

Terror Forecast : RNBC Terrorism?

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Early detection of and response to RNBC terrorism are crucial. Prevention entails legislations and actions by the nation to prevent proliferation of WMD, foresee terror actions by sound intelligence synergized action by law enforcement agencies. India is yet not fully prepared to respond to a terrorist attack that uses WMD. The Government of India / NDMA needs to lay down a clear cut yet flexible response policy for WMD Disasters. Concurrent and automated response by agencies at all levels is the need. It is proposed to have a WMD & Terrorism Cell at the SDMA's to deal with such disasters. The NDMRCs should also stock items needed for WMD disaster response and relief. A concerted and coordinated effort by the NDMA and SDMA's needs to be put to generate and increase awareness about WMD terrorism threats and disasters.

Terror is not new to India. Modern man is living in a violent world and undeniably, societal threshold of violence is rising. As a result, 'People' are already inoculated against increasing dosage levels of violence. The need to spill more blood and launch more spectacular attacks to capture headlines is becoming a compulsion because of heightened security against traditional terrorist acts. Consequently, the post modern terrorist is technology-driven and is exploiting the openness of information and availability of cheap technology. Recent trends suggest that terrorists are graduating to 'ultra violence' – from controlled and surgical acts of terrorism to killing 'en masse'. The media, of course, is lapping it up and adding to the hype.

Terror Awakening

November 26 has gone down in history as a black letter day. The largest ever terror strikes, so meticulously planned and executed were unleashed on Mumbai in particular and India as a nation. The event has brought a paradigm change in the common man's outlook to combating terror. The September 11 attacks, the anthrax letter scares in the US, the Litvenko radiation poisoning and the rising use of technology by the terrorists, have focused world attention on the possibility of terrorism involving Radiological, Nuclear, Biological or Chemical (RNBC) weapons, commonly called Weapons of Mass Destruction (WMD). It is learnt that the FBI, presently, is tracking several groups within the United States that have acquired, or show an inclination to use, Weapons of Mass Destruction (WMD). So are quite a few nations across the globe, with increasing references to its origins in Pakistan.

It is no longer a matter of **if** - but rather **when** - a WMD will be used in anger against the masses of India. Preparing the nation to address this threat is a formidable challenge, but the consequences of being unprepared could be devastating. With emerging infectious diseases, early detection and control of RNBC attacks depends on a strong and flexible public health system at the local, state, and central government levels.

Emerging Threat

Nuclear, Biological and Chemical (NBC) weapons are commonly bracketed as Weapons of Mass Destruction (WMD). Recently, the term Radiological weapons or 'Dirty Bombs' has been added to the group of WMD. The chance of a significant WMD incident triggered by Terrorists occurring in India is heightened by several factors, including :-

- (a) Inexpensive availability of chemical/biological (C/B) agents and their precursors and easily obtainable production processes.
- (b) Portability of small amounts of C/B agents especially useful for clandestine purposes.
- (c) Capability of inflicting mass casualties based on limited ability to quickly identify and/or contain the effects of such substances.
- (d) Increased WMD stockpiles, with the potential for theft or acquisition of the weapons by terrorists groups.
- (e) Potential for large-scale public impact due to increased media coverage of the use of WMD and high level psychological and panic reactions.

We are witnessing significant change in the psyche of the ultra terrorist; in that he does not attach too much of importance to the traditional 'means to ends' concept of political violence. "The ability to please God by killing his enemies 'en mass; with WMD" may be an end in itself, - a perfect justification for mass killings or ethnic cleansing. Nine years into the new millennium, India must take note of the changing nature of terrorism. An open society like ours is particularly vulnerable to WMD terrorism. Information on RNBC weapons is readily available on the Internet and in many 'how-to' books. There is increasing evidence of illegal trafficking in nuclear materials. In addition, countries hostile to India are known to possess WMD capabilities, and are known to support terrorist groups.

How to Respond

India is not yet ready to address systematically the consequences of a "Conventional" Terrorist incident, leave alone a WMD event. Detection capabilities are limited, integrated analytical and planning efforts are proclaimed but not fully understood, and the domestic use of military forces needs to be purposefully re-examined. Of great concern is that there still is limited understanding of how all the moving parts of a response to such an attack would function in relation to the requirement and to one another (particularly for a RNBC scenario). The Administrative inertia and initial confusion amongst security agencies seen recently at Mumbai is a living example.

Early detection of and response to RNBC terrorism are crucial. Without special preparation at the local and state levels, a large-scale attack with variola virus, aerosolized anthrax spores, a nerve gas, or a food borne biological or chemical agent could overwhelm the local and perhaps national public health infrastructure. Large numbers of patients, including both infected persons and the "worried well," would seek medical attention, with a corresponding need for medical supplies, diagnostic tests, and hospital beds.

Key Focus Areas. Crisis Prevention and Consequence management should be based on the following four focus areas, with each area integrating training and research:

- (a) Preparedness and Prevention.
- (b) Detection and Surveillance.
- (c) Response.
- (d) Mitigation.

Preparedness and Prevention

Prevention entails legislations and actions by the nation to prevent proliferation of WMD, foresee terror actions by sound intelligence synergized action by law enforcement agencies. At the International level we have the UN resolutions for Anti Terrorism (Resolution 1373 (2001), Against use, proliferation and production of WMD (UN Resolution No 1540

of April 28, 2004 and UN Resolution No 1673 of April 27, 2006), The CWC, Bio Weapons and Toxin Convention, the NPT, CTBT and the recent PSI. India has passed the WMD Act of 2005 and the Disaster Management Act of 2005. Unfortunately what is lacking is a credible Anti Terrorism Act. India has experimented with the POTA and TADA, both of which have since been done away with.

Preparedness means adequately preparing our intelligence, anti terror forces and the public to deal with RNBC terrorism and at the same time prepare for the aftermath in terms of detection, diagnosis, and mitigation of illness and injury caused. This is a complex process that involves numerous partners and activities. There is a need to prepare and develop coordinated preparedness plans and response protocols. In addition, we should encourage and support applied research to develop innovative tools and strategies to prevent or mitigate illness and injury caused by WMD terrorism.

Detection and Surveillance

Crisis prevention relies on real time detection of a crisis and negating it. It depends on the National Intelligence and Police forces to do so. Coordinated and synergized actions with support from International agencies is the order of the day. Early detection is also essential for ensuring a prompt response to a RNBC attack, including the provision of prophylactic medicines, chemical antidotes, or vaccines. As part of this effort, National, state and local health agencies will need to form partnerships with front-line medical personnel in hospital emergency departments, hospital care facilities, poison control centers, and other offices to enhance detection and reporting of unexplained injuries and illnesses as part of routine surveillance mechanisms for WMD terrorism.

Response

Response to an incident, especially a RNBC incident, consists of two aspects. First, the Armed or special force response to the incident to contain and neutralize the threat and catch

/ destroy the perpetrators. Second, the relief or rehab response to prevent spread of damage and minimize casualties. A comprehensive public health response to a WMD terrorist event involves epidemiologic investigation, medical treatment and prophylaxis for affected persons, and the initiation of disease prevention or environmental decontamination measures. Departments of Intelligence, Police, Traffic and Transport management, public services like sanitation, water and electricity will all need to coordinate efforts for successful consequence management of such disasters. Not just *Mohallas*, but entire cities or districts may have to be isolated/quarantined to prevent spread of contagion.

Mitigation

Indian preparedness to mitigate the public health consequences of WMD terrorism depends on the coordinated activities of well-trained health-care and public health personnel throughout the country who have access to up-to-the minute emergency information. Use of latest technology for disaster relief, antidotes, drugs and shelters are the need of the hour. Effective communication with the public through the news media will also be essential to limit terrorists' ability to induce public panic and disrupt daily life.

Indian Anti Terrorism Apparatus

India's anti terror mechanism is controlled by the Internal Security cell at Ministry of Home Affairs. It attempts to coordinate the actions of the various intelligence agencies and police, Para Military forces and the NSG. The State police forces are not under their jurisdiction. Further, the NSG has been entrusted with VVIP security in addition to its anti terror tasks and this has unfortunately been the main reason for its poor management. Turf battles and overwhelming bureaucratic (read IAS) control over various CPOs has led to blame game and one up man ship. The success of the NSG and Army/Navy special forces in the recent Mumbai Attacks should be purely attributed to the courage and commitment of the teams at lower levels. A thorough and realistic appraisal

towards re-equipping, revamping, increasing the scope and strength and better logistics of these forces is imperative.

Indian Mechanism for Disaster Management

India has faced Terrorism related disasters for a long time now. While the government has put in place a very comprehensive and detailed structure for combating disasters, it is primarily organized to deal with natural disasters. The essential responsibility of disaster management lies with the State Government where the disaster has occurred. At the Central level, the National Crisis Management Committee oversees all disaster-related efforts. The Government has also set up the National Disaster Management Authority (NDMA) for drawing up and monitoring the implementation of disaster management plans, ensuring measures by various wings of Government for prevention of and mitigating the effects of disasters and for undertaking a holistic, co-ordination and prompt response to any disaster situation. While it has begun work on NBC disasters, it has no portfolio to deal with terrorist attacks.

The State governments are autonomous in organising relief operations in the event of disaster and in the long-term preparedness/rehabilitation measures. There is a State Crisis Management Group (SCMG). It also establishes an Emergency Operation Centre as soon as a disaster situation develops. Besides having all updated information on forecasting and warning of disaster, the Centre would also be the contact point for the various concerned agencies. At the District level, the DC is the focal point for directing, supervising and monitoring relief measures for disaster and for preparation of District level plans. Here too, some states have dedicated Anti Terror Squads but these are not synergized in terms of op concepts and equipping with those at National level.

Govt Initiatives for Combating WMD Disasters

Apparently, some thought seems to have been given by the Indian Government to disaster management aspects relating to WMD threats. It has instituted a number of measures to deal with RNBC disasters. Salient ones are :-

- (a) Devised three standard operating procedures (SOPs) to deal with terrorist attacks involving use of RNBC Weapons. These SOPs provide for preparedness by the concerned Administrations in terms of identification of potential targets, formation and training of specialist response teams, training of fire service and state police personnel etc.
- (b) Earmarked eight battalions of the Police (CRPF, CISF, BSF and ITBP) as the National Disaster Response Force. Four out of these have been trained and equipped specifically for RNBC disaster/terrorist strikes.
- (c) The Government has, with the help of Bhabha Atomic Research Centre (BARC), recently set up 18 Radiation Emergency Response Centres in different parts of the country to deal with any nuclear and radiation emergencies.

What Needs To Be Done

No nation can claim that it is adequately prepared for a WMD attack. While some nations have seemingly advanced systems, technologies and policies in place to prevent or combat WMD incidents, most are not even at the rudimentary stage of preparedness. In spite of all the aforementioned initiatives, India is poorly prepared to respond to any terrorist attack that uses WMDs. It is assumed that a national policy addressing the threat of WMD terrorism is in place (WMD Act 2005), that it is being implemented at the level of the National Security Council (NSC) by a small staff, and

that this high-level group's efforts are making progress in coordinating national resources (NDMA) to meet WMD terrorism challenges. However, much remains to be done. Some recommendations are enumerated below.

National Strategy on Crisis and Consequence Management

While much has been written about prevention and preparedness in the aftermath of the Mumbai tragedy, it is equally vital to have detailed plans to respond to such acts and deal with the consequences in order to minimize loss of life. Such important guidelines should be contained in a National Counter Terrorism Plan (NCTP) that outlines responsibilities, authorities and the mechanisms to prevent such incidents, or if they occur manage acts of terrorism and their consequences. This plan should be updated and reviewed periodically to keep pace with the changing dynamics of terrorism.

It is recommended that an accelerated and intensified national program, integrated and synergised across the entire nation and managed by the NSC, which will address comprehensively the threat of WMD Terrorism be put in place. The most significant crisis response/ consequence management issue is the absolute necessity for unity of effort at the tactical (first responders), operational (state and district), and strategic (the National, Central or Federal) levels of response. The areas of improvement or change would essentially be as follows :-

- (a) Crisis Management.
 - (i) Credible Comprehensive National Structure.
 - (ii) Nodal Agencies.
 - (iii) Effective Domestic Legislation and Laws.
 - (iv) Synergised Intelligence, Surveillance and Early Warning.
 - (v) Strengthening the NSG.
 - (vi) Accountability to avoid Blame game
- (b) Consequence Management.
 - (i) Response Policy and Training.

- (ii) Concurrent Response Mechanism.
- (iii) WMD Wing for the NDMA.
- (iv) Empowering the NDRF.
- (v) Coordination of Health and Relief measures.
- (vi) Logistics and Equipment.
- (vii) Graded Awareness Programmes.
- (viii) Media management.

Crisis Management

The Key to disaster preparedness is to have a two part plan, the NCTP, in which the first part pertains to crisis management, i.e. prior to the terrorist incident. This is mainly a function of prevention and initiative and should perforce come from the Centre. The second part is the consequence management, i.e. what happens after the event is over.

Credible Comprehensive National Structure

Thorough planning, sound Intelligence and early warning are the key. Therefore, the start point for national preparedness against the possible use of WMD by terrorists should be a thorough analysis of threats to critical infrastructure, computer systems and networks, particularly relating to telecommunications, energy supply, electricity, financial operations and critical emergency response systems. The **National Security Council (NSC)** does meet for National emergencies arising out of external threats and internal turmoil. However, due to a lack of coordination amongst various contributory agencies, the effort falls short of expectations. There is thus a need to revamp the structure of the NSC. The NSC should have the following bodies to give a wholesome attention to National Security:-

- (a) **Strategic Policy Group** - Coordinate Wartime actions and National Emergencies.
- (b) **National Intelligence Agency** - Coordinate Intelligence from various agencies.
- (c) **National Security Advisory Board**

- Advise the NSC on Security matters.
- (d) **National Internal Security Agency**
- Coordinate Internal Security issues.
- (e) **NDMA** - Coordinate Disaster Management including Manmade Disasters (Terrorism).

National Intelligence Agency (NIA): The present organisation of the NSC caters for the first three bodies. However some changes are needed. The NSC needs to address two issues viz. a centralised Intelligence mechanism and a central agency governing all Central Police Organisations (CPOs). The Joint Intelligence Committee (JIC) of the NSC needs to be upgraded to handle all intelligence issues at National level (both Internal and External). It is proposed that the JIC be converted into the **National Intelligence Agency (NIA)** to coordinate the efforts, inputs and analysis from the DIA (Defence Intelligence Agency), IB, RAW and various Police intelligence departments. The NIA will be the sole input agency for intelligence matters to the Strategic Advisory Group (War time, National emergencies and Strategic Issues) and the NIA (Internal security issues). Without a central agency coordinating and analysing intelligence in real time conditions, no worthwhile Hazard Prediction or Crisis Management will be achieved.

National Internal Security Agency (NISA): Currently, the matter of Internal Security is not being coordinated by the NSC and is dealt by the Ministry of Home Affairs. As Internal Security problems have had the so called “Foreign Hand” for nearly three decades now, it is imperative that the matter be dealt at National level by a central body like the NSC. In this context, we need to consider setting up under the aegis of the NSC, a **National Internal Security Agency (NISA)** (aka Directorate of Homeland Security). The NISA will be the umbrella organisation to dovetail efforts of all police and Para Military organisations in the country. NISA should be staffed by a mix of experts from the Armed Forces, CPOs, PMF and Civil Government experts on security matters. The Directorate should also have on its advisory panel experts from various fields, scientists and members from other Government departments and private industry. The Directorate should

also be responsible for suggesting a proposed policy for defence of infrastructure, counter measures, changes in domestic legislation, if required and R & D efforts.

The NISA ought to carryout the following essential functions:-

- (a) Focused long and mid term threat assessment including terrorist related threat assessment.
- (b) Implementation of government policy and monitoring of counter measures.
- (c) Strategy and doctrine development.
- (d) Inter agency co-ordination and liaison with defence forces, states, Intelligence agencies operating world over and even in private industry.
- (e) Identification of information requirements for infrastructure assurance.
- (f) Work in close coordination with the concerned wings or departments of the NDMA for Disaster preparedness and mitigation.
- (g) There is a general public apathy about techno-terrorism which must be addressed vigorously. The NISA must generate programmes for public engagement and building up public awareness to include appropriate curriculum into universities and school educational system.
- (h) The NISA must also develop mechanisms for Information Warning from various sectors including private industry and its rapid dissemination.

Nodal Agencies: At the outset, we need to identify and nominate the Nodal Agencies for Crisis and Consequence Management. Once these are laid down, prevention and response will get streamlined. While the dividing line between Crisis and Consequence is very hazy, detailed policy articulation will enable streamlined actions in both cases. The two aspects of Crisis and Consequence should be handled by two Nodal Agencies.

The **Nodal Crisis Management Agency** should be **NISA**. The NISA will be responsible to gain intelligence, identify likely threats, analyse targets and carryout vulnerability

studies. It should also utilise its resources to pre-empt the threat and nullify it so as to avoid an incident. Prevention and Early warning are its two main functions. Failing prevention, it should be able to give accurate and real time inputs of the threat and its magnitude. It must deploy its resources to reduce the impact of the incident and take suitable action to identify the perpetrators and nab them. This will enable quick legal action and help prevent future incidents.

The Nodal Consequence Management Agency should be NDMA. This is the agency that, on occurrence of the incident, mitigates its effects and reduces casualties. The NDMA is also responsible for relief and rehabilitation. However, in its present mode, the NDMA is not equipped to deal effectively with complex WMD disasters.

Effective Domestic Legislation and Laws: To facilitate pre-emptive action by law-enforcement agencies, domestic legislation must categorise and control the development, production, stockpiling, transfer, acquisition or possession of all types of chemicals, biological agents and strategic fissionable materials that may be used to manufacture a weapon of mass destruction. The only technological barrier is access to these materials. Fortunately, the Disaster Management Act 2005 and the WMD Act 2005 cover most aspects of the WMD threat. What is lacking is a credible Anti Terrorism Act. India has experimented with the POTA and TADA, both of which have since been done away with. Presently we have only the IPC and other laws for Law and Order. It is imperative that India enacts on priority a comprehensive Anti Terrorist Act complementing the WMD Act 2005. Other acts to grant over riding powers to the NISA and NDMA for Crisis and Consequence Management respectively need to be instituted.

Coordinated Intelligence, Surveillance and Early Warning and Sharing of Information: The role, and flow, of information is critical. It is inherently hampered by the need of crisis responders to keep their information secret and the desire of consequence managers to be transparent. If

this does not occur, the inevitable result is the compartmentalization of the crisis response and consequence management efforts. More thought should be given to the “translation” of sensitive and classified information to unclassified and applicable consequence management information.

Real-time detection of WMDs, as in battlefield conditions, will seldom be possible within a democratic society. Any attempt to provide a nationwide civil defence programme, without evidence of an imminent threat, would invite public indifference, misuse of equipment and even ridicule. Terrorists can however reconnoitre targets, monitor movements, infiltrate activists or liaise with dis-satisfied employees. They can choose the timing, mode and place of their attacks, switching or delaying operations if necessary. Only the gathering of accurate and timely intelligence can blunt these advantages. There is a need to understand the aims, motivation and operational structure of the terrorists in question. Surveillance of suspect groups and sources of dual-use technologies by NIA can decrease the risks associated with use of WMD by terrorists. These risks include the acquisition or illicit manufacture and storage of agents, communications with state sponsors and the development and testing of dispersal systems.

The NIA should be above all political manipulations to be able to be responsive and provide accurate and authentic intelligence. In this regard, the Centre and States have a leading role to play by creating appropriate structures and mechanisms.

Strengthening the NSG and CPOs: The NSG was raised in 1985 for Anti Terror and Anti Hijacking duties. Over the years it has been degraded to be VVIP security guards. All elements are located at the National Capital and need to be transported to incident sites. It lacks adequate and dedicated surface, air and marine transportation. Its equipment too needs upgradation to meet state of art international standards. The following is recommended :-

- (a) Increase the strength of the NSG and locate one SAG at four widely separated

yet well connected geographical locations in the country. Also create a marine SAG with the Coast Guard and a dedicated Sky Marshal SAG.

- (b) Re-equip the force with state of art weapons and equipment, including NBC equipment. Provide helicopters and special assault vehicles to the SAG.
- (c) Raise one SAG from State police forces for each state. These State SAGs must be equipped and trained with the NSG.

Another area of concern is the effectiveness of our Police Forces. The need of the hour are sharp, responsive, knowledgeable, well trained Police forces equipped with state of art weapons and policing equipment. The credibility of our police forces is at stake. They are viewed as stooges of the ruling party. India urgently needs to put in effect measures to enhance their social standing and acceptability as guardians of justice. Unless emergent action to correct this is taken, crisis prevention / response will remain a crisis in itself.

Accountability to Avoid Blame Game: Policy for dealing with WMD Disasters must lay down specific areas of actions and responsibilities for each agency concerned. Any overlaps and duplication must be ironed out to avoid confusion and chaos during disasters. The NIA, NISA and NDMA should be above political control and must be coordinated at the highest level. This will ensure full accountability and avoid Political / Intra Agency blame game. Placing all concerned agencies under one control authority will reduce division of loyalty and lead to synergised, effective and coordinated response.

Consequence Management

Response Policy and Training: The Government of India / NDMA needs to lay down a clear cut yet flexible response policy for WMD Disasters. The present system of disaster response being graduated from District upward to National level will not work. Concurrent and automated response by agencies at all levels is the need. These policy guidelines should be published and be known to all responders and

agencies down the channel. The NDMA must also issue Standard Operating Procedures, giving out concurrent actions by various agencies and response mechanisms. To ensure that these policies and response actions are at par, standardized training modules should be prepared for training of all concerned agencies.

WMD & Terrorism Division at NDMA:

The NDMA has made progress in Chemical disaster management, however, lot needs to be done in the other fields. It is recommended that a WMD and Terrorism Division be established at the NDMA. Intelligence inputs received from the NISA need to be processed at the NDMA for effective Hazard Prediction and Consequence Management. The division will deal with Hazard Prediction and Early Warning, Operational aspects like Identification, Isolation, Quarantine and Decontamination, Medical and Health aspects and the associated Logistics. The NDRF Battalions should be directly under command the NDMA Operations Wing.

NDRF: The raising of the NDRF Battalions from existing CRPF, CISF, BSF and ITBP is a good move towards Disaster Management. The organisations have been structured keeping in mind current disaster requirements but have not been fully tested as yet. Out of the eight battalions, four are trained and equipped for RNBC Disasters. The following is recommended with regard to the NDRF Battalions.

- (a) There is a need to have a governing body or Headquarters for managing the NDRF. Present system of dual control of the mother agency and the NDMA shall not work during crisis.
- (b) The number of battalions needs to be increased to be able to respond effectively anywhere in the country. The present eight battalions are grossly inadequate to handle the numerous disasters that strike our vast nation. Ideally, the country should be divided into ten operational zones based on size and population. Each zone must have an NDRF Battalion.
- (c) The NDRF needs to be equipped to deal with all kinds of disasters. The

NDRF (NBC) must have state of the art detection and hazard prediction instruments and latest decontamination equipment.

- (d) The NDRF HQ should have a dedicated air arm for movement of Emergency Response Teams and their equipment in case of emergencies.

WMD & Terrorism Cell at State Disaster Management Authority (SDMA): It is proposed to have a WMD & Terrorism Cell at the SDMA to deal with such disasters. These cells will take directions from the WMD & Terrorism Division of the NDMA and coordinate issues at the State level. In addition, each state must have at least one battalion of State Reserve Police trained for Disaster Management (SDRF). The SDRF battalion needs to be trained similar to the NDRF. One Company of this battalion should be given RNBC training at par with the NDRF (NBC) Battalions and function as a Dual Tasked Company.

IRB: All India Reserve Battalions (IRB) must be trained for Internal Security duties. These battalions can augment the strength of the NSG and the RAF.

Citizens Emergency Response Teams (CERT): A “CERT” is a group of people that is organized and receives special training for the purpose of enhancing their ability to recognize, respond to, and recover from a major emergency or disaster situation affecting their community. CERT should be organized and trained under the District / Municipal Headquarters having jurisdiction in the area where the CERT will operate.

Coordinated Health and Relief Mechanism: The example of the Mumbai attacks have shown how government machinery was not aware or ignored the private hospitals and clinics. A coordinated plan for health and relief needs to be worked out.

- (a) **Centralised Database:** A centralized National data base of all hospitals and health centres needs to be maintained at the NDMA giving patient handling capacity, drugs and medicine stocks and

number of Doctors and Paramedics on the panel of a given institution. Similar database must be maintained for qualified first responders and trained volunteers for WMD incidents.

- (b) **Surge Capacity Building:** In a WMD incident, casualties will cause a surge beyond the capacity of most clinics and hospitals. India needs more Doctors and Paramedics with a 100 % increase in Hospitals and Clinics. India has less than one hospital bed and one physician for every 2,000 people, as reported by the World Health Organisation. Similar state exists with Medicine and Drug stocks and other Medical equipment. India does not even have a Paramedic training institute !

- (c) **Equipment Resource:** The NDMA has established the National Disaster Mitigation Resource Centres (NDMRC) along with each NDRF Battalion. The NDMRCs should also stock items needed for WMD disaster response and relief. In addition, stocks need to be maintained under the aegis of the SDMA. A National Antidote and Drug Management Agency should be established which can maintain stocks of critical drugs and antidotes for use during emergencies.

- (d) **Communications and Networking:** The SDMA needs to have Satellite phones and long distance mobile networks to be able to communicate from the incident site to the outside agencies. A National Strategic Communications Grid should be put in place with advanced technology protected equipment to overcome EMP effects of Nuclear Blasts and provide foolproof communications to the Incident Command Authority and all SDMA from the NSC (NISA and NDMA).

Citizen Awareness

One single factor that can tremendously enhance our preparedness potential is ‘awareness level of the common citizen’. The first persons to become aware of an RNBC attack will be the intended targets and victims—not the police or

government officials. The first five minutes to an hour of a WMD Terror attack (The Golden Hour) may prove lethal to first responders and the public. Western nations are becoming increasingly aware of the threat of WMD Terrorism and regular emergency drills and Hazmat training workshops are conducted at Schools, Universities, Private Companies and institutions.

In India, awareness of WMD threats and their mitigating techniques are known only to the handful of experts and Response units like the Armed Forces and the NDRF. With various biological threats having been officially eradicated (e.g. Smallpox), even doctors are not being trained to diagnose and treat these. A concerted and coordinated effort by the NDMA and SDMA's needs to be put to generate and increase awareness about WMD terrorism threats and disasters. Community awareness programmes, street plays, NGO initiatives will all go a long way in increasing public awareness.

Conclusion

India is yet not fully prepared to respond to a terrorist attack that uses WMD. It is reassuring that there is a nascent national policy addressing the threat of WMD terrorism in place, that it is being implemented at the level of the National Security Council (NSC), and that this high-level group's efforts are making progress in coordinating national resources to meet the challenges posted by WMD terrorism. However, much remains to be done.

Preparedness measures such as training of role players including the community, development of advanced response systems, effective communications and above all a well-networked institutional structure involving the government organisations; academic and research institutions, the armed forces and the NGOs would greatly contribute to the overall disaster management of WMD Terrorism Disasters. The government's recent policy changes reflect the changing approach from rescue and relief to preparedness.

BIBLIOGRAPHY

Documents:

1. Meeting the Threat Of Weapons Of Mass Destruction Terrorism: Toward a Broader Conception of Consequence Management, Military Medicine, December 2001 by Becker, Steven M.
2. Biological and Chemical Terrorism : Strategic Plan for Preparedness and Response Recommendations of the CDC Strategic Planning Workgroup. April 21, 2000 / 49(RR04).
3. Non-Conventional Terrorism: Chemical, Nuclear, Biological by Dr. Boaz Ganor ICT "Survey of Arab Affairs-A periodic supplement to Jerusalem Letter/Viewpoints" SAA:41 19 Av 5755 / August 15, 1995.
4. Terrorism And WMD : Some Preliminary Hypotheses by Bruce Hoffman, The Nonproliferation Review/Spring-Summer 1997.
5. Are We Prepared for Terrorism Using Weapons of Mass Destruction? Government's Half Measures, by Eric R. Taylor, Policy Analysis, No 387, November 27, 2000.
6. The Fight Against WMD Terrorism By Lt Col Arvind Mathur, NBC Defence Journal, CME Pune, June 2002.
7. Alexander Spencer, "Questioning the Concept of 'New Terrorism,'" Peace Conflict & Development, Issue January 8, 2006, Available from www.peacestudiesjournal.org.uk, accessed November 29, 2006.
8. Bruce Hoffman, Inside Terrorism (New York: Columbia University Press, 2006).
9. Walter Laqueur, The New Terrorism: Fanaticism and the Arms of Mass Destruction (Oxford: Oxford University Press, 1999), 8. Available from www.questia.com., accessed November 30, 2006.
10. India's System of Controls over Exports of Strategic Goods and Technology, dated 1/8/04 issued by the Ministry of External Affairs; and "Indian Initiatives on Codes of Conduct for Scientists," pp. 3-4.
11. "Regulating Biotechnology," Editorial in The Hindu, May 25, 2004.
12. Sandhya Tewari and Divya Chopra, "Compulsions of the Biotech Industry," pp. 33-34.

13. Government of India, Ministry of Defence, Annual Report, 2004-2005, p. 100. (m) www.ndma.gov.in
14. Government of India, Ministry of Defence Annual Report, 2001-2002, p. 2.
15. BTWC Verification: India's Position, Bio-Terrorism and Bio-Defence, P.R.Chari and Suba Chandran New Delhi: Manohar, 2005, p. 21.
16. Government of India, Ministry of External Affairs, Annual Report, 2002-03, p. viii.
17. Silent Warfare: Managing Nuclear Chemical Biological (WMD) Disasters, Brig (Dr.) HK Kar, Manas Publications.
18. WMD Terrorism : Strategy for Consequence Management, Brig MS Patial, © USI of India, Manas Publications, 2006, New Delhi 110002.
19. Disaster management : The WMD Dimension, PR Chari, CBW Magazine, Jan March 2008, IDSA, New Delhi 110010.
20. Meeting the threat of WMD terrorism: Toward a broader conception of consequence management, Military Medicine, December 2001 by Becker, Steven M.
21. U.S. General Accounting Office, "Combating Terrorism: Federal Agencies' Efforts to Implement National Policy and Strategy," GAO/NSIAD-907-254, September 1997, p. 21.

Web Sites:

- (a) www.twq.com/03autumn/docs/03autumn_parachini.pdf
- (b) cns.miis.edu/research/wtc01/terrwm.html
- (c) www.fpa.org/.../newsletter_info_sub_list.htm
- (d) www.nti.org/db/cbw
- (e) rand.org/nsrd/terrpanel
- (f) www.state.gov/t/isn/rls/rm/73260.htm
- (g) www.southasiaanalysis.org/papers9/paper867.html
- (h) security.homeoffice.gov.uk/cbrn-resilience/
- (i) nacwc.nic.in/
- (j) www.dhs.gov/
- (k) www.opcw.org
- (l) disarmament.un.org/wmd/