ROLE OF ARMED FORCES IN DISASTER MANAGEMENT:
AN OVERVIEW ON GUJARAT EARTHQUAKE

Jyoti Purohit, Research Scholar
Department of Public Administration
Mohan Lal Sukhadi University
Udaipur (Rajasthan): 313002

ABSTRACT

The Armed Forces have traditionally played a significant role in both natural and man-made disasters. After natural calamities, they help in relief work, the maintenance of law and order and restoring essential services. This paper presents an overview on the role of the Indian Army deployed by the India Government after the earthquake that struck the Gujarat State on 26 January 2001. Immediately after the earthquake the Armed forces were pressed in service to rescue the affected people from the devastated places and to carry out the relief operations. But for the effective disaster risk reduction, it is essential to minimize the dependence of Armed forces in the post disaster relief and rescue works. It is the main responsibility of civil administration to take leadership in the Disaster Management. In this paper certain suggestions are mentioned to improve the Disaster Management.
INTRODUCTION

Disaster management is “… the range of activities designed to maintain control over disaster … and to provide a framework for helping at-risk persons to avoid or recover from the impact of the disaster.”  

1 The ability of victims to provide for their recovery, whether from their own resources or through their ability to acquire assistance, is a major factor in the speed of the recovery. The ideal role for disaster assistance is to support victims, efforts to allow them to accomplish their own relief and recovery efforts more effectively.  

2 The military forces of affected states have played an important role in responding to natural disasters in many contexts. Yet existing guidelines on the use of military assets in disaster response, such as the United Nations, Military and Civil Defence Asset (MCDA) Register and the Oslo Guidelines, focus largely on the deployment of international forces to complex emergencies.  

3-4 The Armed Forces are so structured that they are capable of a rapid response and dispatch self-contained mobile and composite task forces to any part of the country, or even overseas. In Indonesia, the military (Tentara Nasional Indonesia (TNI)) is central to disaster management. Opinion polls indicate that, despite a history of brutal suppression of separatist movements, the military is one of Indonesia’s most respected institutions, with a reputation for providing effective first response capacity. The Pakistan military played a central role in the response to the 2005 earthquake. An Inter-Agency Standing Committee (IASC) evaluation noted the ‘extraordinary performance of the Pakistan military’, while a Fritz Institute survey found that most aid recipients identified the military as the primary provider of food, shelter and livelihood and medical services.  

5 The army’s decision making skills, logistical and coordination capacities and willingness to listen and contribute to one of the most effective humanitarian response to a large-scale natural disaster.  

6
USES OF MILITARY RESOURCES FOR DISASTER ASSISTANCE

A summary of the potential uses for military resources is provided below. Identifying potential military roles provides a basis to understand expectations which exist about military involvement in disaster assistance:

- **Logistics**: Air, land and sea transport and handling of relief supplies and personnel; probably the most common uses of military resources.
- **Health care**: Acute and specialized medical care, whether through the use of mobile field hospitals, the provision of medical equipment and temporary duty specialists, or caring for patients at specialized military hospitals (e.g. burn cases).
- **Search and rescue**: Frequently provided as a convenience function, such as monitoring emergency radio channels or the use of ships to respond to sea disasters.
- **Commodities**: Using stockpiled military supplies for immediate relief needs or excess supplies to support rehabilitation efforts. Using stockpiles by civil administration, one can reduce military readiness and pose acceptability problems.
- **Data collection and analysis**: Specialized military units can evaluate the extent and impact of a disaster using remote sensing and databases (e.g. digitized maps). Physical damage assessment corresponds to a normal military function; analysis beyond this level (e.g. estimating economic impact of crop damage) may be outside normal capacities.
- **Public works/construction**: Personnel and equipment from military pioneer/engineer units can be used to rebuild/build and operate the infrastructure needed to deliver assistance quickly. The military’s standalone, highly mechanized, ability contrasts with the availability of labour for labour intensive activities in some foreign countries after disasters.
- **Public information**: The military’s psychological warfare and propaganda capabilities can be used to provide timely information to disaster victims. The military public affairs structure can collect and distribute information on disaster impact and recovery efforts.
• **Public administration:** Military civil affairs personnel can administer assistance, perform local government functions and serve as a link between disaster victims and the military. This will be very important for the Preparedness and Mitigation aspects of the Disaster Management cycle. It is unlikely civil affairs units will take over local government functions, except where no national government exists.

• **Security:** Military police or combat units can establish or maintain security for disaster relief operations.

### ARMED FORCES IN INDIA DISASTER MANAGEMENT SYSTEM

The armed forces have been forming the core of government response and the government’s viewpoint on their role has been very positive. This was most evident in the statement of the Indian Prime Minister during a seminar on the subject in Dec 05. Made in the backdrop of fresh memories of tsunami, avalanche and snow storm, followed by earthquake in J&K, he said, “The world over, without exception, all governments have involved the Armed Forces whenever a disaster strikes. They are invariably the first to respond and quickest to reach the affected area. As has been increasingly observed in recent cases across the world, the men in uniform have played a stellar role in mitigating and alleviating the suffering caused by disasters”. The Disaster Management Act 2005 has an important Chapter VIII regarding constitution of National Disaster Response Force. An excerpt from the Chapter is worth mentioning here “There shall be constituted a National Disaster Response Force for the purpose of specialist response to a threatening disaster situation or disaster. Subject to the provisions of this Act, the Force shall be constituted in such manner and, the conditions of service of the members of the Force, including disciplinary provisions therefore, be such as may be prescribed”. The Natural Disaster Response Force (NDRF), an eight battalion force set up under the Disaster Management Act of 2005, comprises 2 battalions each from the Central Industrial Security Force (CISF), the
Border Security Force (BSF), the Central Reserve Police Force (CRPF) and the Indo-Tibetan Border Police (ITBP). The force is responsible for mounting professional response during natural or man-made disasters. Four of these battalions are trained and equipped in Nuclear, Biological and Chemical (NBC) related disasters.15

ROLE OF THE INDIAN ARMY IN DISASTERS

In India, the military is formally involved in disaster recovery if the affected state government asks for its assistance, and if the request is approved by the National Crisis Management Committee in Delhi. In the immediate aftermath of the tsunami, the Indian air force and navy were dispatched to assess and report on damage. The Indian army mobilised more than 8,300 troops for rescue and relief operations in India and Sri Lanka, and the first troops were deployed within six hours of the disaster. Following the 2001 earthquake in Gujarat, the army established relief camps for 23,000 people and provided emergency medical care. NRDF troops are trained in disaster response, and the eight battalions are integrated with state disaster response mechanisms. The NRDF was active in the response to floods in Bihar in 2008.16

GUJARAT EARTHQUAKE 2001

A Powerful Earthquake of magnitude 6.9 on Richter-Scale rocked the Western Indian State of Gujarat on the 26th of January, 2001. It caused extensive damage to life & property. This earthquake was so devastating in its scale and suffering that the likes of it had not been experienced in past 50 years. Leaving thousands seriously injured, bruised and handicapped; physically, psychologically and economically. This was an intra-plate earthquake, one that occurred at a distance from any plate boundary where plate tectonics
create most earthquakes, so the area was not well prepared. The event was the result of stored energy in a collision margin. 13,805 people lost their lives and more than 1, 67,000 were injured. About 1.2 million houses were damaged partially or completely. Social infrastructure and public infrastructure were severely damaged. More than 1,000 health units and 12,000 schools were damaged. Roads, bridges, Public buildings, Dams and irrigation structures were also affected severely. The total primary loss was about US $3,189 million and the secondary loss was about US $ 635 million and the tertiary loss was about US $ 2,097 million. Kutch is a district that has a long-disputed border with Pakistan. Army and air force bases located in this zone, near Gandhidham town, suffered heavy damages and losses in the earthquake. A large number of army personnel were deployed in towns and villages of Bhuj, Ahmedabad, Dhangadhara, Jamnagar, Rajkot and other affected areas in Gujarat. Vehicles and specialized equipment were also deployed to support the relief operations throughout these areas. Soldiers in more than 60 columns worked day and night in rescue and relief operations. In addition; three columns of army engineers were deployed for initial technical inspection including on-the-spot repair measures of damaged buildings within days. The key tasks undertaken by the army in the aftermath of the earthquake included:

- provision of safe drinking water in border villages and key towns;
- establishment and running of tented camps in urban and rural areas;
- establishment of schools in rural areas;
- provision of tents and tarpaulins to local authorities in border districts;
- patrolling of affected areas to avoid theft or loot or disorder;
- provision of communications for civilian action;
- running of free kitchens in Bhuj and four towns in the initial weeks.
Table-1 Damage to Utilities and Transport Systems

<table>
<thead>
<tr>
<th>Resource</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railways</td>
<td>Damage to track between Viramgam to Gandhidam; Gandhidham to Bhuj; Viramgam to Okha; and Palanpur to Gandhidam. Heavy damage to various station buildings, station cabins, bridges, residential quarters and signalling systems. Rail links as far as Bhuj have been restored.</td>
</tr>
<tr>
<td>Roads</td>
<td>650 kilometres of national highways damaged, 100 kilometres severely. National highways are now traffic-worthy.</td>
</tr>
<tr>
<td>Bridges</td>
<td>Many minor and major bridges damaged including the Syurajbari bridge at Bachau. Most main road bridges have been repaired and are capable of accepting limited weight traffic.</td>
</tr>
<tr>
<td>Ports</td>
<td>Berths 1-5 at Kandla Port suffered major structural damage.</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>147 exchanges, 82,000 lines and optical fibre systems damaged. All exchanges and at least 40,000 lines have been restored.</td>
</tr>
<tr>
<td>Power</td>
<td>45 sub-stations and power supply to 50% of feeders in Kutch damaged. Power supply to nine towns &amp; 925 villages affected. All substations and 225 feeders have been restored and there is now power to all villages in Kutch.</td>
</tr>
<tr>
<td>Water</td>
<td>Water supply to 18 towns and 1340 villages damaged or destroyed. Piped water restored to 9 towns and 480 villages. Tube wells are gradually being restored.</td>
</tr>
<tr>
<td>Fuel</td>
<td>Jamnager refinery shutdown 26 January by power failure. Crude oil and product pipelines were shut down for checking. Crude oil pipeline for one day, product pipelines for nine days. Availability of product not affected as alternative arrangements have been made.</td>
</tr>
<tr>
<td>Schools</td>
<td>Kutch District had 1359 primary schools with 5168 schoolrooms. Of these, 992 schools and 4179 classrooms were destroyed. There were 38 secondary schools of which six were destroyed, 14 suffered heavy damage and 12 were partially damaged. Of 128 non-government schools, nine were destroyed, 11 suffered heavy damage and 99 were partially damaged.</td>
</tr>
</tbody>
</table>

*Source: Relief Web, OCHA http://www.reliefweb.int*
The army rescued 478 people (almost half of them in the first two days), evacuated 484 seriously injured persons, and recovered 2,260 corpses.\textsuperscript{19} It established 48 relief camps for 23,000 people in Kutch villages to house displaced people and provide emergency medical care. With the military hospital in Bhuj rendered unusable, the army airlifted injured to Pune military hospital in neighboring Maharashtra state. Army doctors performed 11,284 major operations, treated 17,566 patients with severe injuries; evacuated 600 injured to available hospitals for further treatment, and airlifted 486 to Pune or Ahmedabad for additional medical relief or operations. The army patrolled 19 towns, protecting evacuated properties and coordinating the flow of traffic and relief goods. To assist most affected areas, it set up 39 camps within the first two days and initiated and managed 39 free camp kitchens that reached 14,000 families every day. The air force pressed into service six IL-76s, 18 AN-32s, 4 Avros, four Dorniers and 16 helicopters in the largest peacetime mobilization for a relief effort. It made 953 sorties, carrying relief materials, tents, equipment, food items, rescue teams and injured persons, and assisted international teams including from the USA, UK, Switzerland, Turkey and Denmark. The navy provided hospital ships and helicopters, facilitated casualty evacuation and transportation of relief material and supplies from the Jamnagar base in Gujarat, and despatched teams with satellite phones. The INS Ganga carried relief materials to Kandla Port in Kutch and two naval ships were converted into hospital ships where surgeries were performed on severely injured victims for two weeks. A Dornier operated between Mumbai and Kandla carrying fresh water and sterilized equipment for hospital use. The military and civilian responses were coordinated at both the central and the state levels, encompassing relief supply coordination; relief needs assessment and removal of debris from roadways.\textsuperscript{20}
SUGGESTION FOR IMPROVING DISASTER MANAGEMENT

In the above mentioned discussion about Army’s role in Gujarat earthquake 2001, it is obvious that the Army has done a commendable work in the post disaster relief and rescue works and assisted civil administration and other assisting agencies greatly. However, it should be clear that the primary responsibility of Armed forces is to protect the Country from any external aggression triggered by another country. Therefore it is essential to minimize the dependence of Armed forces in the post disaster relief and rescue works. It is the main responsibility of civil administration to take leadership in the Disaster Management. The Disaster Management Act 2005 is a paradigm shift in the implementation of laws and regulations in terms of works and responsibilities to each department of civil administration. Here, certain suggestions are mentioned to improve the Disaster Management:

- Education and awareness are prerequisites for preparedness. Disaster preparedness education is provided through formal and non-formal means by both government and NGO programs. The government-operated programs provide disaster preparedness education through the Campaign for Popular Education and primary-level school curriculum (SEMP, 2003).  

- Citizens have different priorities and engage in different behaviours before, during, and after a disaster, law enforcement must employ different styles of policing in each stage of a disaster to meet both the needs of citizens and the challenges of the disaster.

- Strengthen networks among disaster experts, managers and planners across sectors and between regions, and create or strengthen procedures for using available
expertise when agencies and other important actors develop local risk reduction plans (Fernandez, 2006).²²

- Disaster Management process must incorporate people’s participation at the local decision making level. Participation of community has been successfully tested in several programmes around the World ((Pearse (2003)²³ Osti (2004)²⁴).

- Researchers suggest that disaster management is shifting from a traditional focus. Summarizes this shift as follows (Pearce, 2003) cited in (Paulina Aldunce, Alejandro León, (2007))²⁵.

  - From hazard to vulnerability.
  - From reactive to proactive.
  - From single agency to partnerships.
  - From science driven to multidisciplinary approach.
  - From response management to risk management.
  - From planning for communities to planning with communities.
  - From communicating to communities to communicating with communities.

The coherent work by the Army has been observed in various disasters recently, e.g., Gujarat Earthquake 2001, Kashmir Earthquake 2005, Koshi Flood 2008, Mumbai Attacks 2008 etc. Despite such appreciation, the role of army has to be essentially limited to immediate response after the disaster and would not involve active participation in other stages of disaster management.

REFERENCES


[12] Ritchie, G.N., The Military Role in Disaster Relief, Preparedness and Prevention, photocopy, Disaster Preparedness Centre, Cranfield University, Swindon


