



सत्यमेव जयते

Deputy Commissioner (East)  
GNCT of Delhi  
R & I Branch  
Diary No. 15521  
Date 24/09/15 dm(E)

**DISTRICT DISASTER MANAGEMENT AUTHORITY, NEW DELHI DISTRICT  
OFFICE OF DISTRICT MAGISTRATE  
12/1, JAM NAGAR HOUSE, SHAHJAHAN ROAD, NEW DELHI - 110011  
TELEPHONE - 01123385743**

F-2(39C)/DC/ND/DM/2013/Mockdrill/6017-23 Date 23/9/15

To,

The Divisional Commissioner,  
5, Sham Nath Marg,  
Delhi-110054

**Sub: Report on CBRN Emergency Workshop held on 10.09.2015 and 11.09.2015 at  
Disaster Management Centre, Humayun Road, New Delhi**

Sir,

Kindly find an enclosed report regarding the CBRN Workshop held on 10.09.2015 and 11.09.2015 organized by District Disaster Management Authority, New Delhi to sensitize the Emergency Support Functionaries (ESFs) i.e. Delhi Fire Service, Delhi Police, Medical Superintendent, CDMO, CATS, St. John Ambulance, DIAL, Civil Defence Wardens, QRT & EOC members on CBRN Emergency at Disaster Management Centre, Humayun Road, New Delhi.

*(Signature)*  
**(SANJAY KUMAR)  
DISTRICT MAGISTRATE  
NEW DELHI**

*SDM - VI (HOS)  
30/9/15 - 1 - update on  
website BOMA  
appreci*

Copy for information to:-

1. JS (Disaster Management), MHA, NDCC Building, Jai Singh Road, Delhi.
2. Member (CBRN), NDMA, A-1, Safdarjung Enclave, New Delhi.

Copy also forwarded to:-

1. DM (East). L. M. Bundh Building, Shastri Nagar, Delhi.
2. PS to Hon'ble Lt Governor, Raj Niwas, Delhi.
3. PS to Chief Minister, Delhi Secretariat, Delhi.
4. OSD to Chief Secretary, Delhi Secretariat, Delhi.

*As directed by  
DE (DM), Copy forwarded  
to Sr. SA (Revenue Dept.)  
for uploading on  
BOMA web portal.  
5.10.15*

*(Signature)*  
**(SANJAY KUMAR)  
DISTRICT MAGISTRATE  
NEW DELHI**

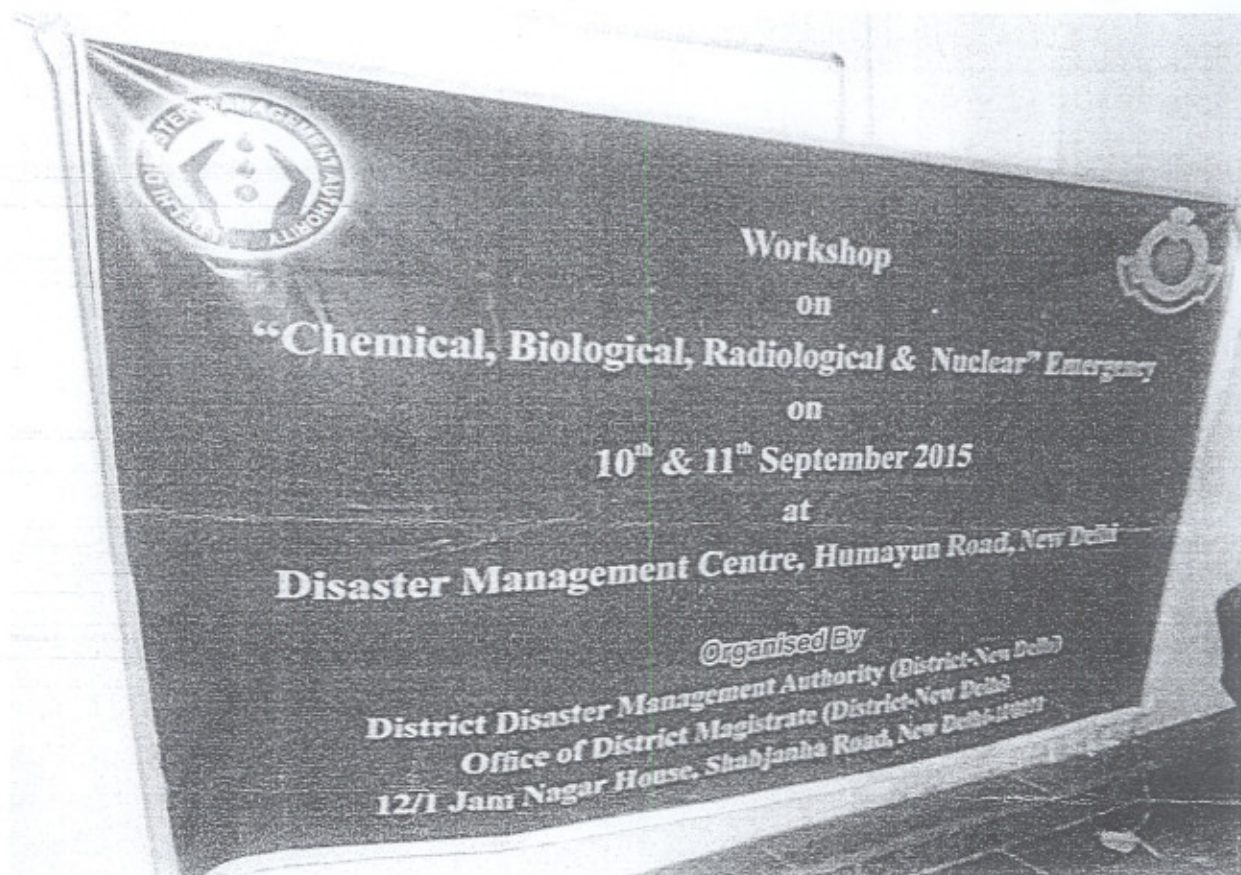
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5/10/15*

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29/9/15  
OS (BOMA)  
P.O.  
S-X*

## Workshop on CBRN



Organized by

**District Disaster Management Authority, New  
Delhi**

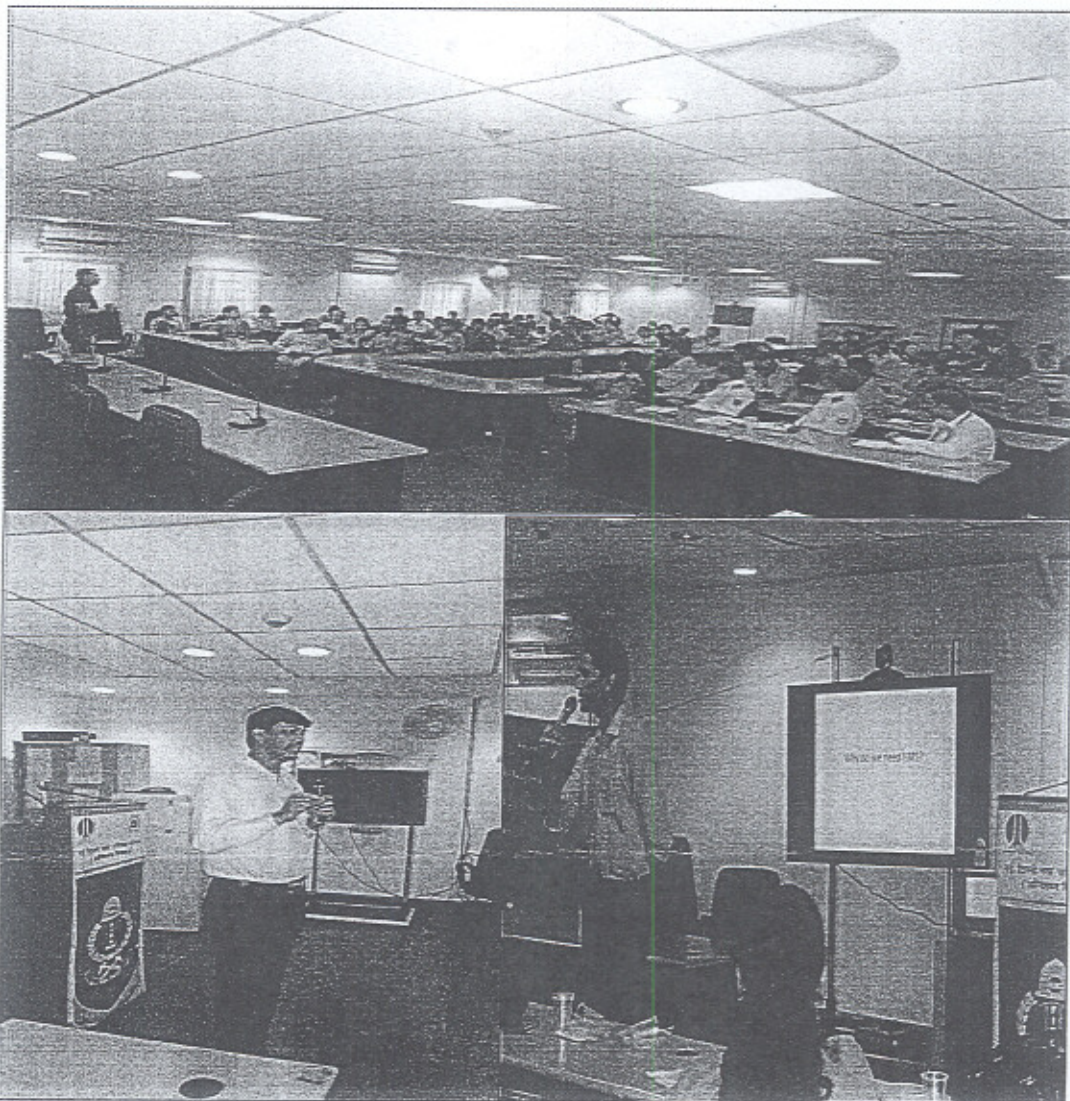
at

**Disaster Management Centre, Humayun Road**



### Workshop on CBRN

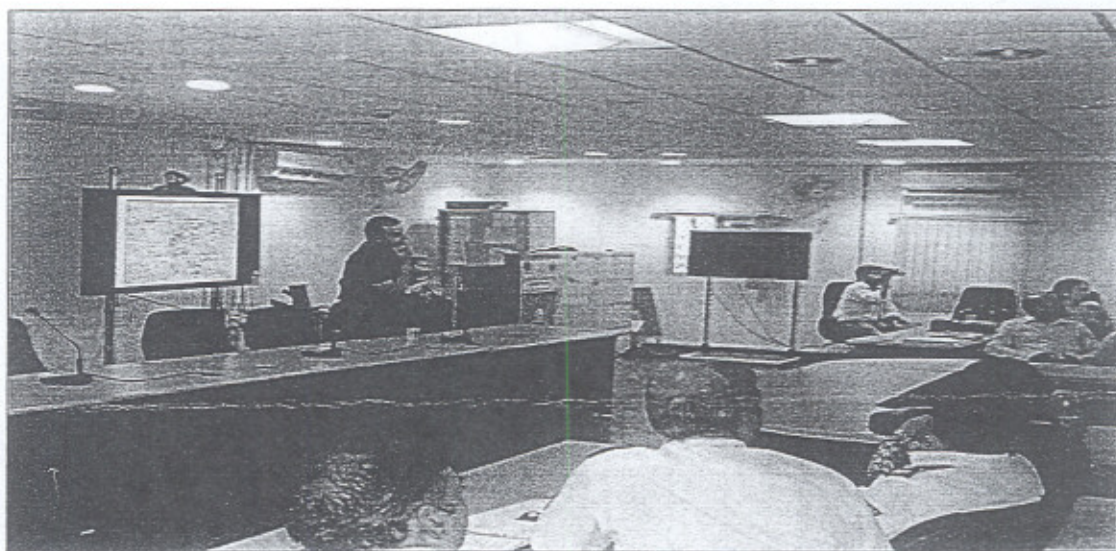
A two days workshop was organized by District Disaster Management Authority, New Delhi on 'Chemical, Biological, Radiological & Nuclear Emergencies' on 10<sup>th</sup> & 11<sup>th</sup> September 2015 from 2-6 PM at Disaster Management Centre, Humayun Road. The Workshop was organized in view of the recent alleged radiological emergency at IGI Airport on 29<sup>th</sup> May 2015 and Mayapuri Industrial Estate Radiological Emergency so as to create awareness and sensitize the Emergency Support Functionaries (ESFs) i.e. Delhi Police, Delhi Fire Services, CATS, St. John Ambulance, etc. on 'Chemical, Biological, Radiological & Nuclear' Emergency' in order to safeguard interest of the vulnerable communities.





The speakers on Day 1 include Atomic Energy Regulatory Board (AERB) Scientific Officer Mr. Rajoo Kumar and Head of Radiological Safety Division; Dr. Saurabh Dalal, Disaster & Emergency Medicine Physician associated with NIDM; Mr. Nitesh Kumar, Senior Para Medic, National Instructor and Evaluator, Healthcare Sector, National Skill Council of Govt. of India & Certified Instructor of Certified American Heart Association and associated with Global Academy of Public Safety and Habitat Management. The Participants for the workshop comprised of Medical Superintendents, CDMO, Airport Authority of India, DIAL, Delhi Fire Service, Delhi Police, CATS Ambulance, DDMA Disaster Management Team (EOC and QRT) and Civil Defence Wardens.

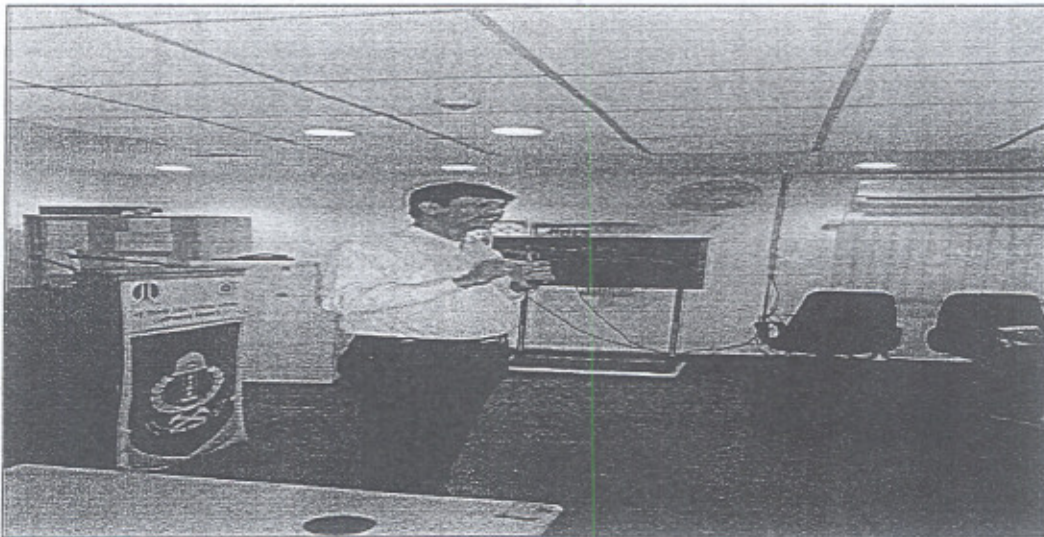
The first lecture on **Day 1** was given by Mr. Saurabh Dalal who briefed about an overview on CBRN Emergencies and talked about preparedness of hospitals to tackle CBRN Emergency, the rule of thumb, safe area and individual protective equipments (IPE). He further explained disasters in urban & rural scenario and how the definition of emergency, disasters and its response changes in urban & rural context. He emphasized on the lack of awareness regarding CBRN Emergencies and that specificity of roles should be defined for CBRN Emergencies.



Dr. Saurabh Dalal giving a lecture during CBRN Workshop



The second lecture was conducted by Mr. Rajoo Kumar, Scientific Officer & Head of Radiological Safety Division from Atomic Energy Regulatory Board (AERB). He talked about AERB, application of ionizing radiation in medicine, industry, research and agriculture, legal framework and regulations of radiation sources, radiation safety, security of other radioactive material, emergency preparedness, planning and response i.e. radioactive material under regulatory control and radioactive material out of regulatory control, role of AERB in emergency and emergency exercises. He started off the lecture with Mayapuri Radiological Emergency and how the licensed reactor which was not monitored periodically lead to the radiological incident and affected human lives. He informed about various rules pertaining to Atomic Energy such as Atomic Energy (Safe Disposal of Radioactive Waste), Rules 1987. He then informed about the IEA Security Guidelines, legal framework pertaining to Emergency Response, International obligations, Crisis management, radiations and biological effects of radiation and their deterministic effects. He also mentioned about his paper publication on Mayapuri citing details about the Radiological incident.



**Mr. Rajoo Kumar, Scientific Officer, AERB imparting a lecture on CBRN Emergency**

Mr. Rajoo Kumar further mentioned applications of ionizing radiations (medicine, industry, research and agriculture), radiation sources used in nuclear medicine, industrial gamma radiography exposure device (IGRED), source used in industrial radiography and applications of IRGDS. He further discussed about Legal & Regulatory Framework citing Atomic Energy Act (1962), Atomic Energy



(Radiation Protection) Rules (2004), Atomic Energy (Safe disposal of radioactive wastes rules, 1987), codes, guides, manuals and standards, International (safety and security guides – IAEA, reports – ICRP) and AERB committees. He further explained about radiation safety with 4 types of ionizing radiation i.e. alpha, beta, gamma (X-ray) and neutron, common units, radiation weighing factors, inverse square law, radiation monitoring instruments, personnel monitoring devices, assessing doses from internal radiation, radioactive sources, IAEA Safety standards, water contamination, SOPs, role and responsibility of the regulatory body in emergency (MURC), role of AERB during radiological emergency (MORC), crisis management group (CMG), and emergency exercises i.e. table-top exercises and field exercises.

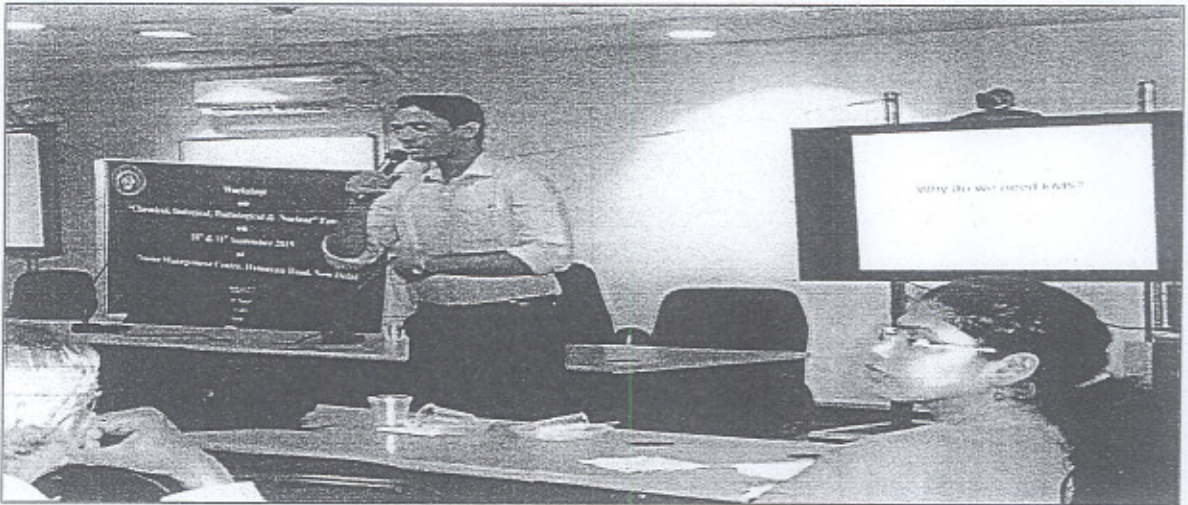


Participants during a session on CBRN Emergency

The third lecture was given by Mr. Nitesh Kumar, Senior Para Medic, National Instructor and Evaluator, Healthcare Sector, National Skill Council of Govt. of India & Certified Instructor of Certified American Heart Association and associated with Global Academy of Public Safety and Habitat Management. He lectured on Emergency Medical Services (EMS), Role of EMS and other best practices worldwide. He further talked about pre-hospital care, principals of EMS system, challenges, emergency intervention, definitive management, disaster preparedness, In-hospital emergency care, the need of First Aid, triage, signs and



symptoms, best practices worldwide and cited examples of Qatar and U.S.A. for the same.



Mr. Nitesh Kumar, Sr. Paramedic imparting lecture on CBRN Emergencies

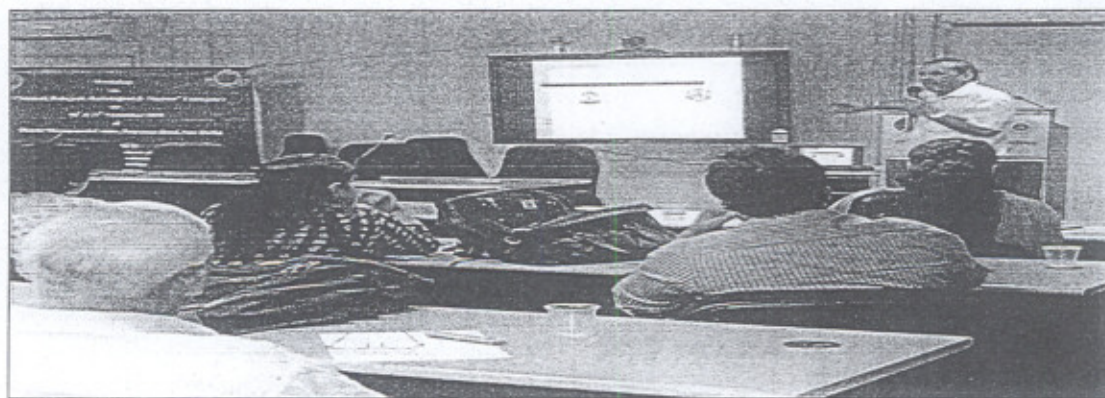


Participants during an Interactive Session in Workshop on CBRN Emergency

Day 2 began with prominent speakers from Institute of Nuclear Medicine & Applied Sciences (INMAS, DRDO), National Disaster Response Force (NDRF) and GAPSHAM. The workshop was from 2-6 PM and was started off by a lecture on CBRN Emergency by Mr. Jitendra Singh, Ex-Asstt. Commandant, CISF from GAPSHAM who talked about Management of Chemical Emergencies. He further talked about threat perception, chemical weapons, identification of features of chemical emergency, physical protection against chemical agents, Management of



CBRN incidents, guidelines for on-site commands, off-site issues that impact response. He also mentioned about incident phases i.e. response, medical triage, management of resources, recovery phase and restoration phase.



**Mr. Jitendra Singh, GAPSHAM giving a lecture on Management of Chemical Emergencies**

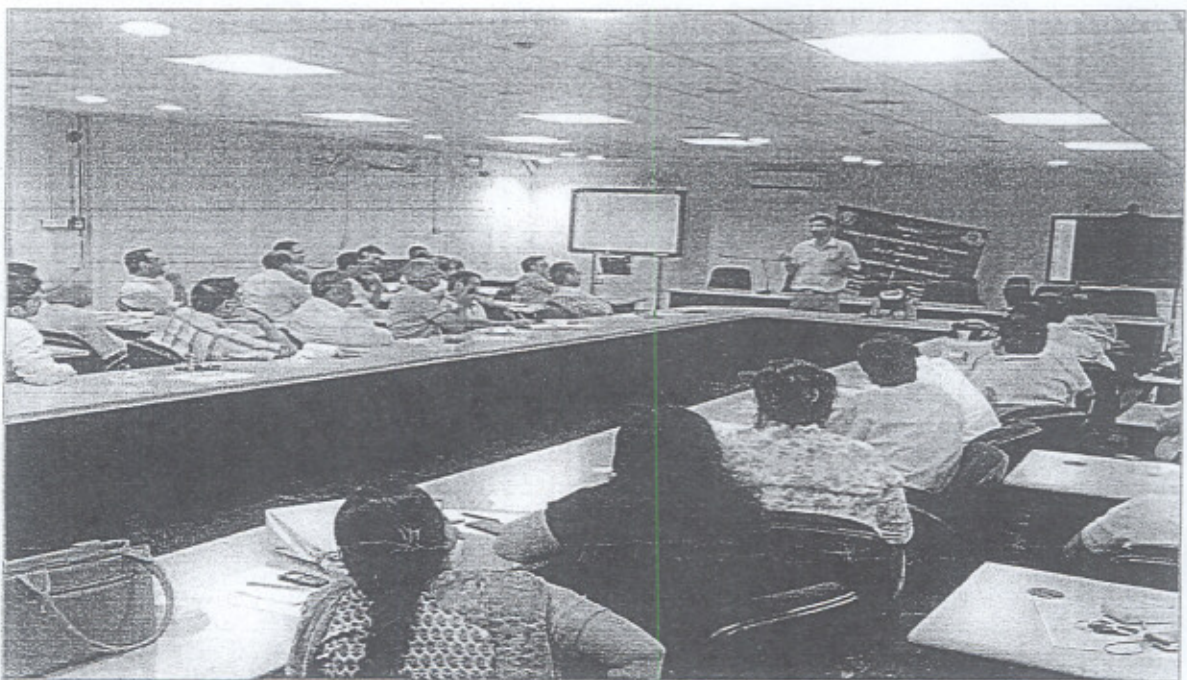


**Mr. Vinod Kaushik, Scientific Officer & Deputy Director, INMAS, DRDO giving a lecture on CBRN Emergency**

The second lecture was given by Mr. Vinod Kaushik, Scientific Officer & Deputy Director of Institute of Nuclear Medicine and Applied Sciences (INMAS), DRDO. He started off with a brief introduction about DRDO as an organization and the formation of Disaster Management Act, 2005. He cited the importance of why a Workshop on CBRN should be organized as people especially the ESFs are not aware on how to respond to any CBRN Emergency. He emphasized on the



importance of coordination between various departments for a successful response to any CBRN Emergency. He further explained about half value layer which is the thickness of specified material that "attenuates the beam of radiation to an extent such that the air kerma rate (AKR) is reduced to one-half of its original value. He then explained how 6 inches of sand, 9 inches of wood and 3/4<sup>th</sup> inches of steel protects from radiation in case of CBRN Emergency. He also mentioned what one should wear to protect from radiation such as mask, gum boots, etc. and that the ESFs should be covered fully including the nose, ears, eyes, hands and face. He further mentioned that the suits to be worn by first respondents weighing 650 grams specially designed for CBRN Emergency are available with DRDO.

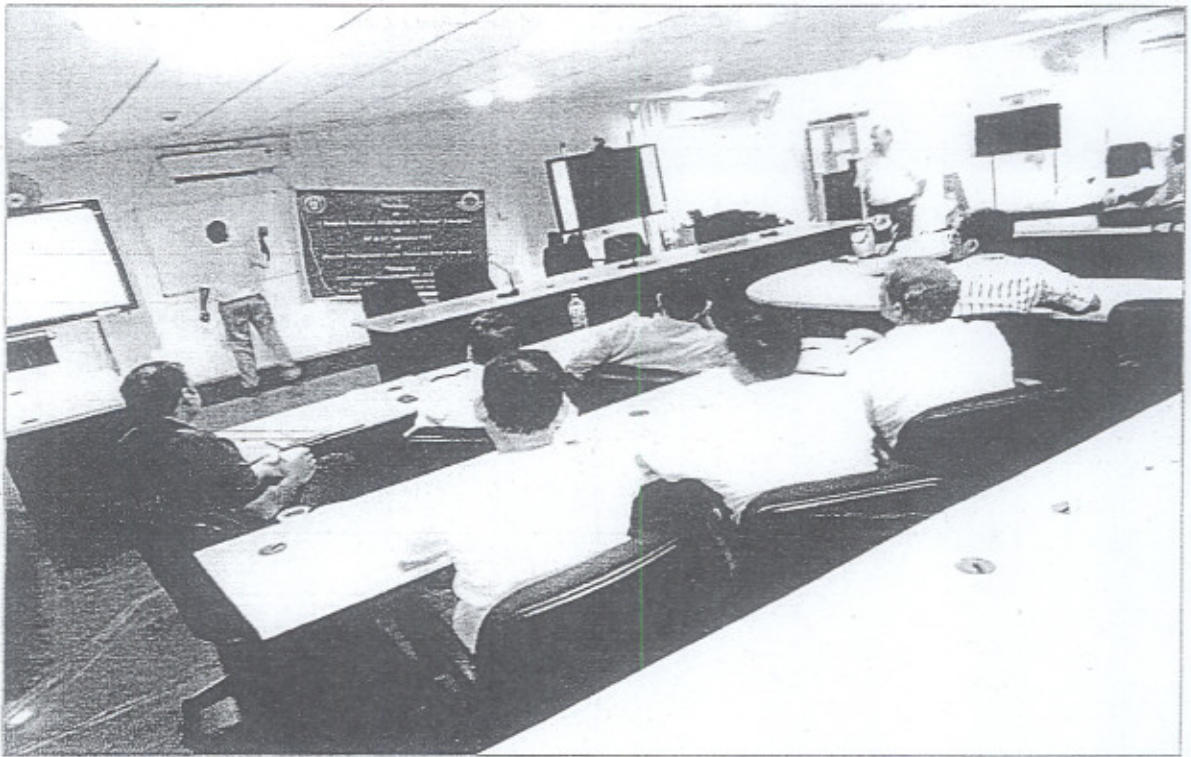


Participants during a session by Deputy Director & Scientific Officer Mr. Vinod Kaushik, INMAS, DRDO in CBRN Emergency Workshop

Scientific Officer Mr. Vinod Kaushik further explained about the inverse square law citing that any radiation which is coming from any object will be reduced to the square of the distance i.e.  $E$  is inversely proportional to  $sq. r$ ; where  $E$  is any radiation coming from the object and  $r$  is the distance. He talked about Initial Nuclear Radiation and Residual Nuclear Radiation and cleared doubts of the



participants i.e. Doctors (CDMO, Medical Superintendent, etc.), Delhi Police, Delhi Fire Service, St. John Ambulance, CATS, DIAL, Airport Authority of India, Disaster Management Teams (EOC & QRT) during an interactive session regarding their roles in any CBRN Emergency and how to respond and protect themselves from radiation.

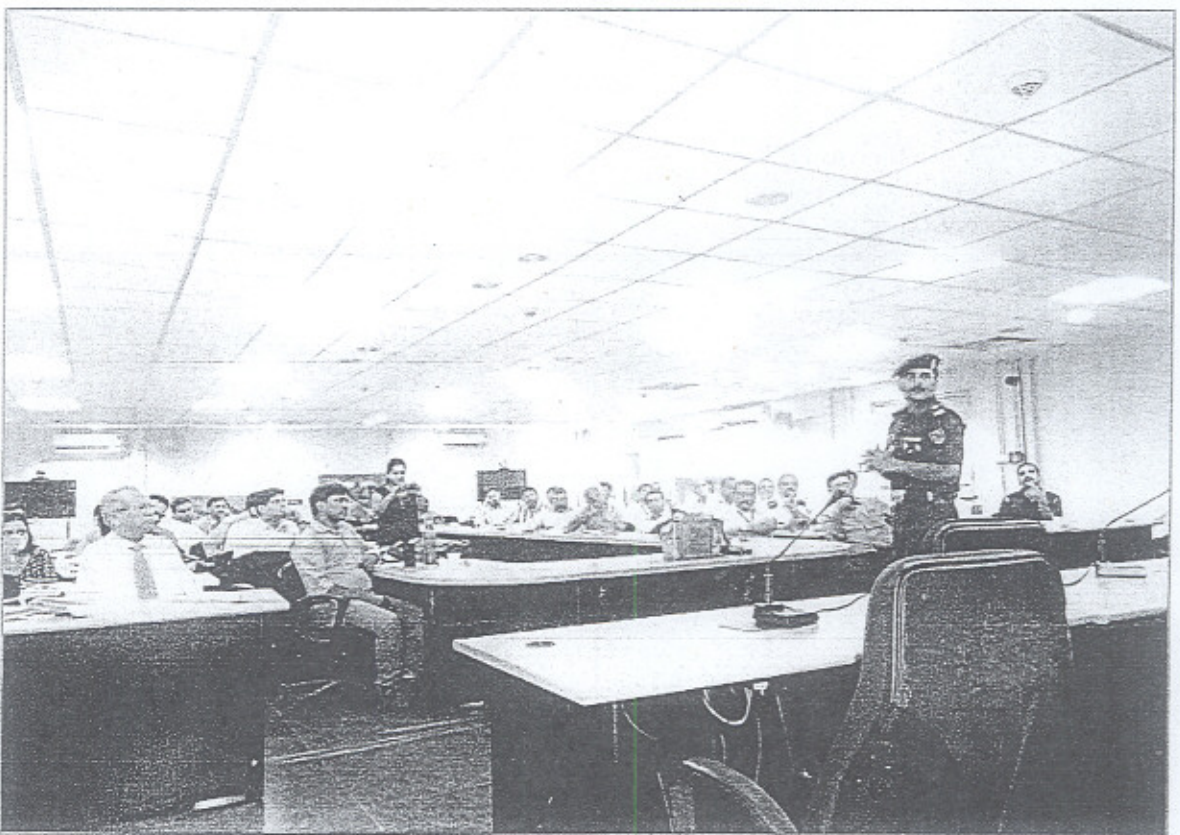


**Mr. Vinod Kaushik, Deputy Director & Scientific Officer, INMAS, DRDO explaining about Initial Nuclear Radiation and Residual Nuclear Radiation to the participants**

The third lecture on Day 2 was given by Second Commandant Mr. Pankaj from National Disaster Response Force (NDRF). He gave the lecture on how to respond to CBRN Emergency and training specific to CBRN Emergency. He talked about phases of CBRN Emergency i.e. Notification, Response, Recovery and Restoration phase, structure of a CBRN Response team, various IRS entities, stake holders in a district, emergency support functions, scene size up, detection of CBRN agent. He further mentioned about evaluation of victims, rescue and evacuation team, triage of casualty, decontamination of victims, decontamination team tasks, personnel decontamination, Medical team tasks, Safety officer tasks, information officer,



disaster victim identification, dead body management and protection of responders and the public.

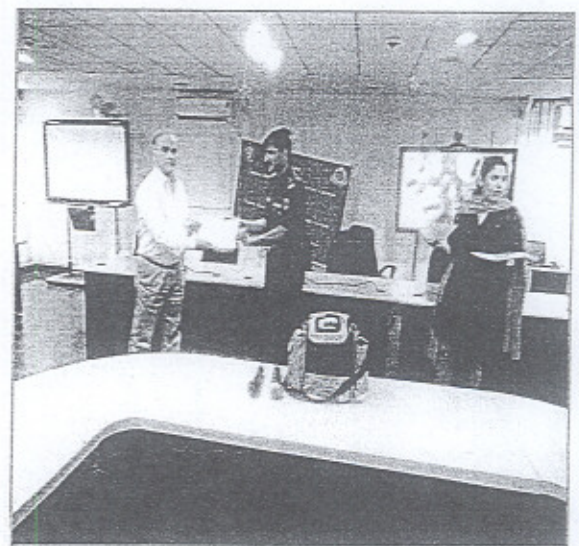
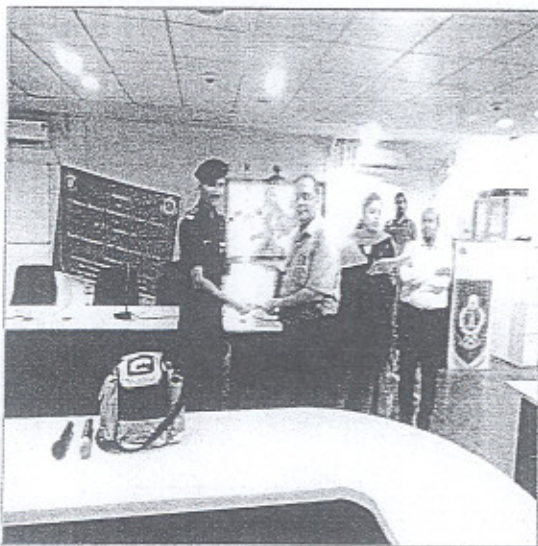
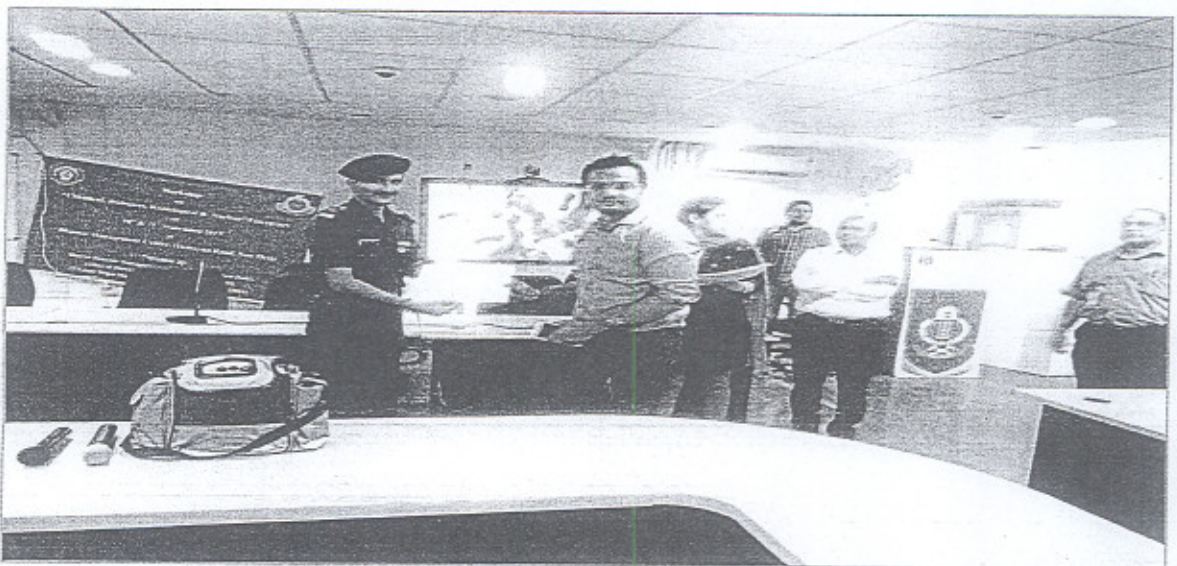


**Mr. Pankaj, Second Commandant, NDRF giving a lecture on 'Response to CBRN Emergency' to the participants at Disaster Management Centre, Humayun Road**

At the end of the 2 day workshop, a participation certificate was given by District Disaster Management Authority, New Delhi to the participants who had attended the event on both the days. DDMA, New Delhi received appreciation from the Deputy Director (INMAS, DRDO), AERB Scientific Officer, NDRF Second Commandant and the participants for the workshop conducted in regard to CBRN, thereby creating awareness regarding CBRN response and protection from radiation, thus preparing the community for CBRN Emergency.



Deputy Director & Scientific Officer Mr. Vinod Kaushik, Head of Radiological Safety Division & Scientific Officer Mr. Rajoo Kumar, NDRF Second Commandant Mr. Pankaj and the participants appreciated the efforts made by District Project Officer and Project Coordinator in organization of the event sensitizing the ESFs in regard to CBRN Emergency.



Participation Certificate being distributed to the participants by NDRF Second Commandant Mr. Pankaj at Disaster Management Centre, Humayun Road



### CBRN Emergency Workshop

#### Day 1 Speakers:

S. No.	Name	Designation	Department/Organization
1.	Mr. Rajoo Kumar	Scientific Officer & Head of Radiological Safety Division	Atomic Energy Regulatory Board (AERB)
2.	Dr. Saurabh Dalal	Disaster Emergency & Medicine Physician	NIDM, GAPSHAM
3.	Mr. Nitesh Kumar	Senior Para Medic, Healthcare Sector	GAPSHAM

#### Day 2 Speakers:

S. No.	Name	Designation	Department/Organization
1.	Mr. Vinod Kaushik	Deputy Director & Scientific Officer	Institute of Nuclear Medicine & Applied Sciences (INMAS), DRDO
2.	Mr. Pankaj	Second in Commandant	National Disaster Response Force (NDRF)
3.	Mr. Jitendra Singh	Ex-Commandant, CISF	GAPSHAM

#### Participants:

- Medical Superintendents and CDMO
- CATS
- St. John Ambulance
- Delhi Police
- DIAL
- Airport Authority of India (AAI)
- Delhi Fire Service (DFS)
- Disaster Management Team (EOC & QRT)
- Civil Defence Wardens