CHAPTER 3

ROLES OF VARIOUS ARMED FORCES
IN DISASTER RELIEF

1. **General.** Armies, the world over play an important role in the mitigation of disasters of various kinds. It would be of interest to examine the actual roles played by various armies as also to examine the roles that are envisaged in their countries Disaster Management Policy.

**US Army’s Role in Disaster Relief Operations**

2. In the US, disaster relief is, primarily, the responsibility of Federal and State. Department of Defence (DOD), which provides military assistance to civil authorities in natural disasters when requested or directed in accordance with the Disaster Relief Act of 1974.\(^{40}\)

3. Normally, military support to disaster relief is provided at the request of the Administrator and Federal Emergency Management Agency (FEMA), who is responsible for co-ordinating the activities of all federal agencies in rendering support to State and local governments during major disasters. However, when a possibility of serious disaster is imminent, a military commander can take all actions as may be required to save human life, or mitigate major property damage or destruction without awaiting formal orders. The Secretary of the Army is DOD executive agent for disaster relief activities within the US. This includes responsibility for effective utilisation, co-ordination, and control of resources made available by other components of DOD.

**Military Participation**

4. Minimum essential military resources are utilised in disaster relief operations. Participation is terminated at the earliest practicable time. Unless formally directed by the Federal Co-ordinating Officer, all support terminates within 3 months. Military assistance in rehabilitation consignment to a disaster is provided only when directed by FEMA, or in support of emergency operations conducted by the Corps of Engineers as authorised by law. The Commander, Unified

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\(^{40}\) Brigadier S Ghosh, VSM. ‘US Model for Disaster Management,’ pp.1 et seq.
Command, in response to requests from the State Department, can also provide disaster relief support in friendly foreign countries.

5. The American National Red Cross, by its charter, is organised to undertake activities for relief operations in disasters. In instances not involving FEMA, the Red Cross can be expected to request Army assistance when local resources are inadequate. In such eventualities the Red Cross may be provided, supplies, equipment, or services on loan or by purchase.

**Planning**

6. DOD components have been directed to develop appropriate contingency plans for major disaster assistance operations and ensure that these plans are co-ordinated with appropriate Federal, State, and local civil authorities and other DOD components.

7. Planning for military support of disaster relief considers all aspects of logistics. The types of support required might vary according to the type and intensity of damage, local facilities, density of population, and warning received. Logistics support generally provided are:

   (a) Evacuation and housing.
   (b) Casualty management.
   (c) Supply of clothing, food, and medicine.
   (d) Water purification.
   (e) Emergency communications support.
   (f) Physical security.

8. Army owned supplies and equipment, not immediately required in the execution of a primary mission, may be made available for use in disaster relief operations and the costs are debited to FEMA.

9. **Funding.** The Army budget does not include allocation for disaster relief operations. Such operations are undertaken on the premise that costs other than normal operating expenses
will be reimbursed by the agencies outside DOD which request military participation in disaster relief operations.

10. **Role of the US Army.** The role of the US Army in disaster Management can be briefly summarised as under:

   (a) Army plays only a **supportive role** in disaster management. Army has a dedicated Defence Co-ordinating Officer (DCO) to co-ordinate the Army’s role in disaster relief operations and attends all the meetings on the subject on a regular basis. This ensures proper liaison and co-ordination with all the agencies involved in relief operations.

   (b) Army, when called for disaster relief operations, is organised into a Joint Task Force to meet the requirements of specific situations.

**Iranian Army’s Role in Disaster Management**

11. After experiencing devastating earthquakes in 1962 and 1968, Iran has evolved an efficient relief network that integrates the armed forces, civil government and an Iranian version of the Red Cross known as **Sher-e-Khoshed**. The planning and co-ordination of relief is done at the highest level by the Deputy Prime Minister, who is also the Deputy Chief of the Joint Staff a serving Lieutenant General. He, thus, combines the authorities to issue orders to civil authority and the military commanders with regard to relief work.

12. Iran is divided into three military districts, each normally having an army corps and parallel civil administration and unit of Sher-e-Khoshed. This triangular organisation percolates right down to district and village level. Even in the remote areas persons of the Army Revolutionary Corps comprising of the Literacy Corps, Health Corps and Construction Corps represent the armed forces.

13. This vast network backed by elaborate communications facilitates relief assessment and operations. The reserve stocks of the armed forces are automatically made available to meet relief requirements. Regular monthly conferences are held at corps level to review contingency plans. Many hundreds of helicopters are on call and kept at a high state of readiness in a potential
disaster situation. In the event of disaster, the resources of the civilian government, Sher-e-Khoshed, Police, Navy, Air Force come under relevant military district commanders.\textsuperscript{41}

**Role of Indian Armed Forces**

14. **Primary Role.** The primary role of the Armed Forces is to preserve national interests by safeguarding the territorial integrity of the nation against external threats, as well as the nation’s strategic interests in the region.

15. **Secondary Role.** Its secondary role is to assist civil authorities in handling internal threats, maintenance of essential services, as also to assist the Central government or States during natural and other calamities.

**Procedure for Provision of Aid**

16. General Assistance during disaster situation is to be provided by the Defence Services with the approval and on orders of the central government. In case, it is of such an immediate nature that reference to central government is not practicable, local military authority may comply with a request at their discretion. This will be reported immediately to respective service headquarter (operations directorate) and normal channels taken recourse to, as early as possible.

17. **Requisition Procedure.** Any state unable to cope with a major disaster situation on its own and having deployed all its resources will request government of India for additional assistance. Ministry of Defence will direct respective service headquarters to take executive action on approved requests.

18. **Co-ordination.** The responsibility for co-ordination of disaster relief operations at various levels is as follows: -

(a) **Inter Services Co-ordination at Central Level.** Cabinet secretariat (Military Wing).

\textsuperscript{41} Mohan Pandey.’ Disaster Relief’, *Trishul* Vol III No 2 1992.
(b) **Service Headquarters.**

(i) Military Operations Directorate (MO 6) at Army Headquarters.

(ii) Director of Naval Operations at Naval Headquarters.

(iii) Directorate of Operations (Transport and Maritime) at Air Headquarters.

(c) **Command and Lower Formations.**

(d) **Local Level.** Nominated commander of troops and senior civil administrator in-charge of relief.

**Organisation in Indian Army for Disaster Relief**

19. All formation and units located in various places in the country have the instruction to be ready to move in case required for aid to civil authorities. All formation headquarters prepare detailed contingency plans to meet any eventuality, which may arise due to any natural or other disaster situation. All units located in areas which are prone to the recurring natural disasters like floods etc, have detailed relief plans worked out which are frequently rehearsed. The task of coordinating aid to civil authority is generally given to static headquarters like Area and Sub Area Headquarters who report to the theatre commands.

**Comparison of the Roles of Various Armies in Disaster Relief**

20. A comparison of the roles of US, Iranian and Indian Armies in Disaster Relief clearly indicates that while the specific roles of the other armies and the command and control set up is clearly delineated the same cannot be said of the Indian Army. There is a pressing need for a clear delineation of responsibilities and the command and control set-up in case we wish to derive maximum benefit out of its immense potential.

21. The Iranian Army has a clear-cut role and is made solely responsible for disaster relief. In the event of a disaster the resources of the civil government, Sher-e-Khoshed, Police, Navy and Air Force come under relevant district commanders. However, this would neither be feasible nor practicable in India.
22. In India the clause states that the state should deploy all its resources before requisitioning
the Army. This should be amended as such a step would cause further delay in rendering much
needed assistance during disasters.

23. The static headquarters, which is supposed to be responsible to co-ordinate the disaster
management may sometimes be located too far to be effective in the area where the disaster has
occurred. There could also be a delay or lack of communication of the co-ordination carried out
with the civil administration. This would seriously hamper the disaster relief, which would be
carried out by some unit. Thus, there is a pressing need for greater co-ordination. An appointment
such as the Defence Co-ordinating Officer (DCO) which the US Army has would solve this to a
large extent. The system of having a Joint Task Force whenever the Army is called for would also
enable the army to be more effective.
1. The Indian Army has rendered yeoman service during times of natural disasters. The researcher of this thesis has had the privilege of having been involved in a few such operations. The experiences have been mixed and it is aimed to highlight some of the shortcomings as well as plus points regarding employment of Army in management of natural disasters. These would be in the form of case studies. Prior to the case studies it would be of interest to see the involvement of the Indian Army in disaster relief.

Types of Assistance

2. The armed forces may be called upon to provide following types of assistance:

(a) **Infrastructure for Command and Control.** Infrastructure for setting up of command and control organisation for providing relief is an important task for armed forces. This would involve provision of communications both telephone, radio and specialist manpower.

(b) **Medical Aid.** Provision of medical care with the help of the medical teams including treatment at the nearest armed forces hospital is one of the major tasks performed by the Armed Forces.

(c) **Transportation of Relief Material.** Provision of logistic back up vehicles such as aircraft/helicopters/ships/boats for transportation of relief material to the affected areas is also one of the function, which armed forces may be required to undertake.

(d) **Establishment of Relief Camps.** Setting up and running of relief camps can be effectively carried out by the armed forces.
(e) **Construction and Repair of Roads and Bridges.** Army engineers can undertake construction and repair of roads and bridges to enable relief teams/material to reach affected areas. This will also include provisioning of technical and plant equipment such as cranes, bulldozers, boats etc.

(f) **Maintenance of Essential Services.** Repair, maintenance and running of essential services may have to be undertaken in the initial stages of disaster relief.

(g) **Evacuation of People to Safer Areas.** Assisting in evacuation of people to safe places before and after the disaster is one of the most important tasks that the armed forces may be assigned to do.

(h) **Stage management of International Relief.** Stage management of handling of international relief can be undertaken by the services in case requested to do so by the civil administration.

**Inferences Emerging from Help Rendered**

13. The salient inferences that emerge from the help rendered by the Armed Forces are as follows:-

(a) The **civil population places immense faith** in the abilities of the army. Indian Army is reassuring and generating self-confidence in them. As a result, reassured and confident populace is in a better position to help themselves.

(b) The **urge to requisition the Army** at the slightest hint of a disaster needs to be curbed.

(c) **Professional tasks** involving the army are **executed promptly**.

(d) At times the **equipment available** with the army **may not be suitable** for the execution of a task.
(e) The speed of reaction of the army and its ability to operate under adverse situations needs to be exploited.

(f) At times, the state authorities requisition the army even when it is not really required only to serve their own interests. This could have an adverse impact on the morale of the army and could affect its performance adversely in such situations subsequently.
CHAPTER 3.2

PREPAREDNESS OF INDIAN ARMY FOR DISASTER MANAGEMENT AND MEASURES TO ENHANCE ITS EFFECTIVENESS

1. The primary role of the army is to defend the sovereignty and integrity of our country. Its organization, training and equipment are tailored to meet this. It would not be practicable to change the basic structure in order to handle an additional task such as disaster management. Disaster Management as we know is a highly specialized subject. As we have earlier seen in the case studies, there are instances when the equipment available with the army is not really suitable for disaster relief.

2. However at the same time one should also view the overall picture as to whether our country can really afford a separate agency to look after disaster management. It would be more practicable to utilize the Army wherever possible to aid in disaster relief keeping in mind its strengths, which are as follows :-

   (a) Well **organised and equipped** for primary role.

   (b) Highly **motivated and disciplined**.

   (c) **Quick response time** to any given task.

   (d) Valuable resources and **ethos**.

   (e) Army always ready for national cause.

   (f) **Apolitical** character and **impartial** by nature.

   (g) **Compassionate** approach.

   (h) Ability to **operate under adverse conditions**.

   (j) **Will to serve**.
3. In case the army is to be employed for disaster relief and the need is accepted that the Army should be utilized, then the next question that emerges is whether the army is organised, trained and equipped for disaster relief. It would be pertinent to quote Mr. B Someshwar Rao in his address at the seminar on disaster management organised by the Army training Command.

“The agency chosen to organise this seminar, the Army Training Command, is the most appropriate one; it fits in exactly with the one known and time-tested disaster management policy the country has: HAND IT OVER TO THE ARMY. Armymen do a commendable job of rescue during floods and other calamities, but I wonder if even they are specially trained for each category of disaster.”

Organisation

4. Keeping in view its primary role and the arguments submitted earlier, it would be impracticable to change the organisation of the army as such. However, Disaster Management Plans should incorporate the army at all levels so that the army knows what is expected from it and should be prepared to do its tasks efficiently.

Training

5. There is no formalised or informal training in disaster management or relief. Whatever training is only on the job (combat training). It would be beneficial to train selected officers in aspects of disaster management. Although the Faculty of Nuclear Biological and Chemical Protection in the College of Military Engineering conducts a course, it is only a beginning and mainly deals with NBC disasters. Probably, its scope could be enhanced or alternately officers could be sent for courses to various institutes, which run these. Interaction and participation in seminars would also enhance awareness of the subject. The seminar conducted by the Army Training Command is a step in the right direction and should be followed up in right earnest.

Equipment

6. It may neither economically viable nor feasible to equip units across the board with equipment for handling disaster situations. However, certain disaster prone areas such as Assam (floods), Uttarkashi (Earthquakes), Andhra Pradesh, Orissa (Cyclones) could be identified. The static formations and units at these areas could be given some specialised equipment keeping in
mind the nature of disaster from funds specially allocated for this purpose. These could be utilised by the local units as and when required.

“Natural Disasters will continue to cost an increasing amount of time and money unless we are prepared to invest in prevention.”

**Principles of Employment of Armed forces**

7. The operations of the armed forces whenever called upon to assist the civil authority in rendering relief are governed by certain guiding principles. These are enumerated below:-

(a) **Judicious Employment of Armed Forces.** The assistance by armed forces should be requisitioned only when it becomes absolutely necessary and when the situation can not be handled by civil administration from within its resources.

(b) **Immediate Response.** When natural and other calamities occur, the speed for rendering aid is of paramount importance. It is clear that under such circumstances prior sanction for assistance may not always be possible. In such cases, the army when approached for assistance should provide the same without delay. No separate government sanction for aid rendered in connection with assistance during natural disaster and other calamities is necessary.

(c) **Command of Troops.** The army units while operating under these circumstances continue to be under command of their own commanders and aid rendered is based on task basis. Civil administration is to coordinate and not to command.

(d) **No Menial Tasks.** While assigning task to the troops it must be remembered that army is not utilised for menial tasks. Also, the army should not be utilised for disposal of dead bodies as it is a socio-religious issue and army may get a bad name in recognizing the religious aspect of dead bodies.

(e) **Requisition Of Aid On Task Basis.** The requisition of army should not be in terms of number of columns, engineer and medical teams, instead the civil administration should spell out task and leave it to army authorities to decide the force level, equipment and methodology to tackle the situation.
(f) **Regular Liaison and Co-ordination.** In order to ensure that optimum benefit is derived out of armed forces employment, regular liaison and co-ordination needs to be done at all levels and contingency plans made and disseminated to the lowest level of civil administration and the army.

(g) **Advance Planning and Training.** The army formation located in areas prone to disaster must have detailed plans worked out to cater for all possible contingencies. The troops should be well briefed and kept ready to meet any such contingency.

(h) **Integration of all Available Resources.** All available resources, equipment, accommodation and medical resources with civil administration, civil firms, NGOs etc need to taken into account while evolving a disaster relief plan. All the resources should be integrated to achieve optimum results. Assistance from outside agencies can be super imposed on the available resources.

(i) **Early De-requisitioning.** Soon after the situation in disaster affected area has been brought under control of the civil administration. Armed forces should be de-requisitioned.

**Stages of Disaster Relief**

8. Disaster Management could be broken up into the following four sequential though not necessarily exclusive stages:

(a) **Preparatory Stage.** This corresponds to the pre-disaster period and includes disaster prediction, warning and alert systems, preventive measures and issue of contingency plans and checklists for potential disasters. During this stage appropriate organisational infrastructure provisioning could be set up, standard operating procedure formulated, communication equipment provisioned and rehearsals conducted.

(b) **Emergency Stage.** This stage commences from the warning of disaster to the period immediately after the disaster strikes and aims at providing immediate succour to the affected people and bringing a semblance of order in the disaster affected area.
(c) **Rehabilitation Stage.** This period covers short term measures to restore essential services, communication and normal community life.

(d) **Reconstruction Stage.** This is a long-term measure aimed at providing adequate relief to the affected people.\(^{42}\)

**Actions by Armed Forces in Various Stages of Disaster**

9. **Preparatory Stage.** During this stage the following activities should be conducted: -

(a) Establishment of liaison with state and local level authorities.

(b) Identification of possible areas of employment.

(c) Understanding the overall disaster relief plan and formulation of own contingency plan.

(d) Tasking and preparation for execution of contingency plans.

(e) Local level liaison and reconnaissance if required.

(f) Briefing of troops and rehearsals if required and if possible for those types of disasters, which are recurring in nature.

10. **Emergency Stage.** During this stage in case magnitude of the problem is high enough to warrant the requisitioning of the armed forces, the following activities are carried out by the troops: -

(a) On being warned for disaster relief operations the troops are warned and prepared for the task.

(b) Final tasking and co-ordination.

(c) Move to disaster area.

(d) Establishment of controlling HQ and conduct of relief.

(e) Division of area into various segments.

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\(^{42}\) Singh JJ. op.cit., p.5.
Evacuation of victims to safer places.

Assist in bringing a semblance of order in disaster affected area.

Provision of medical aid and other relief.

Use of armed forces helicopters.

11. **Rehabilitation Stage.** During this stage the armed forces may be utilised to assist the civil administration to restore essential services, communication etc. The armed forces need to be derequisitioned the moment semblance of normalcy is restored.

12. **Reconstruction Stage.** The armed forces have limited role to play during this stage, as they would have normally been derequisitioned by then. 43

**Measures to Enhance Efficiency**

13. All requisite measures are existent in almost all states, the problem if any is in their implementation. The State authorities should be made entirely accountable for disaster relief. Army representatives should be incorporated in all committees dealing with disaster relief. Heads of the Central Police organisations posted in the vicinity should also be incorporated into such committees.

14. Assistance by the Armed Forces should be requisitioned only when it becomes absolutely necessary and even then only for such special purposes as cannot be handled by the State Government. Assistance by the Armed Forces should be strictly in accordance with the Instructions on aid to Civil Authorities by the Armed Forces.

2. The Army on its part should take measures to improve its state of training and equipment holding in disaster prone areas. Members of the civil administration should be made conversant with the principles for employment of armed forces.

“The basic problem is the Government’s inability to shift its policy from post disaster response to pro-active pre disaster measures”

43 Ibid., p.6.
CHAPTER 3.3

DISASTER MANAGEMENT POLICIES / STRUCTURES OF SOME COUNTRIES

China

1. China is one of countries in the world that is stricken by serious natural disasters, so China's task of emergency rescue and disaster relief is rather heavy\textsuperscript{44}. China believes that the Chinese Army (called the People's Liberation Army or the PLA), as the defender and protector of the interests of the country and the people, is duty bound to participate in the emergency rescue and disaster relief.

2. The People's Republic of China was founded in 1949. The Country's first Constitution was constituted in 1954 and this demanded that the army should "protect the people and their peaceful work and participate in the construction of the country and go all out to serve the people". Although it was not mentioned directly that the army ought to participate in emergency rescue and disaster relief, the actual meaning had already been included. Legally, in 2000, China promulgated the National Defence Law, which clearly regulates that the Army should participate in emergency rescue and disaster relief. On 01July 2005, China issued the Regulations for PLA Participation in Emergency Rescue and Disaster Relief. This sets the all-round and systematic lawful status and support for Chinese army's participation in emergency rescue and disaster relief. This Regulation clearly defines the principles, tasks, command and support for the army's participation in emergency rescue and disaster relief.

3. \textbf{Relations with the Government.} As emergency and disaster rescue come under the government action, the Army is only an important force in this respect. The relationships with the government in participating in emergency rescue and disaster relief are manifested in four aspects:

(a) The use of Army should be proposed by the local government.
(b) The tasks of the Army are assigned by the local government.
(c) The local government is responsible for material supply.
(d) Technical support is assisted by the 'localities' (Districts).

4. **PLA's Contribution to Disaster Relief Operations in Recent Years.** Over the past five years, the PLA has fulfilled successively nine emergency humanitarian assistance operations to fourteen countries, including countries hit by Indian Ocean Tsunami such as Indonesia, Sri Lanka, Thailand, Maldives, Kenya and Somalia at the end of the 2004, the United States hit by hurricane in September 2005 and Pakistan by earthquake in October 2005. At short notice, more than 3800 tons of relief freight such as tents, blankets, medicine, medical appliances, food and generators were air-lifted to the disaster-stricken countries. Nearly 60 sorties (including 14 sorties by military aircraft) of airlift and tremendous amount of railways and highway transportation were engaged in the operations.

**USA**

5. U.S. Domestic Disaster Management is largely covered in the National Response Plan (NRP), formerly the Federal Response Plan. The NRP is sponsored by the Department of Homeland Security and has also been signed by the Secretaries of the Federal Departments, including Secretaries Rumsfeld and Rice. The NRP is over 400 pages long and builds on lessons from previous incident response plans. Under the plan, new approaches and mechanisms are forged to address present threats in a more comprehensive way. It also addresses the complete spectrum of incident management from preparedness to rehabilitation activities in conjunction with the National Incident Management System (NIMS) by formulation and executing a sound framework for coordination amongst the Federal, State, local, tribal, non-governmental and private sector organisations.

6. As part of the federal response, the Secretary of Defence may direct the military to provide assistance to the civil authorities. Within U.S. Pacific Command a Joint Task Force-

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Homeland Defence has been designated to coordinate military disaster relief operations. Any military assets designated for use in assisting the civil authorities must be cleared by the Pentagon, which allows the Secretary of Defence to maintain operational situational awareness.

7. **Foreign Disaster Relief.** For foreign disaster relief, U.S. Pacific Command is involved when directed by the President or Secretary of Defence. On their direction, the Commander U.S. Pacific Command conducts Foreign Humanitarian Assistance or Disaster Relief operations in order to alleviate human suffering. Disaster Relief Operations are concluded in five phases. They assess, prepare and then deploy to carry out mission operations with emergency relief being the priority - not rehabilitation or reconstruction. Finally, the military transitions support efforts to other responsible authorities, and then redeploy from the area of operations.

**Singapore**

8. The Singapore Armed Forces SAF's stand-by forces are organised, trained and equipped to respond to a wide range of situations, including contingencies and threats to Singapore's security\(^{46}\). Some of the forces are also primed to respond to search and rescue operations and Humanitarian Assistance and Disaster Relief Operations (HADR) missions. Past examples include the 1986 Hotel New World collapse in Singapore and the 1997 Silk air MI 185 air crash in Palembang, Indonesia. To date, the SAF has mounted 28 emergency relief operations. Several of these were Joint operations with Singapore Civil Defence Force Disaster Assistance and Rescue Teams, or SCDF DART teams.

**Australia**

9. Responsibility for Emergency Management in Australia is very similar to the one that exists in the U.S. and India. It is shared in varying degrees across all levels of the Government structure. Under the Australian Constitution, the States and Territories in Australia are responsible for the protection of life and property within their own jurisdiction. To ensure this end, they have their own emergency response agencies such as Police, Fire and Ambulance etc.

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Within the States and Territories, there are a number of local councils or municipalities responsible for identifying, possibly mitigating hazard risks and preparing their communities for hazards that they are vulnerable to disaster. In Australia, these could range from cyclones and floods to bushfires. The Emergency Management Policy of the Australian government is a major factor influencing how decisions are made at the highest level. It is a six-point policy describing how the Australian Government can assist the States and Territories and overseas countries at times of disaster. Though constitutionally, the States and territories are responsible for the protection of life and property in their areas, the Australian Government can coordinate and assist when requested.

10. The lead Australian Government agency responsible for disaster response, at the National level, is Emergency Management Australia (EMA)\(^4^7\). It not only implements many aspects of the Australian Governments' Emergency Management Policy, but also provides national leadership in the development of measures to reduce risk to communities and manage the consequences of disasters.

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CHAPTER 3.4

TEAM BUILDING IN DISASTER MANAGEMENT

Introduction

1. Team building for disaster management is the crux of all our disaster management efforts. All efforts must be directed in building the functional and responsive teams that could work efficiently and effectively to mitigate the ill effects of the disaster in terms of human loss, property loss and recovery (retrieval).

2. The objective of any government should be to design and build teams of individuals, which are prepared to be battle-ready in the rescue and reconstruction process after any calamity or disaster. The persons should be highly responsive in the recovery operations and should have a positive outlook with a proper perspective to work shoulder to shoulder with the other team members.

3. It is relevant to quote the Hyderabad incidents whenever there was a heavy downpour whenever all the low-lying areas were inundated. For the people of Hyderabad who never witnessed such rainfall, it was a bolt from the blue. And for the people at the helm, they were simply caught unawares, having never faced a flood-like situation in their life/ in their career. Thus, a strong need was felt that properly trained teams could have definitely worked better during the crisis situation. Another incident in focus could be the floods in the various parts of Andhra Pradesh.

4. Of course, it is undeniable that the ill-effects cannot be controlled, especially if it is a natural calamity. In a post-calamity situation, the teams working at the affected places can definitely mitigate the impact of the calamity on communities and the people affected in rebuilding the societies from the debris. Hence, when we talk of team building for disaster management, we talk of trained and thorough people working across different domains. They should have impeccable preparation before, during and after the calamity.
5. Each and every member of the team should be thorough in terms of responsibility and role clarity during a disaster. Before committing the members to the team, the government should ensure the following sterling qualities, represented by ‘10Ps’, of persons manning the disaster management teams:

   a) Positive approach.

   b) Passion for service to society and nation.

   c) Perfection (in the respective field).

   d) Patience.

   e) Problem-solving.

   f) Powerful (Sufficient authority to be vested).

   g) Professional.

   h) Pragmatic.

   i) Proactive.

   j) People-friendly.

6. Once the people are selected, then the task of creating the teams that endeavor to respond, recover, reduce and reconstruct in the emergency situations are designed. The all-hazard-approach enlists the formation of teams for all the seasons and occasions to tackle the crisis or the calamity on all the fronts.

7. The following functional teams are suggested for efficient and effective disaster management:

   (a). **Communications Team.** This is the emergency public information team to keep contact with the government, people, NGOs and funding agencies. It should ensure proper dissemination of information related to the messages, warnings, DOs and DONTs, announcements avoiding rumours.

   (b) **Response Team.** This team has to take care of immediate short term needs like activating and deploying emergency resources, executing emergency management plans and activating the emergency operations centers.
(c) **Safety Team.** It should look after all aspects of safety to people, material, equipment and property, both public and private. This team will be functional in reporting to government about the timely requirement, procurement and distribution of the above mentioned things. It can also broadcast and telecast the safety procedures to be adopted by the people at the time of calamities.

(d) **Conflict Resolution Team.** It is necessary to have a team like this, to crack all the conflicts- interpersonal, inter-departmental, public and government. Most of the times, the performance of the teams are hampered by conflicting messages, instructions and information. This can be tackled very effectively by the experts manning this team.

(e) **External Relations Team.** This team should monitor and coordinate with the foreign-funding agencies, foreign media and any other agency from abroad. It has to coordinate between foreign countries and India.

(f) **Facilities Management Team.** It has to look after various aspects of providing facilities to the other teams working at the place of calamity and to the affected people-power, water, medicines, food, blankets, temporary shelters etc.

(g) **Funds Management Team.** This team should comprise of experts to manage the funds received from government, NGOs, businesses, external donors and cash donations from individuals. Insurance and Finance related matters can also be dealt with suitably.

(h) **Medical Team.** It should be comprising of doctors or specialists to address various problems of the people. It should also ensure that the epidemics in the post-calamity period are effectively controlled by necessary measures like first-aid, vaccination, disinfection etc.

(j) **Para Medical Team.** This team should ensure absolute supportive function to the medical team in terms of nursing, treating, counseling and other supportive services.
(k) **Emergency Program Coordinating Team.** This team should be headed by the local authority, especially the collector of the district, having the emergency plans, establishing and supporting volunteer programs, maintaining a list of volunteers, training to the volunteers and the people, conducting mock-exercises for the staff, volunteers and the people to ensure better preparedness.

(l) **Logistics Team.** It is to ensure a steady supply chain of all the resources to the affected communities, especially taking care of the donations received in kind from the people, NGOs, business firms and the governments. Relief materials and other supplies should reach the people on time.

(m) **Scientific and Research Team.** This team should comprise of experts from various fields for making available the latest in research and technology like keeping track of disasters occurring across the globe and the measures taken by the respective governments and people. The latest technology and equipment used in the recovery and reconstruction process should be brought to the notice of the government and common people.

8. It is therefore a **multi-team coordination** at the local, provincial and the national levels which call for immediate attention from everybody. Effective **team dynamics** should be at play in operations, logistics, information, finance and administration.

9. Good management of the above said teams calls for an effective supervision, leadership, networking and building relationships and above all, to influence and inspire people to work as team players and foster excellent team work.