

*DISASTER MANAGEMENT SYSTEM IN SELECT COUNTRIES*

---

The world has shrunk dramatically over the decades in terms of accessibility and communication. Today a disaster event in any remote corner gets attention of worldwide population within minutes through media and net. One can expect friendly nations to contribute in the hour of need. This chapter attempts to look at the international organizations and structures in the field of disaster management. The aim is to see if there is a system or practice which can be incorporated into our national frame work of DM. (The experience of Netherlands stand out distinctly and is hence covered separately in detail as a case study in the next chapter).

**National Framework of Disaster Management World over**

Different countries have different legislations and organisations in place to deal with disasters. Usually the systems get refined after a major disaster. This section aims to analyze some of the international practices in the field identify if some can be incorporated in the India. One fact stands out is that, in most cases, the country's Armed Forces are primary responders to disasters. (Khanna, 2006)<sup>13</sup>

---

<sup>13</sup> Brig. (Dr.) B K Khanna, "Institutional Frame work and role of armed forces in disaster management in India and other countries". NDMA, New Delhi. 2006

## United States of America

In USA Federal Emergency Management Agency (FEMA)<sup>14</sup>, under the Department of Homeland Security is the primary agency to coordinate the federal emergency response. The first responders in the USA are the local police and fire departments. In case they are overwhelmed in a disaster situation there are provisions to mobilize State civil defence assets including the National Guard. Employment of Federal military forces requires special Presidential Authority. State Governor is the in charge of the relief and rescue and he can request federal support through the President if necessary. Common understanding is that the military is only in a supporting role and that the military should be “last in and first out”. Military assets for assisting civil authorities are cleared by the Pentagon while Secretary of Defence maintains operational situational awareness.

**National Response Plan.** Various threats domestically are comprehensively addressed in the National Response Plan (NRP). It is a proactive plan sponsored by the Department of Homeland Security in coordination with various federal departments including Defence. The NRP facilitates effective coordination between State and federal authorities. It utilizes the National Incident Management System (NIMS) to deal with various aspects of disaster management from preparedness to rehabilitation.

---

<sup>14</sup> [www.fema.gov](http://www.fema.gov) accessed 03 Dec 2011 and James Lee Witt, “Stronger in broken Places”, 2002.

Due importance is given to the pre-incident stage wherein preparedness, prevention and mitigation are identified as the pre-conditions for success. To quote a former director in FEMA, *“It is well understood that in disaster situation, people are likely to do what they have to do but it is better, to do what they have planned to do. Knowhow comes from knowing what to do in a crisis.”* (Witt,2002)<sup>15</sup>

**Assistance to Other Countries.** Request for disaster relief assistance to other countries is a routine issue for the USA. Requests flow through the U.S. Ambassador to the U.S. Department of State. On approval by the President, the Secretary of Defence tasks the U.S. Military to provide the required support.

### **People’s Republic of China**

In China also when disasters necessitate, the local governments request army support. The concrete tasks are spelt out by the local government while it remains responsible for material supply. State railway, transport, civil aviation, public security, telecommunication etc provide preferential and convenient services for the army carrying out relief tasks. This is like many other countries **but important difference here, is that China has**

---

<sup>15</sup> James Lee Witt, “Stronger in broken Places”, 2002.

**comprehensive legislation to support intense involvement of its armed forces in any disaster.<sup>16</sup>**

As per the constitution, the army is expected to “protect the people and their peaceful work and participate in the construction of the country and go all out to serve the people”. (Peijun 2007)<sup>17</sup> In 2000, China promulgated National Defence Law and in 2005, it issued detailed Regulations for Army’s Participation in Emergency Rescue and Disaster Relief. This provides a lawful status to Army’s role, principle tasks and command structure in disaster relief. These legislations have made China’s response mechanism highly result oriented and effective as the Army and the civilian stake holders are adequately motivated to execute their roles in disaster situations.

Emergency rescue and disaster relief is conducted under the unified leadership of the central government. The army operates under the leadership of the governments at various levels. By law the Armed Forces are not employed piece meal but as a homogenous unit. To be ready for conducting emergency missions at all times following coordination aspects are ensured:-

---

<sup>16</sup> [www.undp.org/cpr/disred/documents/publications/.../asia/china](http://www.undp.org/cpr/disred/documents/publications/.../asia/china) accessed 30 Jan 2012.

<sup>17</sup> Integrated Disaster Risk Management of China, Peijun Shi, Jing Liu. Institute of Disaster and Public Security, College of Resources Science and Technology, Beijing, 2007

**District Information Centre** are set up by army and the concerned departments of government in peace time, so that at any time, the army has prior knowledge of the environment and is prepared.

The Army has a **special training programme** for various situations. In peace time, the designated units formulate plans, conduct mock exercises and store reserves to ensure quick response.

### **Indonesia**

The earthquake and Tsunami in Northern Sumatra and Aceh on 27 December 2004 was the most destructive disaster ever in Indonesia. 250,126 people were killed, 95,285 people were reported missing and 4,50,000 people were displaced. Almost entire western coastline of Sumatra, Aceh and Nias Islands was destroyed by the earthquake followed by tsunami. All national resources were directed to assist victims in Northern Sumatra and Aceh. A request was also made by the President to the International Community for assistance for surmounting the devastating effects of Tsunami.

In Indonesia, National coordinating agency for disaster mitigation is responsible for policies, plans and guidelines. (Harijono,2010)<sup>18</sup> **National Coordination Board for Disaster & Refugees**, is headed by Minister of

---

<sup>18</sup>Sri Woro B Harijono "Development of National Early Warning Systems", NMGA Jakarta, 2010 and [www.aprsaf.org/data/.../2\\_1\\_Indonesia](http://www.aprsaf.org/data/.../2_1_Indonesia) accessed 10 Jan2012.

Internal Affairs and has following on its board. Representatives of the Ministry of Internal Affairs, Social Welfare, Public Housing, Health, Transportation, Energy & Mineral Resources, Manpower and Transmigration, Finance, Communication, Forest & Environment, Commander in Chief (CNC) of the Indonesian National Defence Forces and Chief of National Police. (Sakya, 2010)<sup>19</sup> In capacity development State minister for research and technology is the main coordinator.

**Provincial Coordination Unit** comprising the Governor and Secretaries of Provincial Governments make next rung. **Regional Task Force Units** for Disaster conduct the operations under supervision of the Regent/Mayor, heads of Sub-district, village chief etc.

**Role of INDF.** The role of the Indonesian National Defense Forces (INDF) is very clearly laid out under the Indonesian Constitution. On request from provincial units, INDF helps in search and rescue operations, transportation, air/sealift, medical equipment, food, clothes, limited construction etc. The Preparatory Phase commences when the crisis is imminent, the execution phase when the units use majority of the resources available and the Rehabilitation Phase under which most construction work takes place.

---

<sup>19</sup> Andi Eka Sakya, Capacity development: “ Supporting Disaster Mitigation activity in Indonesia”, IMGA Jakarta , 2010.

## Malaysia

In Malaysia, the National Security Division under the Prime Ministers' Department is responsible for managing any disaster relief operation within the country and abroad. This is based on the National Security Instruction which provides detailed framework, identification and classification of disasters, duties of relevant authorities and the legislation required to undertake such tasks. (Razi, 2007)<sup>20</sup> In pursuance of this, the **National Management and Disaster Relief Committee (NMDRC)** is responsible to the National Council which is chaired by the Prime Minister. This 24 member committee also includes Ministers of Finance, National Unity and Development, The Chief Secretary, The Chief of Defence Forces and the Inspector General of Police. In order to ensure the effectiveness of the management process the committee divides any disaster situation into three levels.

A local incident that can be easily controlled and will bring about minimum damage will fall in Level I. Level II incidents involve more than two districts with a large number of human casualties and property damage. At Level III are disasters involving more than two states which require response at national level and assistance from international community.

---

<sup>20</sup> Disaster Management in Malaysia, A Fakhru'l Razi , University Putra, Malaysia, 2007.

**The Defence Forces** are represented extensively in DM Organisation. The Chief of Defence Forces is at the National level while a Brigade Commander is a part of the Committee at the State level. At the district level, the commanding officers of a unit represent the military. The tasks of the military are very clear. They assist in providing manpower, limited transportation, engineering equipments, vehicles in rescue operation and medical facilities. They also provide specialists in medical, communication, explosives, underwater diving and assist in constructions.

**Special Malaysian Disaster Assistance and Rescue Team** comprises of personnel from Malaysian Police, Armed Forces and Fire & Rescue department.

## **Japan**

**National Structure** The Local Authorities Autonomies (district level) have the principal responsibility of protecting the lives and livelihoods of Japanese citizens. (Khanna, 2007)<sup>21</sup> They are accountable for relief measures in disaster. If the situation is serious the National Govt. steps in to render assistance to Autonomies. The law also lays down the role of Armed Forces. Japan Ground Self Defence Force (JGSDF) conducts. Disaster relief role assumes considerable importance during peace time. On request from

---

<sup>21</sup>Brig. (Dr.) B K Khanna, "Institutional Frame work and role of armed forces in disaster management in India and other countries". NDMA, New Delhi. 2006



regional Governor JGSDF units are dispatched for disaster management. The request can be made, in emergencies, directly to JGSDF by the Mayors. The JDSDF maintains an initial standby of 2700 personnel and 27 helicopters throughout Japan for dispatch within an hour.

The international relief activities comprise of the following:-

Financial help provided through Ministry of Foreign Affairs (MoFA),

Material support provided by Japan International Cooperation Agency (JICA). Disaster relief operations are conducted by the Defence Agency.

A Japanese government study on early warnings is note worthy. The early warning by the Japan Meteorological Agency (JMA) saved many lives in Tokyo during earthquake of 2011. A minute before the earthquake was felt, the Earthquake Early Warning system, incorporating over 1,000 seismometers, sent out warnings to millions. The warning for general public was delivered about 8 seconds after the first P wave was detected, or about 31 seconds after the earthquake occurred saving many lives.

**DM and the UNO.** (Brown, 1979)<sup>22</sup> At UNO, there are many agencies that guide, aid and assist developing nations in their fight against disasters.

The key agencies in disaster risk reduction activities are:-

---

<sup>22</sup> Brown, Barbara. Disaster Preparedness and the United Nations. Pergaman, New York, 1979 .

**United Nations International Strategy on Disaster Reduction (UNISDR).** As the umbrella framework for disaster risk reduction, UNISDR is intended to link work of the UN Secretariat and UN agencies to broader disaster risk reduction community.

**United Nations Development Programme (UNDP).** UNDP's work on disaster risk reduction is particularly focused at the regional and country levels.

**Specialised UN Agencies<sup>23</sup>** are mentioned below

**World Meteorological Organisation** –work includes climatic early warning.

**World Health Organization** – work includes contributing to capacity building of countries to manage health related crisis and with a particular focus on strengthening the resilience of the health system.

**United Nations Educational, Scientific and Cultural Organisation** – work includes responsibility for the co-ordination of global efforts in tsunami early warning.

**United Nations Environment Programme** – works on raising awareness about environmental threats.

---

<sup>23</sup> <http://esa.un.org/techcoop/portfolio.asp> accessed 03 Nov 11,

**Food and Agriculture Organisation** – works to improve food security including through building more resilient livelihoods and supporting food and agriculture related early warning.

**World Food Programme** – work includes strengthening country and regional capacities to address acute hunger and chronic malnutrition with a view to improving long-term food security, protect livelihoods in crisis situations and enhance resilience to shocks.

**Office for the Coordination of Humanitarian Affairs** Work includes coordination of early warning, contingency planning and humanitarian response.

## **Summary**

Notable points in the above analysis of international framework are as follows.

- The structure for DM follows similar lines across many nations. There are responsible bodies at centre state and district levels with budgets, authority and responsibility. In developed nations like USA, funds are not a constraint but problems do arise due to sheer size of government structures. Coordination is always a challenge. Having an independent agency like FEMA of USA to coordinate the national response certainly helps. An

agency with a clear mandate can assert its authority in peace time and prepare nation comprehensively for DM.

- In China, the legislations are a strong point and have distinctly given an edge to army's role in disaster ops (which is in any case inevitable). It gives a clear mandate in planning, procurement, training and advance preparation to the army. Also, the responsibility of the local government is not diluted and it remains accountable for its plans directions and coordination.
- Since speed is the key to effective disaster relief operations In USA access issues such as: staging support, status of forces agreements, over-flight and landing clearances and simplified entry for relief personnel, are dovetailed in the planning process.
- Japan has given emphasis to warning system and emergency drills. Community is involved and conscious in disaster preparedness .There is a need for planners to focus on warning systems, emergency drills and public education in all major population centers using all available technologies.

-----