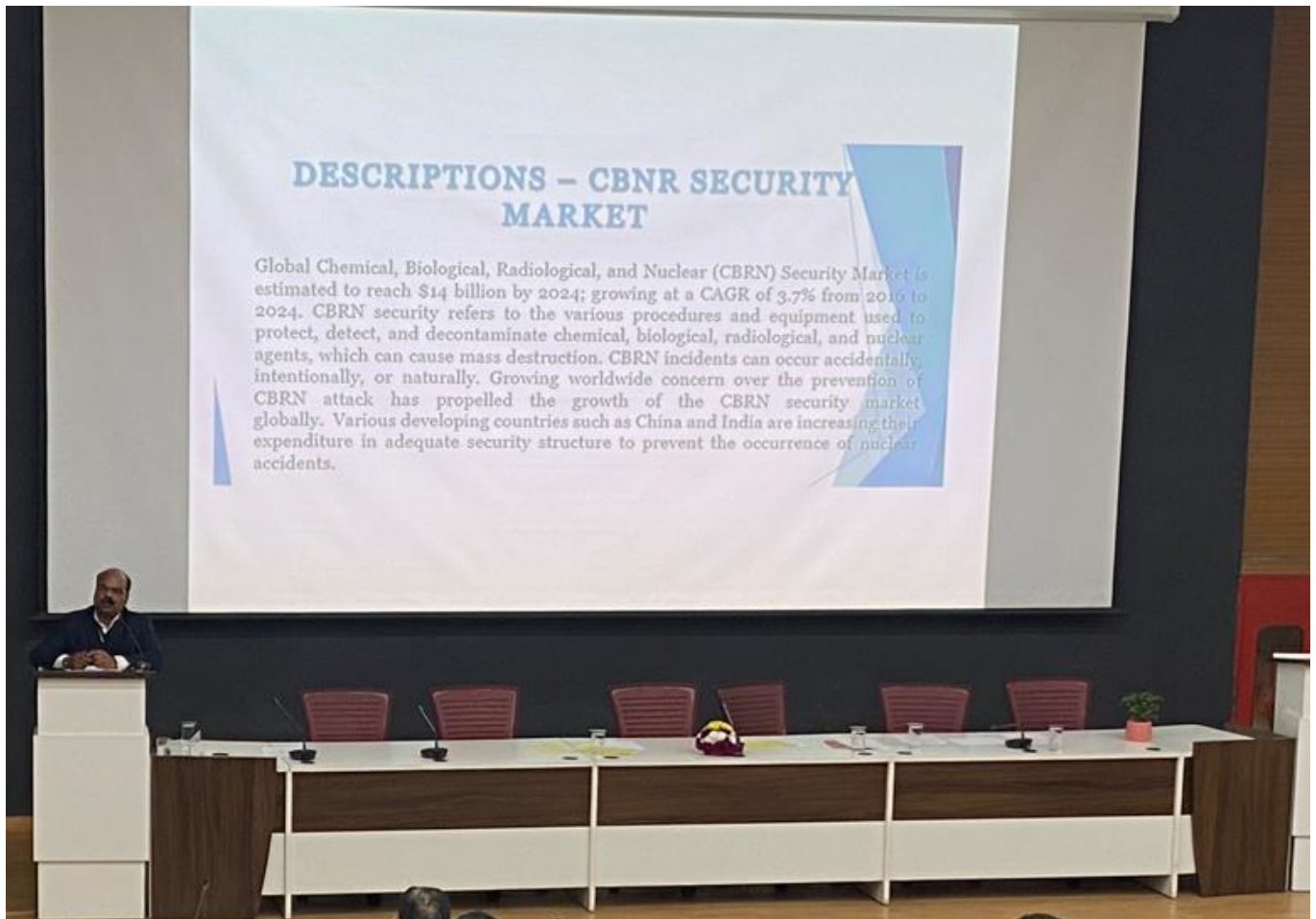
Dr. Himanshu Chauhan, Joint Director at the National Centre for Disease Control (NCDC), Ministry of Health, leads a comprehensive presentation on Crisis and Emergency Risk Management. Drawing on expertise and real-world examples, Dr. Chauhan elucidates strategies for proactive risk mitigation, response, and recovery in various crises, including pandemics, natural disasters, and public health emergencies. Participants gain valuable insights into preparedness planning, coordination mechanisms, and leveraging technology for effective crisis management. Dr. Chauhan's presentation equips attendees with essential tools and knowledge to navigate complex challenges and safeguard communities' health and well-being.



Introduction to CBRNE threats and their global impact by Dr. N. K Chaudhary, Head CBRN INMAS, DRDO, Delhi. CBRN threats encompass chemical, biological, radiological, nuclear, and explosive dangers, posing significant risks worldwide. These threats, whether intentional or accidental, can result in mass casualties, environmental devastation, and socio-economic disruption. Understanding and mitigating these hazards are crucial for global security and resilience.



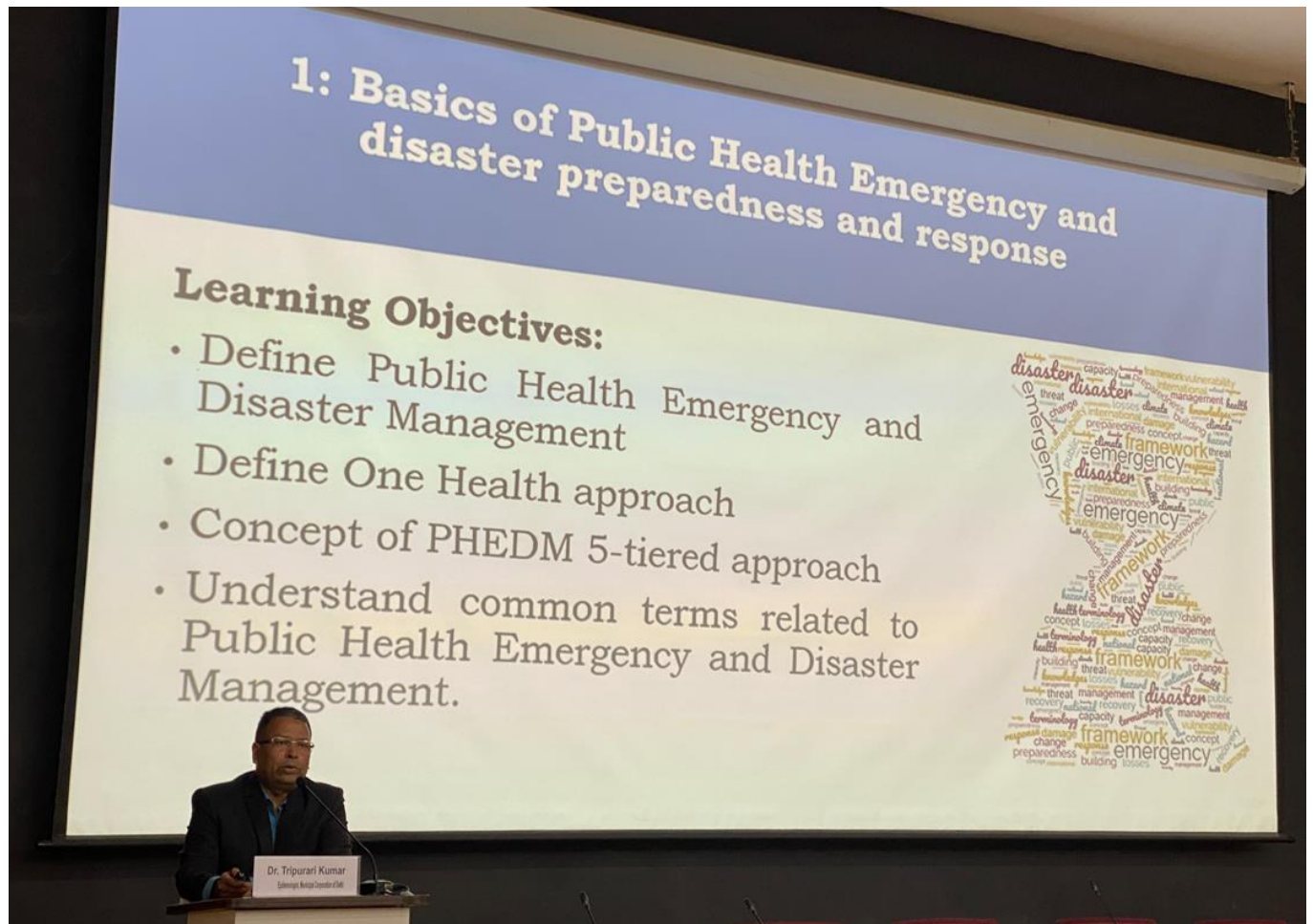
Dr. Raj Kumar outlines key CBRNE preparedness principles: comprehensive risk assessment, robust communication systems, effective training, adaptable response plans, interdisciplinary collaboration, and advanced technologies for detection and decontamination. Essential for safeguarding against chemical, biological, radiological, nuclear, and explosive threats. INMAS, DRDO, Delhi, spearheads research and development in this critical field.



Group exercise tackling a CBRN (Chemical, Biological, Radiological, Nuclear) scenario. Participants collaboratively analyze threats, devise response strategies, and simulate actions. Through teamwork and critical thinking, enhance preparedness for potential CBRN incidents. Develops crisis management skills in a controlled environment."



PHEDM involves coordinated actions to mitigate health risks during disasters. It includes surveillance, resource allocation, and public communication to prevent disease outbreaks and ensure timely medical response. Collaboration between health agencies, emergency services, and communities is crucial to effectively manage public health emergencies during disasters by Dr. Tripurari Kumar, Epidemiologist, Municipal Corporation of Delhi



Dr. Rajiv Sharma, PHS and Lead EM at CDC India, spearheads the Public Health Emergency Operations Centre (PHEOC) infrastructure and information technology. Ensuring seamless coordination and swift response during crises, he oversees the setup, maintenance, and optimization of critical systems, vital for effective public health management and emergency response.



Sh. Vimal Tiwari and Sh. Shubham Badola from NIDM present on Incident Response Systems, detailing strategies for effective response to emergencies. They discuss proactive measures, coordination mechanisms, and technological tools to mitigate risks and ensure resilience in critical situations and Incident Response System Exercise, enhancing preparedness for emergencies. This exercise likely involved simulations and drills to test and improve responses to various crisis scenarios, fostering resilience and coordination among stakeholders.



Sh. S.P. Rana, Dy. Director at DISH, Delhi, shares insights on Chemical Industrial Disaster Response. Drawing from extensive experience, he emphasizes preparedness, rapid response, and collaboration among stakeholders to mitigate CBRN threats. His briefing highlights the importance of proactive measures to safeguard communities and infrastructure from potential hazards.



Demonstration on CBRN/fire safety conducted by Delhi Fire Service. Showcase of procedures, equipment, and techniques to combat chemical, biological, radiological, and nuclear hazards, alongside fire emergencies. Aimed at enhancing public awareness and preparedness.



Presentation on scenario based activity - This presentation introduces participants to scenario-based activities, fostering interactive learning. Participants engage in simulated real-world situations, promoting critical thinking and decision-making skills. Through active participation, they navigate challenges, applying theoretical knowledge practically. By immersing in scenarios relevant to their field, participants enhance problem-solving abilities and gain practical insights. This approach encourages collaboration, communication, and adaptability, preparing participants for diverse professional challenges. With tailored scenarios, participants explore various perspectives, promoting empathy and cultural sensitivity. Overall, scenario-based activities empower participants to apply learning effectively, bridging the gap between theory and practice in an engaging, memorable manner



**Group Photo on 31 Jan 2024**

## Tentative Session Schedule

### 03 Days Face-To-Face

#### Training Programme on “Chemical, Biological, Radiological, Nuclear DRR Public Health Emergency and Disaster Management” (CBRN DRR and PHEDM)

National Institute of Disaster Management,  
Ministry of Home Affairs, Government of India

*Wednesday to Friday 31.01.2024 - 02.02.2024 (9:30 am – 5:30 pm)*

**Venue:** Chanakya hall, National Institute of Disaster Management, Rohini Campus, Delhi

#### Tentative Session Schedule



Day 1: 31.01.2024 ( Wednesday)		
Time	Topic/Subject	Resource Person
09:30 am- 10:00 am	Registration	NIDM team
Inaugural Session		
10:00 am - 10:05 am	Welcome address	Ms. Karishma, NIDM
10:05 am - 10:20 am	Special Address	Prof. Surya Parkash, Head, GMR, CBRN, Industrial & Cyber DRR Division, NIDM
10:20 am - 10:30 am	Special Guest	Dr. Kinny Singh, IAS, District Magistrate, West
10:30 am – 10:40 am	Inaugural Address	Sh. Rajendra Ratnoo, IAS, Executive Director, NIDM
10:40 am – 10:45 am	Vote of Thanks	Sh. Shubham Badola, NIDM
10:45 am – 11:00 am	Group Photo with Participants	
11:00 am - 11:15 am	Tea Break	
11:15 am - 12:05 pm	Basic of DRR&R, and CBRN	Ms. Harjeet Kaur, TO-EM, CDC, Delhi
12:05 pm - 01:00 pm	Introduction to CBRNE threats and their global impact	Dr. N. K Chaudhary Head CBRN INMAS, DRDO, Delhi
01:00 pm - 02:00 pm	Lunch	
02:00 pm - 03:00 pm	Key principles of CBRNE preparedness and response	Dr. Raj Kumar, Sci.G INMAS, DRDO, Delhi
03:00 pm – 03:15 pm	Tea Break	

03:15 pm – 04: 30 pm	Group Exercise on CBRN scenario based activity	Sh. <u>Shubham Badola</u> , <u>Ms.Karishma</u> , <u>Sh.Vimal Tiwari</u>
<b>Day 2: 01.02.2024 (Thursday)</b>		
09:30 am- 10:00 am	Recapitulation	Sh. <u>Shubham Badola</u> , NIDM
10:00 am - 11:30 am	Public Health Emergency in Disaster Management (PHEDM)	Dr. <u>Tripurari Kumar</u> , Epidemiologist, Municipal Corporation of Delhi
11:30 am - 11:45 am	Tea Break	
11:45 am – 01:00 pm	Public Health Emergency Operations Centre (PHEOC) Infrastructure and Information Technology	Dr. <u>Rajiv Sharma</u> , PHS and Lead EM, CDC India
01:00 pm - 02:00 pm	Lunch	
02:00 pm - 03:00 pm	Presentation on IRS	Sh. <u>Vimal Tiwari</u> and Sh. <u>Shubham Badola</u> , NIDM
03:00 pm - 03:15 pm	Tea Break	
03:15 pm - 04:30 pm	IRS Exercise	NIDM and CDC Team
<b>Day 3: 02.02.2024 (Friday)</b>		
09:30 am -10:00 am	Recapitulation	<u>Ms. Karishma Chaudhary</u> NIDM
10:00 am - 11:00 am	Experience sharing on CBRN ( focus on Chemical Industrial Disaster)	Sh. <u>S.P Rana</u> Dy. Director, DISH, Delhi
11:00 am - 11:15 am	Tea Break	
11:15 am - 01:00 pm	Demonstration on (CBRN/Fire)	Delhi, Fire Service
01:00 pm - 02:00 pm	Lunch	
02.00pm to 03.00pm	Presentation on scenario based activity	Participants
03:00 pm - 03:15 pm	Tea Break	
03:15 pm – 04.30 pm	Feedback, Valediction	

## Key takeaway:

Understanding the fundamentals of Disaster Risk Reduction and Readiness (DRR&R) and Chemical, Biological, Radiological, and Nuclear (CBRN) preparedness is crucial for effective emergency management. Dr. Harjeet Kaur's expertise in these areas is essential for enhancing the response capacity of the CDC in Delhi.

Dr. N.K. Chaudhary's discourse on CBRNE threats elucidates their global ramifications. With expertise as Head of CBRN at INMAS, DRDO, Delhi, he navigates the complexities of chemical, biological, radiological, nuclear, and explosive hazards, emphasizing their profound impact on the world, highlighting urgency for preparedness and international cooperation.

Dr. Raj Kumar emphasizes key principles of CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosive) preparedness and response: comprehensive planning, rapid detection, effective communication, coordinated response, and continuous training. Integration of these principles ensures readiness to mitigate CBRNE threats, safeguarding public health and security.

Sh. Vimal Tiwari's past case studies on CBRN (Chemical, Biological, Radiological, and Nuclear) incidents provide invaluable insights into preparedness, response, and mitigation strategies. His expertise from the National Institute of Disaster Management illuminates the complexities of managing such crises, offering vital lessons for emergency planners and responders.

Public Health Emergency Operations Centers (PHEOCs) are vital for effective response to crises. Infrastructure and Information Technology are core components, ensuring rapid data collection, analysis, and dissemination for informed decision-making. Reliable IT systems enhance communication, resource allocation, and coordination among stakeholders, crucial for managing public health emergencies efficiently.

The IRS Exercise conducted by NIDM and CDC Team revealed crucial insights into disaster response strategies. It emphasized the importance of coordinated efforts between governmental agencies and community stakeholders for effective disaster management. The exercise highlighted the significance of preparedness, communication, and swift action in mitigating the impact of emergencies.

First responders play a critical role in emergency situations, often facing immense pressure and danger. Their key takeaway is the responsibility they hold in providing swift, skilled aid while prioritizing safety for themselves, colleagues, and those they serve. Effective training, clear protocols, and ongoing support are vital for fulfilling this duty effectively.

A group exercise on CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosive) preparedness highlights the importance of coordinated response efforts among emergency responders. It emphasizes effective communication, rapid decision-making, and proper utilization of resources to mitigate the impact of CBRNE incidents and safeguard public safety and well-being.

## List of Participants

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Programme chair

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❖ Sh. Vimal Tiwari, Young Professional Centre for CBRN, CBRN, Industrial and Cyber DRR Division, NIDM

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