Management of Chemical Terrorism Disaster

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Potential use of chemical weapons by terrorists

• Greater awareness today.

• Tokyo Underground attacks (March 1995) and the rise of international terrorism
Review Conferences

• Recognized by the First Review Conference (noted concerns related to the possibility that chemical facilities may become the object of attack including by terrorists which could lead to deliberate releases or theft of toxic chemicals).

• The Second Review Conference invited States Parties to consult and cooperate both bilaterally and regionally on ways to prevent terrorists from acquiring and/or using chemical weapons.
Government of India’s strategy

- Terrorist attacks including in Mumbai on 26 November 2008.

Rescue, Relief and Rehabilitation/Recovery approach • Paradigm shift • Strategy for Disaster Management • Holistic Approach with emphasis on prevention, mitigation and preparedness
Guidelines

• National Disaster Management Authority of India under the Ministry of Home Affairs
• Guidelines for preparing action plans for the holistic and coordinated management of all disasters including Chemical Terrorism Disasters
• Based on Extensive consultations and number of experts
NATIONAL DISASTER MANAGEMENT GUIDELINES

MANAGEMENT OF CHEMICAL (TERRORISM) DISASTERS

June 2009

NATIONAL DISASTER MANAGEMENT AUTHORITY
GOVERNMENT OF INDIA
Basic Approach

Based on premise that the possibility of a chemical terrorism attack can be minimized by spreading a general awareness and building the capacity of the community, institutions and governmental and non-governmental organizations.
Difference in WMD Disaster Management Approaches

• While the basic principles for disaster management are the same, there can be no one approach for Nuclear, Chemical and Biological weapon disasters.

• The Approach to Chemical Disaster Management has to be distinct from Nuclear Disaster Management or any other situation.

• Government of India’s strategy recognizes this approach.
Disaster Management Cycle

Focus on All Aspects

- Prevention measures such as Surveillance and Intelligence
- Mitigation of Direct and Indirect risks
- Preparedness in terms of Capacity Development of Human Resources
- Infrastructure Development
- Relief, Rehabilitation and Reconstruction/Recovery
Emphasis

i) Aspects of chemical security and surveillance measures.

ii) Strengthening of intelligence with regard to chemical movement, to prevent their intentional usage for targeting human beings.

iii) Preparedness for counter-chemical terrorism measures including:

a. Issues of safety of chemicals and risk reduction strategies including technical (structural and nonstructural) preparedness measures.

b. Strengthening of response by ensuring rescue and emergency medical services at the site and hospitals.

c. Preparedness of all emergency functionaries.

d. Community-centric mechanism involving all the concerned stakeholders of CTD to build up resilience.
Role of Stakeholders

- All the stakeholders who are involved directly or indirectly in countering CTD shall make use of these Guidelines.

Additionally, the following stakeholders, including responders and service providers, shall specifically make use of these in the following manner:

i) The national/state medical management plans covering macro-issues of capacity development and infrastructure and micro-issues pertaining to establishment, introduction and networking with Poison Information Centres (PIC) and other relevant knowledge management institutions, R&D, and response agencies, etc.

ii) District administrators in coordination with fire and emergency services, and the Chief Medical Officer (CMO) shall use these Guidelines for development of specific protection, detection, decontamination, and management aspects in their DM plans.

iii) All the hospitals shall incorporate special issues and specific provisions related to chemical terrorism while developing their hospital DM plans.
Institutional Framework

• Ministry of Home Affairs - nodal agency for developing and coordinating the intelligence and surveillance mechanism

Line Ministries (response and relief in the aftermath of a potential terrorist attack)
  – Ministry of Defense
  – Ministry of Health and Family Welfare
  – Ministry of Agriculture
  – Ministry of Environment and Forests
  – Chief of Integrated Defence Staff
  – Armed Forces,
  – Defence Research and Development Organisation
  – Armed Forces Medical Services (AFMS)
  – Paramilitary forces and State Machinery
Command and Control Mechanisms

• NDMA, SDMA, DDMA

• The National Crisis Management Committee (NCMC), under the chairmanship of the Cabinet Secretary, is mandated to coordinate and monitor response to crisis situations.

• At the national level through various Crisis Management Groups (CMGs), which coordinate the response of the government sectors, and monitor the situation in terrorist events.
Other Ministries/Agencies at National Level

- Ministry of External Affairs
- Ministry of Information and Broadcasting,
- Department of Drinking Water Supply
- Department of Animal Husbandry and Dairying
- Technical Agencies:
  - Directorate General Health Services
  - Indian Council of Medical Research
  - Drug Controller General of India
Regular Interaction

MHA interacts with states and technical institutes at periodic intervals to share intelligence inputs. Backup technical structure includes the various technical laboratories of:

– AFMS
– DRDO
– CSIR
– Department of Science and Technology
– ICMR
– Other Autonomous and Semi-Autonomous Laboratories
State Level Machinery

• Similar machinery exists at the state level

• States have made Standard Operating Procedures (SOPs) for CTDs.

• State Crisis Groups exist along with Emergency Operation Centers and Emergency Response Centres.
District Level

- The district collector, with the help of various departments and committees, is responsible for planning, preparing, and management of CTD.

- As applicable, the Collector/Deputy Commissioner/District Magistrate and Commissioner of Police/Superintendent of Police have been designated to be a part of the command and control functions.
Emergency Response Centres

• 5 ERCs for CTDs have been established to disseminate technical information relating to the chemicals involved.
  – Manali (Tamil Nadu),
  – Bhopal (Madhya Pradesh),
  – Mahad (Maharastra),
  – Vishakhapatnam (Andhra Pradesh),
  – Hyderabad (Andhra Pradesh)
• 3 more are coming up in Vijaywada, Kurrool and Kakinada in Andhra Pradesh

• The Petroleum and Natural Gas Regulatory Board (PNGRB) has taken the initiative of forming sub-committees which provide necessary guidelines for safety and other standards used by various segments covered under oil and gas mid-stream and down-stream sectors.
Poison Information Centres

National Poison Information Centres work in the areas of:

- Detection of heavy metal contamination, occupational exposure, food
- Water, air, and soil contamination
- Environmental health monitoring
- Toxico-surveillance (active survey of prevailing and potential toxicity risks)

Main Poison Information Centres

(a) AIIMS, New Delhi
(b) NIOSH, Ahmedabad;
(c) Amrita Institute of Medical Sciences and Research, Cochin;
(d) Government General Hospital, Chennai.

State-level forensic laboratories also have limited capabilities for detection of chemical substances.
Response, Rehabilitation and Recovery

- Alert System and Reporting a Chemical Attack or Incident
- Situational Assessment and Initial Response to CTD
- Notification of a Chemical Event and Scale of Disaster
- Emergency Response at the Incident Site
- Evacuation of Chemical Casualties
- Treatment at the Hospitals
- Management of Long term Health Effects of Chemicals
- Rehabilitation and Recovery (medical care, psycho-social care, surveillance of diseases, environmental surveillance)
- Post Disaster Documentation
- Media Management
- Public-Private Partnership
Alert System and Reporting a Chemical Attack or Incident

A well-rehearsed and standardised inbuilt system in the ERP that will activate the definitive specialised response..
Indicators for notification of event

- Explosion with little or no structural damage.
- A device that spreads mist or vapour.
- Multiple casualties exhibiting similar symptoms.
- Mass casualties with no apparent reason or trauma.
- Unusual odours, liquids, spray devices and cylinders.
- A large number of dead animals
**Signal Response**

• The first responder will activate the emergency functionaries by sending the alert signals to the fire and emergency services, police, emergency medical services, district authorities, and the HAZMAT team.

• Necessary updates will be given to the district EOC by the incident commander.

• The EOC will pass on this information which includes safe routes for evacuation, availability of PPE, weather updates, wind direction, speed, and identified safe zones to the concerned authority and to all the other emergency functionaries.

• Specialised responders will collect samples of the chemical agents as per the laid down SOPs.

• Simultaneously, the designated static laboratories will be alerted and asked to remain in readiness to receive field samples so that confirmatory analyses can be carried out without any loss of time.
Core Group for the Management of CTD

Core Group for the Management of CTD has been established comprising a cross section of experts from all stakeholders including:

- State Governments including at district and municipality level
- National Authority on CWC
- Laboratories, Hospitals etc.
India ready to share and cooperate with other States Parties

• Course on Chemical Safety Management for African States Parties in collaboration with OPCW from Gwalior March 28- April 1, 2011

• Workshops on Chemical Process Safety Management in collaboration with OPCW
  
  Mumbai 18-19 April, 2011
  
  Vadodara 22-23 April 2011
Contact Information

• National Disaster Management Agency, New Delhi
  Website: www.ndma.gov.in

• National Authority for Chemical Weapons Convention, Cabinet Secretariat, New Delhi
  Website: www.nacwc.nic.in

• Embassy of India, The Hague
  Website: www.indianembassy.nl
Thank you