Chapter -VI

Emergency Response Plan

CONTENTS

7.1 Introduction

The need for an effective disaster management strategy is to lessen disaster impact which can be achieved through strengthening the existing organizational and administrative structure at district and state level. The Emergency Response Plan is a first attempt to follow a multi-hazard approach to bring out all the disasters on a single platform and incorporates the *'culture of quick response'*. Under the plan, common elements responsible for quick response have been identified and a set of

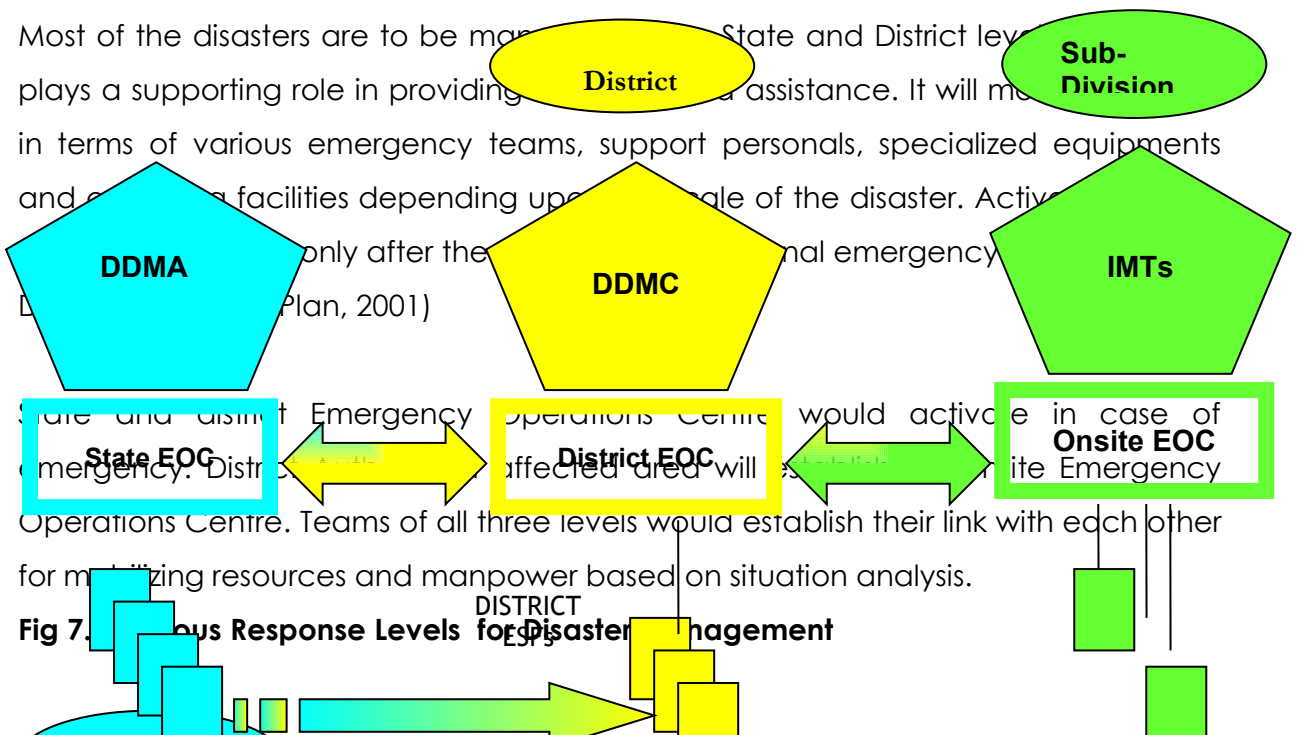
responsible activities has been articulated. It provides a framework to the primary and secondary agencies and departments, which can outline their own activities for disaster response. The plan will also include specific disaster action plans along with modal scenarios in detail to conduct practice drills at district administration level.

7.2 Methodology of Response Plan

- Identification of disasters in the district depending on:
    - Past records
    - Geological settings
    - Vulnerability associated in context to the disaster
    - Risk assessment according to the socio-economic conditions
- Identification of emergency response functions in consultation to the guidelines provided by state nodal agency
- Identification of responsible government and non-government agencies depending upon response functions
- Identification of responsible officers, manpower and resources
- Identification of primary and secondary agencies and demarcation of roles and responsibilities as per their functions
- Conducting regular trainings, meetings and mock drills

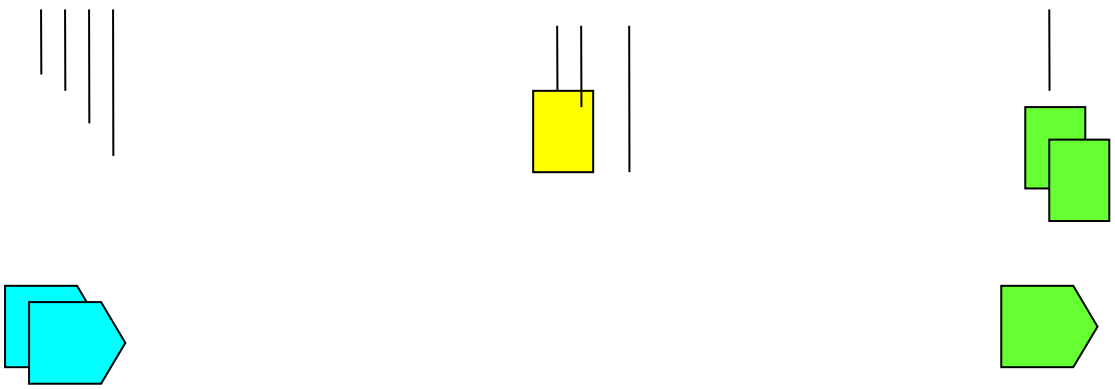
7.3 Response Levels

Most of the disasters are to be ma State and District lev plays a supporting role in providing assistance. It will m in terms of various emergency teams, support personals, specialized equipments and facilities depending up ale of the disaster. Activ only after the nal emergency D Plan, 2001)



State and district Emergency Operations Centre would activate in case of emergency. District affected area will ite Emergency Operations Centre. Teams of all three levels would establish their link with each other for mobilizing resources and manpower based on situation analysis.

Fig 7. ous Response Levels for Disaster nagement



7.3 Important Terminologies Used in the Plan

7.3.1 Response Plan

The Response plan establishes an organised setup to conduct ESF operations for any of the Natural and Manmade Disasters. It outlines an implementing framework of sharing resources as per the requirement within National and State level department will be engaged to support during an emergency situation. The Response Plan has structured the response of concerned departments i.e. primary and supporting departments to be organized and function together with grouping capabilities, skills, resources, and authorities across the State and district Government with the ESF plan. The plan unifies the efforts of State Departments and supporting agencies to be involved in emergency management for a comprehensive effort to reduce the effects of any emergency or disaster within the state.

7.3.2 Incident Command System (ICS)

The ICS was first established in 1970 after a wild fire outbreak of California. It is widely accepted by Americans and now many other parts of world too. It is assumed that ICS can also be adapted by the Indian system of disaster response. ICS is a modal tool to command, coordinate and use of resources at the site of the incident. It is base d on the management and direction tools those experts and managers are already aware too. It is a very flexible, cost effective and efficient management system.

7.3.3 Emergency Support Functions (ESFs)

Emergency Support Functions (ESFs) are the essentials of Emergency Management comprising of various coordinating agencies, which manage and coordinate specific kinds of assistance common to all disasters types. The plan establishes an organised set-up to conduct ESF operations for any of the Natural and Manmade Disasters. It outlines an implementing framework of sharing resources and co-coordinating, preparedness, Mitigation, response and recovery as per the requirement. The Plan has structured the activities of concerned agencies i.e. primary/nodal and support agencies into an organised manner according to their capabilities, skills, resources and authorities across the state and district government. It also attempts to unify efforts of state departments so that they are involved in emergency management comprehensively to reduce the effects of any emergency or disaster within the state.

7.3.4 Primary and Secondary Agencies

The designated primary agency would be assisted by one or more supporting agencies (secondary agencies) and will be responsible to manage activities of the Emergency Support Functions and ensuring the mission accomplished. The primary and secondary agencies have the authority to execute response operations to directly support the state needs.

7.3.5 Situation Reports

Situation reports provide an update o f relief operation at regular intervals. These reports are crucial for planning out response actions to be affected areas. The situation reports provide information about the disaster status, casualties, status of flow of relief materials, arrival/departure of teams etc.

7.3.6 Quick Response Teams (QRTs)

The QRTs st district level should leave for the affected site within 3 to 6 hours of the event after the declaration of emergency. They have be adequately briefed by their respective departments . Team should be self-sufficient in terms of resources, equipments, survival kits and response work.

7.3.7 Emergency Operation Centre (EOC)

EOC is a nodal point for the overall coordination and control of response work in case of any disaster situation. Incase of any disaster district level EOC have to be activated. The primary function of EOC is to facilitate smooth inflow and outflow of relief and other disaster related activities. These EOCs act as bridges between State and Centre government.

7.4 Operational –Coordination Structure

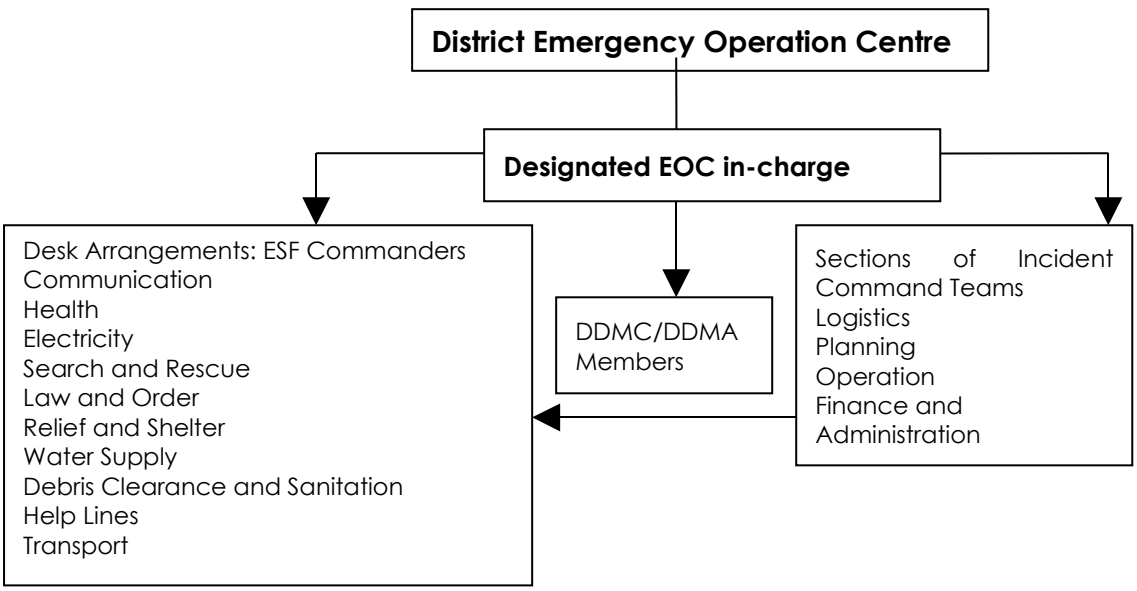
Each organization generally has a framework for direction of its operation and coordination between its different units. Disaster Management generally requires partnership between organizations and stakeholders. An effective and early response requires mobilization of manpower, equipments and materials belonging to different originations which may not be working together during normal times. Therefore a framework needs to be prescribed as a part of emergency planning for operational directions and coordination during response phase. This plan recognizes role of Divisional/ Deputy Commissioner in providing overall operational direction and coordination for all the response functions. With the help of District Disaster Management Committee and District Emergency Operation Centre Deputy Commissioner has formulated following coordination structure for response plan.

7.4.1 Trigger Mechanism

As soon as Emergency Operation centre would get the information about any event, the staff on duty in EOC will pass the information the concerned authority and seek for his instruction for further actions. If the information pertains to the occurrence of a disaster in any part of the district, the staff on duty will also try to inform District Disaster Management Committee members, Emergency Support

Functions-team leaders, Major hospitals and Delhi Disaster Management Authority etc. The staff on duty will also be responsible to reclaim information related to type, magnitude and location of the disaster and also inform it to responsible authorities. The EOC in-charge will also inform all the details to Divisional Commissioner and State EOC. All the desk officers/team leaders and Incident Command Team members will also be informed to immediately report at District EOC. Incident Command team and Desk officials would respond as per their standard operating procedures and directions of Incident Commander(IC)

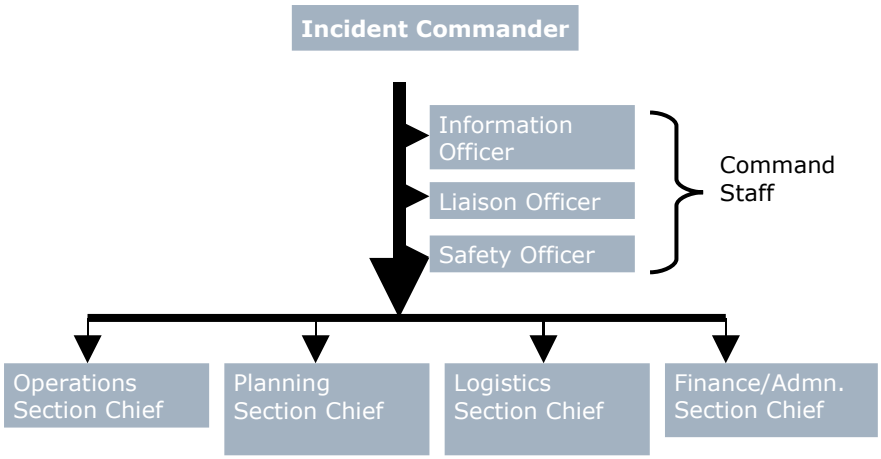
Fig 7.1 : Trigger Mechanism for District EOC



7.4.2 Activation of Incident Command System

Depending upon the location and degree of disaster, Incident Commander(IC) would be appointed. Most of the time, Deputy Commissioner of the affected site undertakes responsibility as Incident Commander and take up following immediate actions

a) Incident Commander will designate Incident Management Team(IMT) according to the rank requirement and assigned responsibilities under four sections of Logistics, Planning, Finance and Administration. Rank requirement are illustrated below in table 7.1.



b) Incident Commander will direct to the EOC in-charge to inform all the DDMC members about the incident and Incident Command Post.

c) Incident Commander will direct a senior officer of ADM rank to coordinate with the team leader of Emergency Support Functions (ESFs)

d) EOC/PCR will also pass the information to the heads of emergency support functions and Incident Management Team about the location of Incident Command Post.

e) Direct EOC in-charge to pass the information to the State apex body/Unified commander

Table 7.1: Rank for District level Incident Command Team

SNo	ICS Position	Suggested rank and position for District level ICS
1	Incident Commander	Deputy Commissioner / Deputy Commissioner of Police
2	Liaison Officer	ADM level
3	Information Officer	ADM level
4	Safety Officer	Deputy Chief Fire Officer-W
5	Operation Chief	Additional District Magistrate-West
6	Planning Section Chief	ADM Level
7	Logistic Section Chief	DC-MCD
8	Finance/ Adm. Section Chief	SDM-HQ
9	Situation Unit Leader	Tehsildar and SHO-Police Station
10	Resource Unit Leader	Tehsildar
11	Supply Unit Leader	AC Food and Civil Supplies

12	Communication Unit Leader	ACP-Communication (Police)
13	Food Unit Leader	AC-Food and Civil Supplies
14	Facilities Unit Leader	EE-PWD
15	Ground Support Unit Leader	DC- Transport
16	Medical Unit Leader	Addl. CDMO
17	Time Unit Leader	Tehsildar
18	Cost Unit Leader	Accounts Officer
19	Documentation Leader	Superintendent/ Tesildaar level officer
20	Technical Coordinator	Oil Safety Directorate/ Officer of Fire Department/Specialist form Vulnerable installations etc.

7.4.3 Responsibilities of Incident Management Team

(i) <u>Incident Commander:</u>

- Incident Commander (IC) shall rush to the Emergency Operations Centre (EOC) where technical experts and section chiefs shall join him. He shall remain in the contact of EOC to know the updated status of incident
- In consultation to technical experts Incident Command Post (ICP) shall be selected near incident site. Site selection shall be on the basis of the wind prevailing directions and probability of secondary hazards etc.
- Obtain updates of the incident situation from ICP and establish a link for continuous communication through dedicated telephone lines with speaker phones, set of walkie-talkies, computer link etc. with the help of coordinator
- Supervise the overall management of each function through respective members of DDMC and expediting response whenever required
- Identify the hazardous and threatened areas based on map and information received ICP
- Take a decisions on requirement and priorities of evacuation and organize the resources to execute the same
- Based on the inputs from the first responders, and experts available at ICP, identify the additional resources requirement and initiate mobilization with the help of section chiefs.

- Coordinate with the other district authorities and state authority
- After making required arrangement, Incident Commander shall visit incident site to supervise the situation
- He shall also take decisions in demobilizing the resources after the incident

(ii) Operations Chief:

Most preferred rank for the operation chief is Additional District Magistrate. Following are the duties designated for Operation Chief:

- Responsible for the management of all operations directly applicable to the primary mission. He will activate the Emergency Support Functions and coordinate with the teams leaders of ESFs.
- Activates and supervises organization elements in accordance with the Incident Action Plan (IAP) and directs its execution
- Determine need and request additional resources
- Review suggested list of resources to be rebased and initiate recommendation for release of resources
- Make expedient changes to IAP as necessary
- Report Information about special activities, events or occurrences to Incident Commander
- Maintain Unit / Activity details

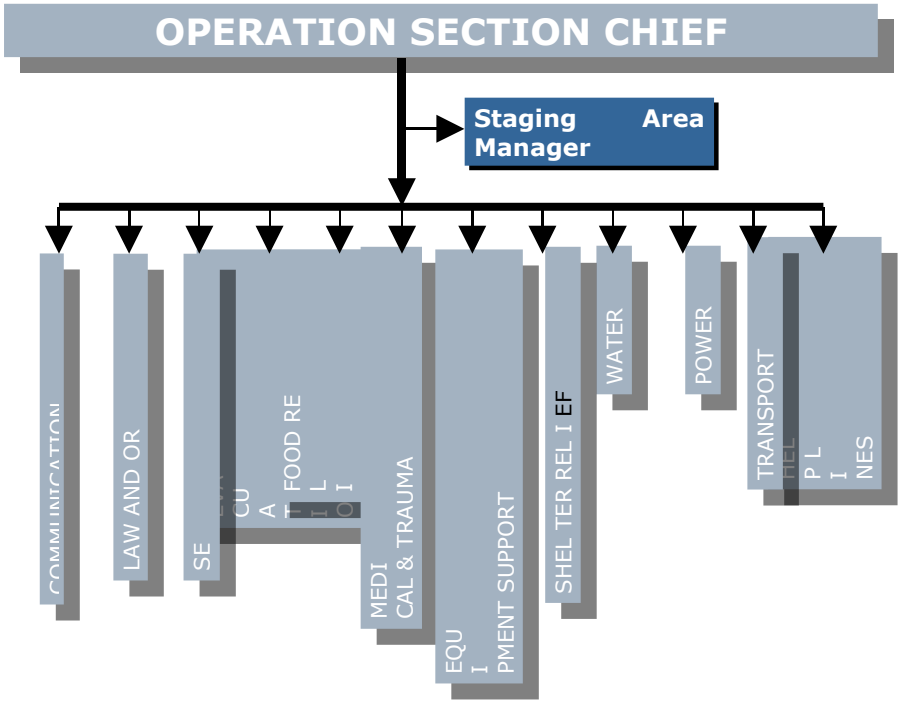
Operation Chief shall be assisted by the following positions to perform above mentioned duties:

(a) Staging Area Manager: responsible for maintaining all activities within a staging area.

(b) Branch Director: Area under the direction of Operation Section Chief and are responsible for the implementation of the appropriate portion of the Incident Action Plan.

(c) Division Supervisor: Implements IAP for the division and reviews division assignments and incident activities with subordinates and assign tasks

Fig 7.3 Operation Section Chief



(d) <u>Emergency Support Functions</u>

ESFs shall be activated under Operation Chief. On the receipt of information Team Leaders (TLs) would take up following actions

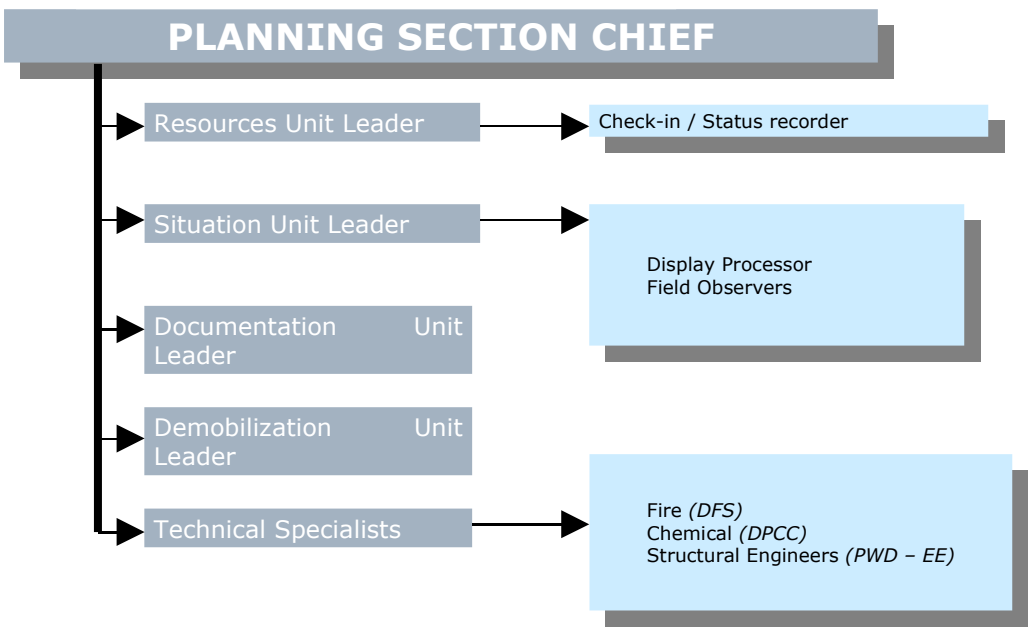
a. On the receipt of information Team Leaders (TLs) will activate their own Emergency Support Functions (ESFs)
b. Team Leaders will join IC and Operation Chief in EOC to ensure coordination and to provide assistance
c. Team Leaders would also move to the site for better operational control
d. Team Leaders will call the nodal officers of supporting agencies and immediately deploy the quick response teams (QRTs) from the location of nearest to the incident site
e. They further reinforce their teams by deploying additional resources from surrounding areas so the effective first respond can be rendered at site
f. A high alert would be notified to move additional resources and manpower to the incident site
g. According to the feedback report additional TLs will take decision of movement of more team and manpower. In some of cases TLs may need to mobilize resources from nearby districts or states. In such cases chiefs will organize this through respective head quarters

(iii)Planning Section Chief

Planning section chief shall be responsible for performing following duties:

- Collection, evaluation, dissemination and use of information about the development of incident and status of resources. Information is needed to
    - Understand the current situation
    - Prepare alternative strategies and control operations
- Supervise preparation of Incident Action Plan (IAP)
- Provide input to IC and Operation Chief in preparation of IAP
- Reassign out of service personnel already on site to other positions as appropriate
- Determine need for any specialized resources in support of the incident
- Establish information requirements and reporting schedules for Planning Section Unit (e.g. Resources, Situation Unit).
- Compile and display incident status information
- Oversee preparation and implementation of Incident Demobilization Plan.
- Incorporate Plans (e.g. Traffic, Medical, Site Safety, Communication) into IAP.
- Maintain Unit / Activity details.

Fig 7.4 Planning Section Chief



Following would be assisting planning section chief in his operation (see figure 7.4)

a. Resource Unit Leader

Responsible for maintaining the status of assigned resources (Primary and support) at an incident. This is achieved by overseeing the check-in of all resources, maintaining

a status keeping system indicating current location and status of all resources and maintenance of a master list of all resources e.g. by key supervisory personnel, primary land support resources etc.

- Establish check-in function lat incident locations.
- Prepare Organization Assignment List & Organization chart.
- Maintain & post the current status and location of all resources
- Maintain master list of all resources checked in at the incident.

(b)<u>Check-in/Status Recorder:</u>

Needed at each check-in location to ensure that all resources assigned to an incident are accounted for:

- Prepare check-in form, resource status boards and status display board.
- Establish communications with the communications Centre and Ground Support unit.
- Post signs so that arriving resources can easily find the check in locations
- Record check-in information on check-in lists
- Transmit check-in information to Resources Unit on regular pre-arranged schedule/ as per need.
- Receive, record and maintain status information for single resources, strike teams, task forces, overhead personnel
- Maintain file of check-in lists.

(c) Situation Unit Leader

- Begin collection and analysis of incident data as soon as possible.
- Prepare, post or disseminate resource and situation status information as required, including special requests.
- Prepare incident status summary
- Provide photographic services and maps if required.

(d) <u>Display Processor *(Draftsman-Computer trained):*</u> Responsible for display of incident status information obtained for field observers, resource status reports, aerial photographs etc.

- Determine:-
    1. Location of work assignment
    2. Numbers, types and locations of displays required
    3. Priorities
    4. Map requirements for incident
    5. Time limits for completion

6. Field observer assignments & communication means

- Obtain necessary equipment and supplies
- Obtain copy of LIAP for each period
- Assist SITL in analyzing and evaluating field report
- Develop required displays in accordance with time limits for completion.

(e) <u>Field Observers</u>

Responsible to collect situation information from personal observations at the incident & give it to situation team leader.

- Determine:-
    - Location of assignment
    - Type of information required
    - Priorities
    - Time limit for completion
    - Method of communication
    - Method of transportation
- Obtain copy of IAP for the operation period
- Obtain necessary equipment & supplies for his use.
- Collect data like
    - Perimeter of location of hot spots etc.
    - Be prepared to identify all facilities location (e.g. division boundaries)
    - Report information to SITL

(f) Demobilization Leader

- Responsible for developing incident DMOB Plan
- Review incident resource records to determine the likely size and extent of DMOB effort ⇨ addl. Personnel, work space and supplies needed
- Coordination DMOB with agency representatives
- Monitor on going operation section resource needs
- Identify surplus resources and probable release time
- Develop incident check out for all units

(g) Documentation Leader: Dy. Chief Inspector of factories and Tehsildar

- Arranging for complete documentation of proceedings at the incident site
- Maintaining record of what happened and what actions were taken
    i. Recovering response costs and damages

ii. Setting the record straight where there are charges of negligence or mismanagement resulting form the incident
iii. Reviewing the efficiency and effectiveness of response actions
iv. Preparing for future incident response
v. Videotaping of the entire combat the rescue operations

(g). Technical Coordinators

Two to Four experts in geo-sciences, fire safety, industrial safety and health shall be nominated as technical experts. Major issues shall be addressed by them are:

a. Formulation of response objectives and strategy

TC shall assess the incident before taking actions and formulate realistic response objectives. The assessment shall be based upon following points:

- Pre-incident plans
- Information related to material involved, container involved, vehicle and structure involved and atmospheric conditions affecting the incident
- Environmental monitoring and sampling data (if available)
- Public protective actions to be initiated
- Resource requirements (trained manpower, specialized protective gear and other equipments)
- Hazards posed to the nearby areas

On the bases of above-mentioned points they will formulate a defensive strategy to protect the public and environment from the immediate spill or discharge area.

b. Identification of Hazard Zone

Technical experts shall be able to determine hazard zone oin the basis of the nature and frequency of the disaster.

c. Establishment of Hazard Control Zones at Incident Site

Technical expert should determine the safe and unsafe zones varying according to the severity of hazard.

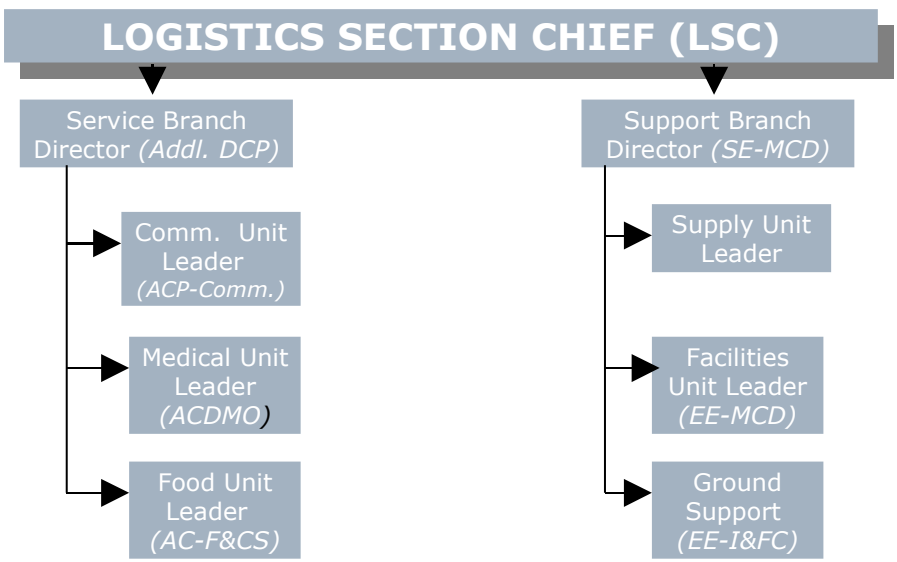
d. Action plan, list of equipments, protective cloths and other requirements and instructions should be designed on the basis of nature of disaster. Special concern sought for fire and chemical disasters.

(iv) <u>Logistic Section Chief</u>

Logistic section chief shall be an officer of rank of Deputy Commissioner. He shall be responsible for providing facilities, services and materials at incident site. He will participate in preparation and implementation of Incident Action Plan (IAP) and activates & supervise Logistic section(see fig. 7.5).

- Assign work locations & tasks to section personnel
- Participate in preparation of IAP
- Identify service and support requirements for planned and expected operations
- Coordinate and process requests for additional resources
- Provide input to / review communication plan, Traffic plan, medical plan etc
- Prepare service and support elements of IAP
- Recommend release of unit resources as per DMOD plan
- Maintain Unit/ Activity details

Fig 7.5 Logistic Section Chief



Following are the team members who will assist him in the process under service and support branch*(refer fig 7.4).*

(a) Communication Unit Leader:

- Prepare & implement incident wireless communication plan
- Ensure that incident communication centre & Message centre are established
- Establish appropriate communication distribution/ maintenance locations within base/ camps
- Ensure communication systems are installed and tested

- Ensure equipment accountability system is established
- Ensure personal portable wireless sets from cache is distributed as for incident wireless communication plan
- Provide technical information required on
    - Adequacy of communication system currently in operation
    - Geographic limitation on communication system
    - Equipment capabilities / limitations
    - Number and types of equipments available
    - Anticipated problems in the use of communication equipments
    - Ensure equipments are tested and repaired
    - Recover equipments from released units.
- Responsible to receive and transmit wireless and telephone messages among to between personnel to provide dispatch services at the incident
- Set up message centre location as required
- Receive and transmit messages within and external to incident
- Maintain files of general messages
- Maintain a record of unusual incident occurrences.

(b) Medical Unit Leader:

Responsible for

- Development of medical response plan
- Respond to requests for medical side and transportation for injured & ill incident personnel medical supplies.

(c) Food Unit Leader:

Responsible for supply needs for the entire incident including camps, staging areas.

- Determine food & water requirements
- Determine method of feeding to best fit each facility or situation
- Obtain necessary equipment & supplies and establish working facilities
- Order sufficient food & potable water from the supply unit
- Maintain an inventory of food, water
- Maintain food service areas & ensure that all appropriate health & safety measures are being followed.
- Supervise caterers, cooks and other food unit personnel.

(d) Supply Unit Leader:

Primarily responsible for ordering personnel, equipment & supplies receiving and storing and storing all supplies for the incident maintaining an inventory of supplies servicing non-expendable supplies to equipment.

- Determine the type & amount of supplies en route
- Order, receive, distribute and store supplies & equipment
- Receive and respond to requests for personnel, supplies and equipment
- Maintain inventory of supplies & equipment.
- Service reusable equipment

(e) Ordering Manager:

- Obtain necessary order forms
- Establish ordering procedure
- Establish name and telephone number of personnel receiving orders
- Get names of incident personnel who leave ordering authority
- Check on what has been already ordered
- Orders when possible
- Place orders in a timely manner
- Keep time and location for delivery of supplies
- Keep receiving and distribution manager informed of orders placed

(f) Receiving & Distribution Manager:

- Organize physical layout of supply area
- Establish procedures for operating supply area
- Set up a system for receiving and distribution of supplies and equipment
- Develop security requirement of supply area

(g) Facilities unit leader:

- Primarily responsible for the layout and activation of incident facilities e.g. base, camps, ICP.
- Provides rest and sanitation facilities for incident personnel
- Manage base and camp operations (to provide security and general maintenance)

(h) Ground support unit leader:

- Support out of service resources.
- Transportation of personnel, supplies, food & equipment.
- Fueling, service, maintenance and repair of vehicles and other ground support equipment.
- Implementing traffic plan for the incident

(v) Finance and Administration Section Chief

A SDM rank offices can be deputed on this responsibility. Finance and Administration chief will take decisions related to financial and cost related matters under given time frame.(see fig. 7.5)

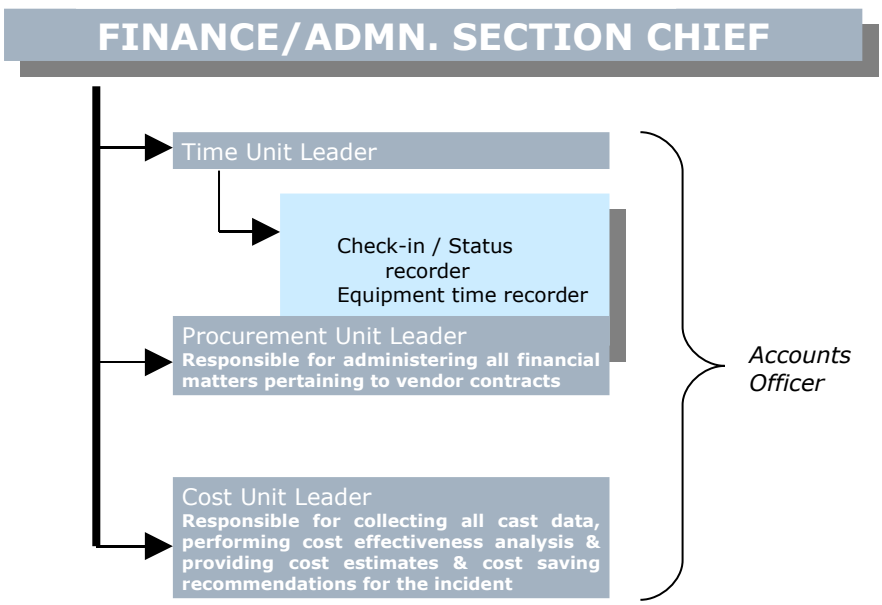
Following positions would be helping him in conducting his duties :

(a) Time Unit Leader: Responsible for status recording and equipments time taken recording

(b) Procurement Leader: Responsible for administering all financial matters pertaining to vendor contracts

(c) Cost Unit Leader: Responsible for collecting all cast data, performing cost effectiveness analysis & providing cost estimates & cost saving recommendations for the incident

Fig 7.6 Operation Section Chief



7.4.4 Desk Arrangements

EOC will expand to include desk arrangements with responsibilities for specific tasks. The desk arrangement may continue to operate from EOC till the time long term plan for rehabilitation being finalized. The desk arrangements provide for divisions of tasks, information gathering and record keeping and accountability of the desk officer to the district commissioner. The Team leaders of Emergency Support Functions shall deputed as Desk Officer and perform duties under the direction of Operation Section Chief.

7.5 Emergency Support Function (ESF) Plan

Need of ESF Plan

A disaster causes immense loss to human lives in a massive scale. If a formalised and timely response would not take place death toll can increase immensely. Therefore each district and state formulates a Emergency Response Plan consisting several Emergency Support Funtions(ESFs) related to Communication, Search and Rescue, evacuation, law and order, medical response and Trauma Counselling, water supply, electricity, warning and transport etc. All of these emergency functions consist of emergency plans that would be activated at the time of emergency.

The ESF Plan document outlines the objective, scope, organisation setup and Standard Operating Procedures (SOPs) for each ESF that is to be followed by the respective ESF agencies when the Incident commander will activate the response plan. Standard Operation Procedures (SOPs) provides a basic concept of the operations and responsibilities of Disaster Management Team, Nodal and Secondary agencies.

ESF Organisational Setup and Inter-relationships

The plan establishes an organised setup to conduct ESF operations for any of the Natural and Manmade Disasters. It outlines an implementing framework of sharing resources and co-ordinating, preparedness, Mitigation, response and recovery as per the requirement. National and State level department will be engaged to support during an emergency situation. The Plan has structured the activities of concerned agencies i.e. Nodal and support agencies into an organised manner grouping their capabilities, skills, resources, and authorities across the State and district Government. The plan unifies the efforts of State Departments and support agencies so that they are involved in emergency management comprehensively to reduce the effects of any emergency or disaster within the state.

The Revenue Department (The department is to be renamed soon as the Department of Revenue and Disaster Management, as directed by the Ministry of Home Affairs) is the Primary Agency co-ordinating all Disaster Risk Management Efforts. However there will be Other Agencies Involved in-charge of Different ESFs.

Each ESF shall have an ESF Nodal agency, and a number of support agencies. The ESF *Nodal agency* shall be directly linked to the Incident Commander/Divisional Commissioner and the State EOC, and will be the main co-ordinator incharge of the ESF. The support agencies to the ESF shall support the *Nodal agency* in establishing and managing the emergency shelter and rehabilitation.

At the district level, the Nodal Agency will lead the ESF with direct link to the Incident Commander of the District, the Deputy Commissioner Revenue and the district EOC. The Nodal Agency will also be a member of the Incident Management Team lead by an officer of the Revenue/Police or other department as decided upon by the district IC, and as required by the Incident Manager who may draw upon some or all of the ESFs for onsite response. The Nodal Agency must hence nominate a Team Leader (TL) at the State level and district level, and a member for the IMT(s) in advance, with appropriate (at least two) backstopping arrangements. The Nodal and Support Agencies must together or separately (as decided according to need of the specialised function) constitute QRTs with members, and appropriate (at least two) backstopping arrangements.

Team Leader (TL) of EOC would be on the basis of its authorities, resources, and capabilities in the functional area. He would be the member of Disaster Management Team that represents all of the key functions of the state in a single location under the direction of the Relief Commissioner /Divisional Commissioner (Incident Commander).

All persons nominated, and all teams must go through a sensitisation, training and must be acquainted with the Standard Operating Procedures of the ESF Plan. They must practise and update their plan and SOP regularly (at least twice a year)

Each of the Nodal and Support agencies would also comprise of quick response team trained to carry out their functions at the response site.

The success of ESF will be of critical importance and would reflect in the lives saved in the golden hour. Below a list of ESFs has been given which will be activated at state/district level during emergency situation.

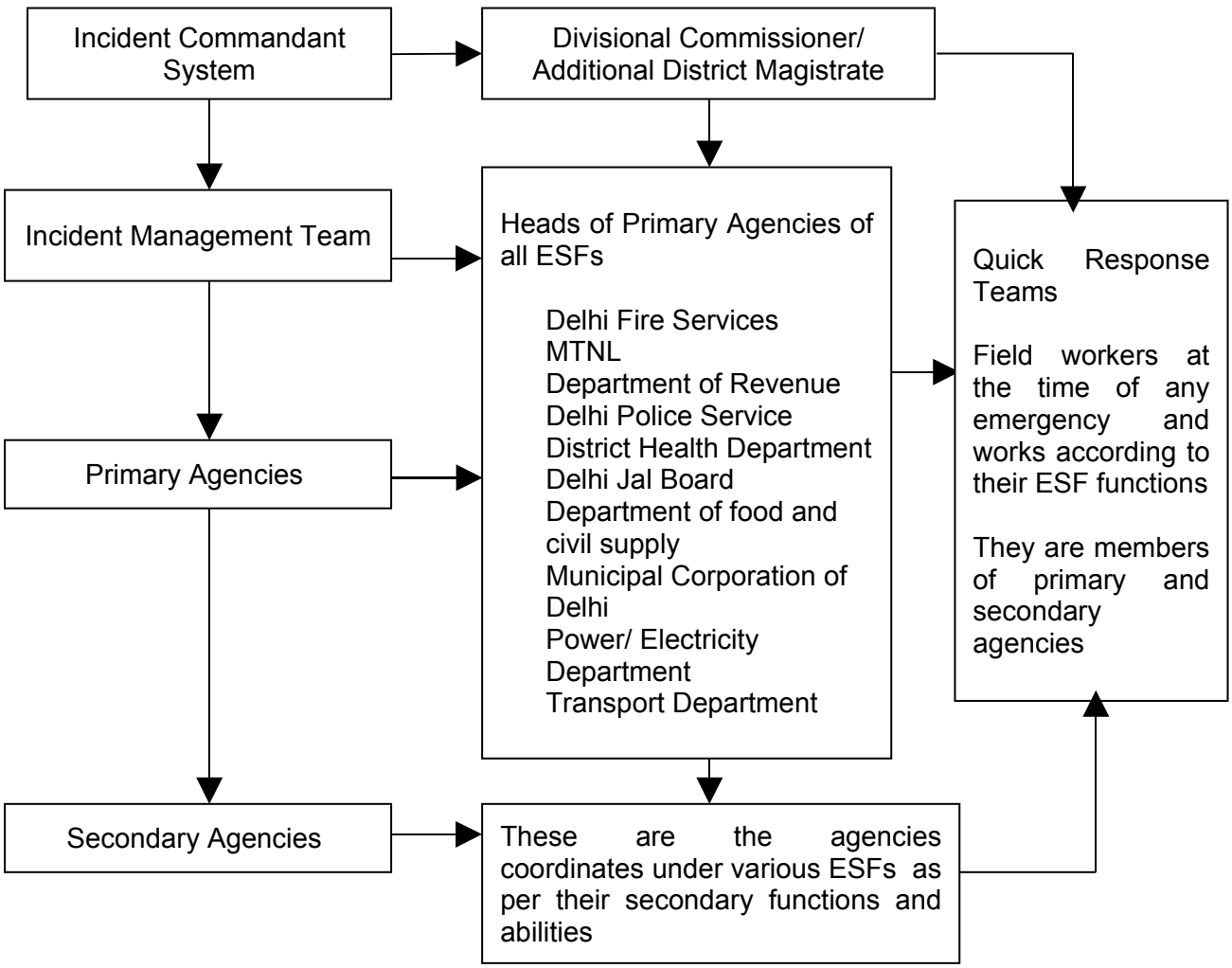
Table: Structure and the Nodal and Support Agencies

ESF #	Function	Nodal Agency	Support Agency

ESF 1	Communication	MTNL (Mahanagar Telephone Nigam Ltd)	NIC, Police, Revenue Wireless, Private Telecoms/ Mobile Representatives.
ESF 2	Law & Order	Police	Homegaurd and Civil Defence, Army, CPMF/
ESF 3	Search & Rescue	Fire Services	Police, Civil Defence, NCC, Army, CPMF/ Home representative, Health Representatives
ESF 4	Evacuation	Police Deartment	Police, Fire Services, Civil Defence, NCC, Army
ESF 5	Food (Relief)	Food & Civil Supplies	Revenue, IRCS/ NGO Representative
ESF 6	Medical Response/ Trauma	Health	CATS, Civil Defence, NSS, DHS, IRCS Rep
ESF 7	Equipment Support, Road & Clearance	MCD	PWD, DJB, DDA, MES, NDMC, DMRC
ESF 8	Shelter (Relief)	Revenue department	PWD, MCD, DDA, Delhi Cantt, HUDCO/BMTPC(Preparedness), NDMC, Revenue, NGO Rep
ESF 9	Drinking Water	Delhi Jal Board	MCD, NDMC, CGWC, CWC, Irrigation and Flood Control, Delhi Cantt.
ESF 10	Electricity	Delhi Transco Ltd	BSES, NDPL, DERC
ESF 11	Transport	Transport Department	DMRC, DTC, Northern Railway, Civil Aviation, PWD, MCD, Delhi Cantt.
ESF 12	Help Lines, Information Dissemination	Revenue	NIC, NGO Rep

All ESFs have to assist the Incident Commander i.e. Deputy Commissioner at State level as per their assigned duties described in the SOP's and to be followed during emergency within the District/State. A detailed organisational setup of all ESFs and team leaders has been given below.

Organisation Setup of the ESF at State Level



Background

The Emergency Support Function (ESF) 'Communication' supports the Response Plan in case of Major Communication links damage in various parts of the city during a Disaster and there is a requirement for immediate restoration or replacement of the network. The Objective of the ESF is to provide failsafe and reliable communications support during and after a disaster; to restore communication facilities in the aftermath of a disaster and provide vital communication linkages between Emergency Operation Centres, and important response agencies. This ESF encompasses setting up of temporary communication centres in and around the area of impact and activation of Mobile units in case of widespread damage in a disaster like an earthquake.

Nodal agency

Mahanagar Telephone Nigam Limited

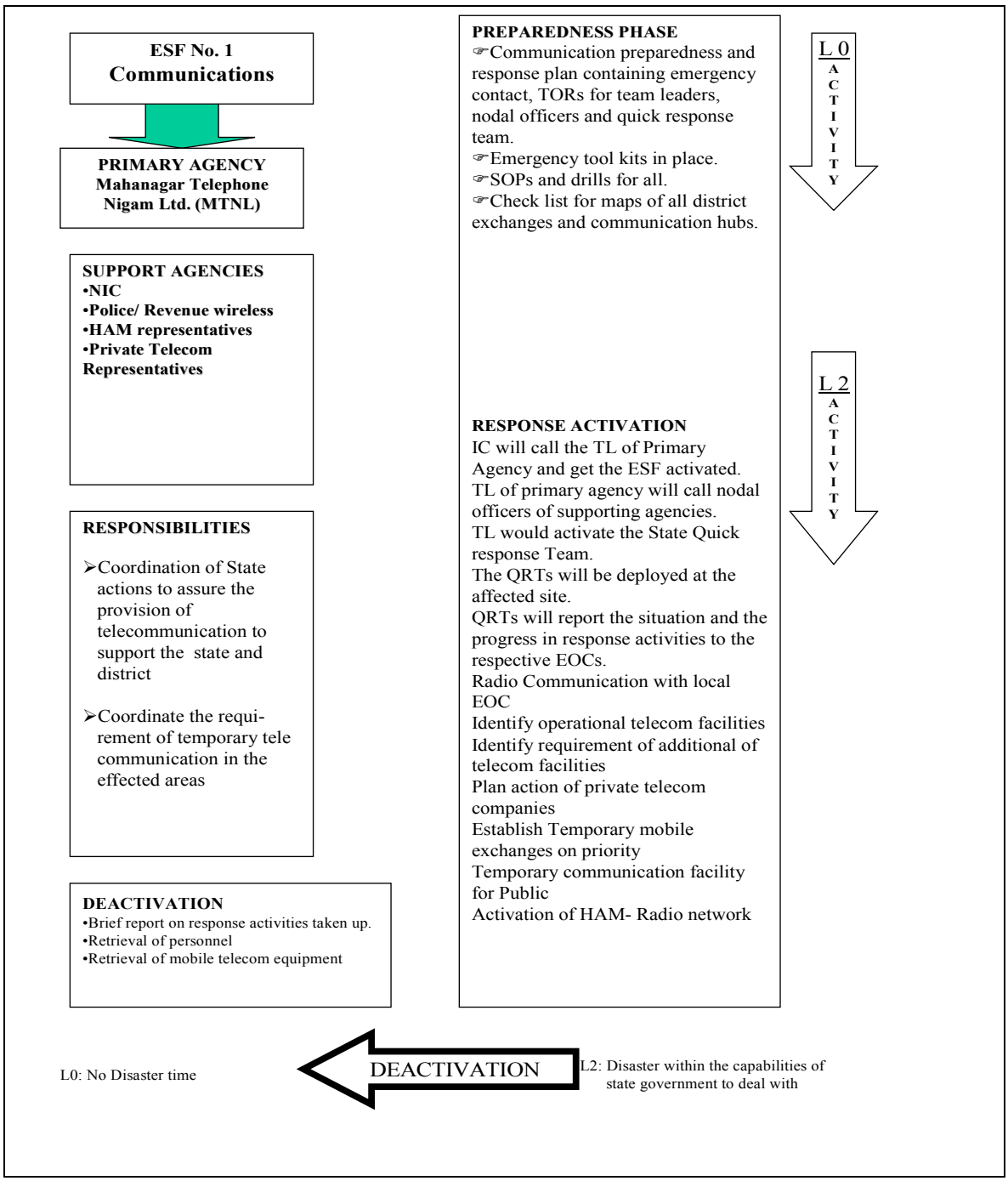
Support Agencies

- NIC
- Police/ Revenue wireless
- HAM representatives
- **Private Telecom Representatives**

Situation Assumptions

1. *There would be a congestion in the network because of increased calls to control rooms due to panic created in the community.*
2. *The initial reports on damage may not give a clear picture of the extent of damage to communication network.*
3. *The affected site may cut off from the state control rooms and the officials on site and find difficulty in communicating to the District/State EOC.*

Response Framework



Standard Operating procedures for the Nodal Agency

a. Identify the actual and planned actions of commercial telecommunication companies to restore services.

b. Determine what assets are available and nearest to the affected area(s) by each emergency support functions support agency and the time frame in deploying those assets.

c. Coordinate the acquisition and deployment of communications, equipment, personnel and resources to establish temporary communication capacities within the affected area.
d. Accumulate damage information obtained from assessment teams, the media industry, the local Deputy Commissioners Office EOC, and other city/country/state agencies and report that information through Emergency Support Function.
e. Prioritize the deployment of services based on available resources and critical needs.
f. Coordinate communications support to all governmental, non-governmental & volunteer agencies as required.
g. IC will call the TL of Primary Agency and get the ESF activated.
h. TL of primary agency will call nodal officers of supporting agencies.
i. TL would activate the State Quick response Team.
j. The QRTs will be deployed at the affected site.
k. QRTs will report the situation and the progress in response activities to the respective EOCs.
l. Sending flash news of latest updates/donation requirements for disaster area all over the state
m. Assisting the EOC in providing updated information to national as well as at the state level.
n. Setting up of toll free numbers for emergency information assistance.

SOPs for Quick Response Team on Help Lines, Warning Dissemination

- The QRT members will reach to the nodal office as soon as they will get instructions.
- QRT teams would reach to the site immediately after receiving instructions from the nodal officer
- On the site QRT members will take stock of the situation from the IC at the site and their counter parts.
- The QRTs will coordinate, collect, process, report and display essential elements of information and facilitate support for planning efforts in response operations.

ESF #2 - LAW AND ORDER

Background

The purpose of Emergency Support Function on Law and Order is to establish procedures for the command, control, and coordination of all law enforcement personnel and equipment. The Law and Order function encompasses a broad range of routine policing activities. The response function has as its primary goal the maintenance of law and order activities, and, if necessary the restoration of law and order should there be a breakdown within the normally law-abiding community.

State Nodal Agency

Delhi Police

Suggested Support Agencies

Civil Defence and Home guards, central paramilitary forces etc

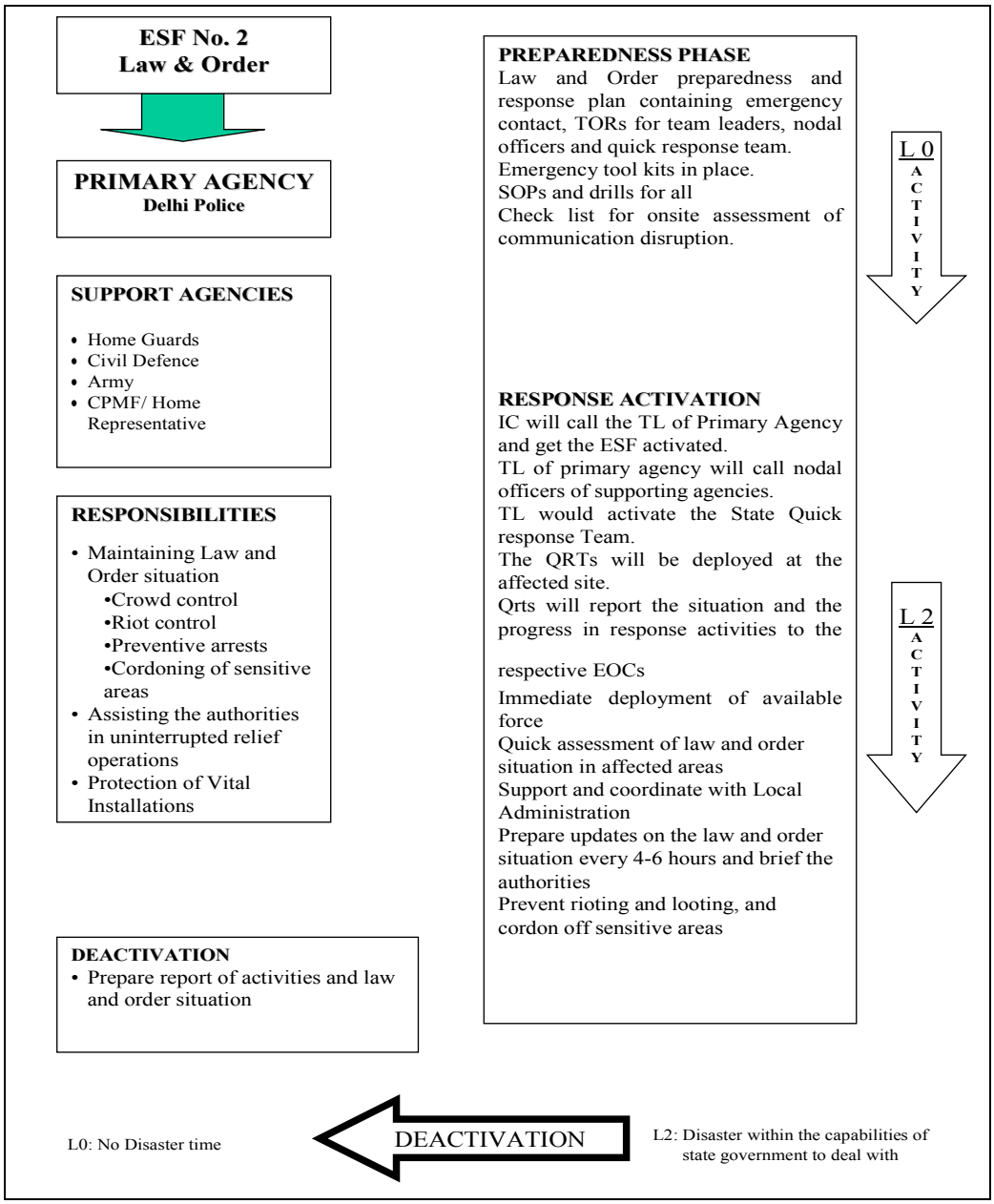
Situation Assumptions

- There would be panic and people will gather at a place.
- The crowds may go out of control.
- Riots may also take place.

SOPs for Nodal Agency

- IC will call the TL of Primary Agency and get the ESF activated.
- TL of primary agency will call nodal officers of supporting agencies.
- TL would activate the State Quick Response Team.
- The QRTs will be deployed at the affected site.
- Cordoning of area to restrict movement of onlookers, vehicular and pedestrian traffic should be done.
- Any additional requirements at site to be taken care of.

Response Framework



SOP for Quick Response Team on Law and order

- Quick assessment of law and order situation in affected areas
- Support and coordinate with Local Administration
- Prepare updates on the law and order situation every 4-6 hours and brief the authorities
- Controlling situations like rioting and looting, and cordon off sensitive areas
- QRTs will guide property and valuables in affected areas.
- Control and monitor traffic movement.

- QRTs will provide diversion of traffic on alternate routes as and when it is necessary.
- The QRTs will also provide information about traffic flow along various corridors, especially heavy traffic or congested roads.
- QRTs will communicate to police control rooms, details on the field activities including deployment and reinforcement of staff and resources and communicate nature of additional requirements.

ESF #3 - SEARCH AND RESCUE OPERATIONS

Background

The State Response Plan (SRP) establishes an organised setup to conduct S&R operations for any of the Natural and Manmade Disasters. For S&R operations outlines an implementing framework of sharing resources as per the requirement within National and State level department that will be engaged to support during an emergency situation. The Plan has structured the response of concerned departments i.e. primary and supporting departments so that they function together by grouping their capabilities, skills, resources, and authorities across the State and district Government within the ESF plan.

The S&R ESF has to respond to assist the Incident Commander as per their assigned duty, which has been described in the SOP's and is to be followed during emergency within the State. The scope of Response function includes the following broad areas

- Rescue of those trapped
- Search for victims of a disaster (whether living or dead).

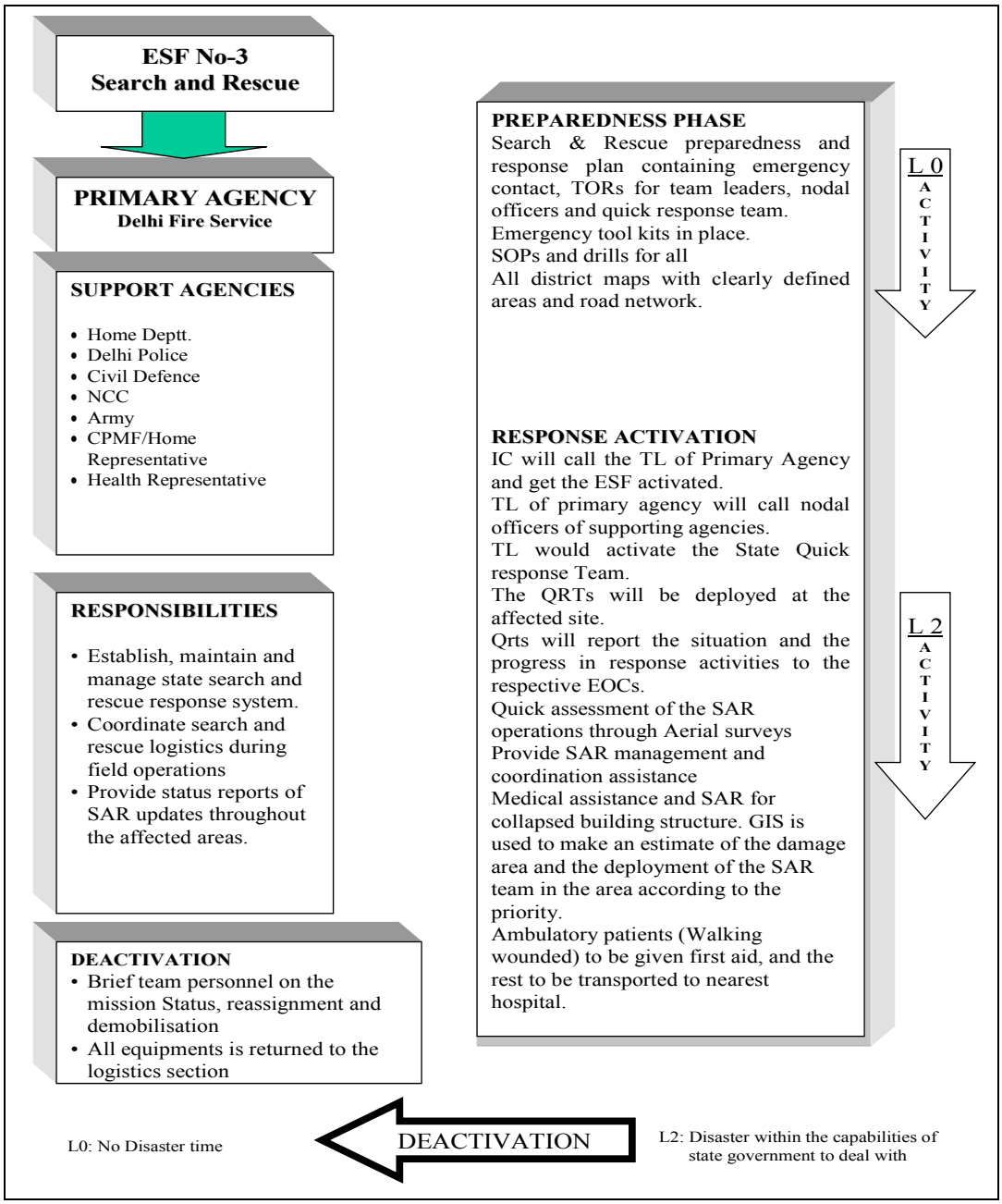
STATE NODAL AGENCY

Delhi Fire Services

ESF SUPPORT AGENCY

- Municipal Corporations
- Police Department
- Department of Revenue
- Civil Defence and Home Guard
- Army (if called upon)
- Directorate of Health Services
- Communication ESF
- Water and Sanitation Nodal Agency
- Transport –Nodal Agency

RESPONSE FRAMEWORK



SOP of the ESF Nodal Agency

- IC / District EOC (on orders from IC) would contact the team leader of S&R Operations to activate the ESF response plan
- Team leader of Nodal agency would report to the Quick response teams for immediate operation and Inform supporting agencies to coordinate in the situation depending upon the scale of the disaster.
- QRTs (of both nodal and supporting agencies) would perform a physical damage assessment and report to the leaders of central and nodal agency

about the percentage of damage, percentage of casualties expected and possible requirement of equipments, manpower and rescue sites.

- Medical and Trauma Counselling Response Teams at District and State Level to be activated by ESF-TL if needed, and report to the Incident Manager at the On-site EOC who will coordinate their activities.
- Response Teams in the field communicate with the ESF-TL at the District EOC, through the Incident Manager.
- Major hospitals given warning to activate their contingency plan, if required
- ESF-TL to inform IC at District EOC if activation of the State EOC will be needed.
- Following up a systematic approach of transferring resources, manpower equipments, vehicles at the Disaster affected areas
- Determine the release of QRTs and facilities at effected site may be considered on a priority basis
- Contacting health services to instruct them to send first-aid and trauma counselling team to the affected site, so the patients can be treated before transporting to the hospital for the advance treatment (if needed).
- Contacting damage assessment teams and send them to the site so that assessment reports can be prepared and situation analysis can be done properly
- Establishing a failsafe communication system with QRTs members so that current reports on situation analysis can be gathered and accordingly help can be provided to the site.
- Declaration of further help required at State and National level in case of damage is at large scale and situation is unmanageable with the available resources
- At the site, QRTs should contact the local volunteers and local people to gather information about vulnerable areas so that search and rescue operation can be take place through a proper channel in heavily dense areas, large buildings, community centres, hotels, hospitals, public building and any other area having large gathering
- Special care to women and children groups should be given as they are expected to be more affected and helpless incase of any emergency situation

- Further request to the health department to deploy mobile hospitals in case the casualties are severe and transportation of patients may take much more time.
- Provide regular updates to the IC at the District/State EOC based on reports from the field and the hospitals
- Coordinate with the Transportation ESF if a large number of medical professionals need to be sent to the affected sites and/or a large number of victims need to be transported to health facilities.
- Ensure the provision and continuous supply of medical facilities (medicines, equipments, ambulances, doctors and manpower etc) required at the disaster affected site and the hospital health centres catering to disaster victims.
- Coordinate with the ESFs on Law & Order, Evacuation, and Debris and Road Clearance, for setting up of field medical posts, transport of victims, and setting up of mobile hospitals.

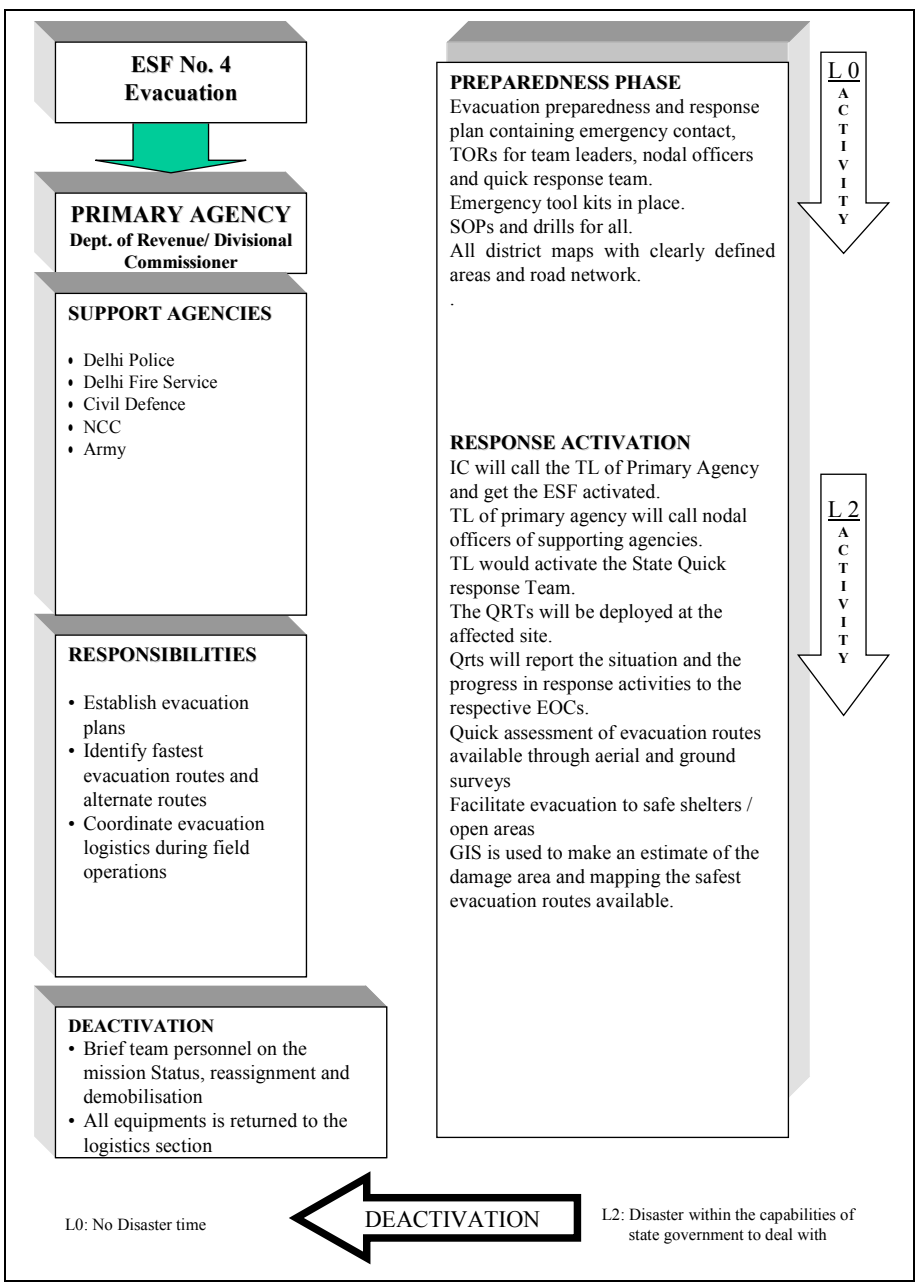
SOP OF QUICK RESPONSE TEAM (QRT)

- QRTs will reach on the spot and take an damage assessment including type of injuries, number of people affected and possible medical assistance need.
- QRTs will provide situation and progress reports on the action taken by the team to the ESF-TL
- QRTs will ensure timely response to the needs of the affected victims by establishing field medical posts at disaster sites, as needed
- QRTs should maintain a coordination with the local people so the S&R operation may take place at more vulnerable locations having dense population, multi-storied buildings and community gatherings as more people are expected to be trapped in such areas
- QRT will report to Nodal agency in case of shortage of vehicles, manpower, resources and relief materials
- QRT will also work effectively with the other teams conducting first aid, trauma counselling, law and order, debris clearance, damage assessment and water and sanitations so the effective rehabilitation may take place accordingly.

BACKGROUND

The purpose of this Emergency Support Functions is to coordinate efforts in safely evacuating the public from a threat to life and/or health. Evacuation and movement involves the coordination of varying agencies and good communications with the public. Evacuation and movement is the responsibility of public safety and the legislative authorities of a jurisdiction. This ESF applies to those agencies and others that are necessary for an evacuation.

RESPONSE FRAMEWORK



NODAL AGENCY

Department of Revenue

SUPPORT AGENCIES

Delhi Police, Delhi Fire Service, Directorate of Home Guard & Civil Defence, National Cadet Core, Indian Army

SITUATION ASSUMPTION

Any disaster situation could cause the need for evacuation. Of particular concern to Delhi is from earthquake, flooding or a fire, which could cause the need for an immediate evacuation, with very little time to plan for the specific evacuation.

1. Individuals and families may be displaced from their homes and may be provided shelters by one or more volunteer organizations.

2. Approximately 10% of the populous may seek shelter in organized shelters. The rest usually will find their own through friends, family, or commercial sources.

3. Displaced persons may require transportation to shelter facilities. This should be provided for by private transportation.

4. Shelter operations will have sufficient sanitation and cooking facilities, including cold and frozen storage, to maximize the use of available products.

SOP OF NODAL AGENCIES

a. Responsible for implementing and coordinating emergency evacuation. This is done in the event of a situation that immediately threatens an area and there is no time to obtain a proclamation from elected officials.

b. Responsible for determining when and how the public can re-enter the evacuated area(s).

c. Provides security for evacuated areas.

d. Documents evacuation status and disseminate status to appropriate personnel, Agencies and the public on a continual and timely basis.

SOP of the QRT

- Required to reach Department of Revenue HQ immediately upon receiving notification from the ESF TL control room
- Contact the field level QRTs and give them information about the disaster
- Inform the field offices to contact their staff designated for the ESF
- Coordinate the ESF activities with the ESF TL at the State EOC

Responsibilities of the QRT in the field

- Required to reach the nearest field office immediately upon receiving notification from the HQ QRT / Central control room
- Co-ordinate with the field QRT from the support agencies
- Provide field assessment information to the ESF TL at the State EOC and to Central control room
- Assist the field office in the response activities

BACKGROUND

The purpose of this Emergency Support Function is to identify food and water needs in the aftermath of a disaster or emergency; obtain these resources; and transport them to the impact area. Food supplies obtained and distributed by Emergency Support Function (Food).

Obtaining food and supplies, arranging for transportation and authorizing assistance may be required. Food must be suitable for household distribution or congregate meal service. Transportation and distribution of food and supplies will be arranged by local, state, private and/or federal agencies/organizations. The Emergency Food Stamp Program may be requested, authorized and implemented. The Food & Civil Supplies Department assumes overall coordination for this function.The scope of the function is to primarily provide food and civil supplies to the affected area. It would include setting up of storage facilities at the disaster site and distribution of the supplies to the effected.

NODAL AGENCY

Food & Civil Supplies

SUPPORT AGENCY

Revenue Deptt,

IRCS/NGO Rep

SITUATION ASSUMPTION

A disaster may partially or totally destroy food products stored in the affected area. There may be a disruption of energy sources (e.g., electricity and gas). Oil for generators and propane tanks may be essential. Commercial cold storage and freezer facilities may be inoperable. Bordering areas affected, schools and other facilities may have food and supplies sufficient to feed victims.

SOP OF THE NODAL AGENCY

a. Determine needs of the affected population, location and food preparation facilities for congregate feeding;

b. Secure food, transportation, equipment, storage and distribution facilities;

c. Evaluate available resources relative to need and location;

d. Initiate procurement of essential food and supplies not available from existing inventories;

e. Respond immediately to requests for Expedited and/or Emergency Food Stamps and access commercial food resources;

f. Establish linkages with private agencies/organizations involved in congregate meal services;

g. Replace products transferred from existing inventories;

h. Phase down feeding operations as victims return home;

i. Refer victims needing additional food to private agencies/organizations;

j. Coordinate public information and provide updates;

k. Maintain financial records on personnel, supplies and resources utilized and expenditures;

l. Resume day-to-day operations.

1. establish communications with Support Agencies representatives and staff to monitor the situation and assess damages food sectors and their requirements, including human resources;

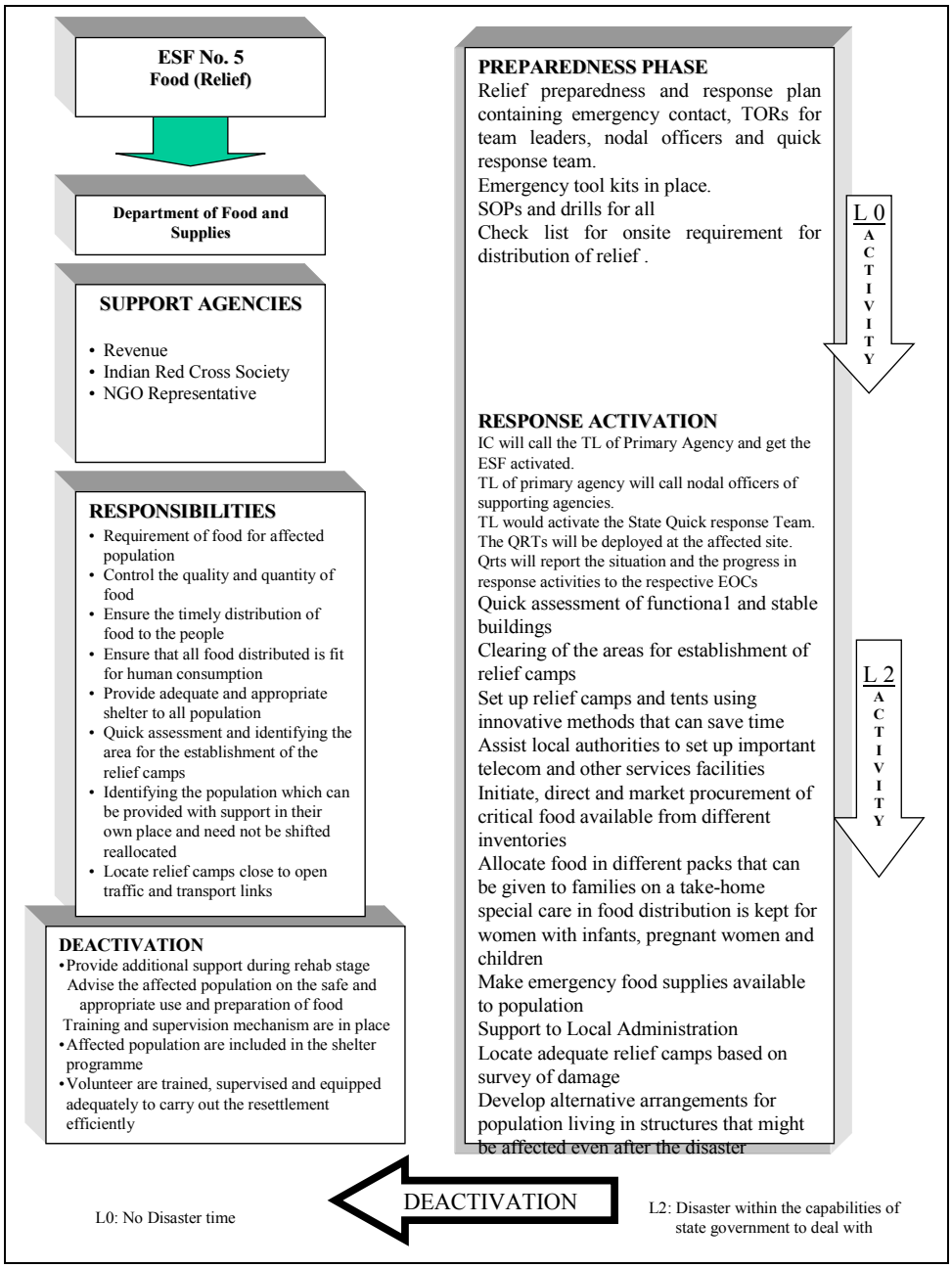
2. maintain a data base of provincial food stocks and distribution systems and other vital requirements;

3. establish contact with other provincial ministries and private industry, including processors, distributors and retailers, to obtain their cooperation;

4. secure food/water sources and maintain food/water stockpiles, and work with Support Agencies to distribute food/water to relocation centres for the affected population;

5. secure and allocate feed stuffs for commercial farm animals and arrange for distribution as necessary;

Response Framework



SOP OF THE SUPPORT AGENCIES

The role of the Support Agencies is to assist in food production, processing and distribution.

Specifically, the function will:

- help in providing safe, wholesome food stuffs and water (such as commercial bottled drinking water) for the people affected, by identifying, securing and arranging where necessary the delivery of food stuffs and drinking water to appropriate staging areas when it is beyond the capability of local agencies to do so;

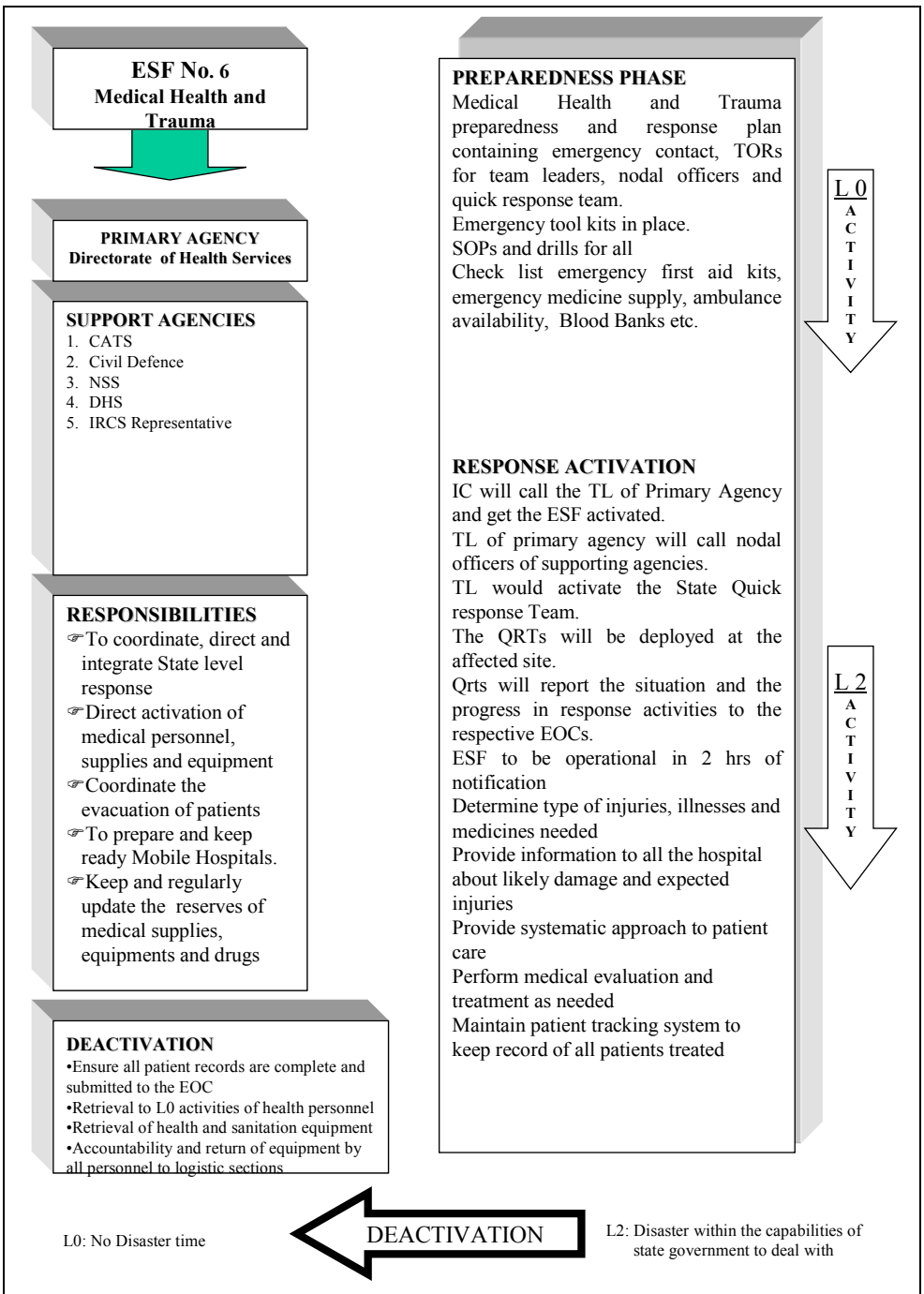
- identify, secure and arrange delivery (where required) of feed supplies for commercial farm animals and other emergency farm input requirements;

- Actively involved in day-to-day operations.

Background

All disasters affect human life and health. Health is both a main objective and a yardstick in disaster management. This Emergency Support Function (ESF) will be responsible for the emergency medical treatment and mental trauma support in the aftermath of any hazardous event.

RESPONSE FRAMEWORK



STATE NODAL AGENCY

Department of Health and Family Welfare (DOH) / Directorate of Health Services (DHS)

SUPPORT AGENCIES

- Centralised Accident and Trauma Services (CATS)
- Delhi Fire Services (DFS)
- Delhi Civil Defence (CD)
- Indian Red Cross Society – Delhi Chapter
- St. Johns Ambulance Brigade
- Directorate General of Health Services – Central Government (DGHS)
- Municipal Corporation of Delhi – Health (MCD)
- Employee State Insurance Corporation (ESI)
- Delhi Cantonment Board (Cantt. Board)
- Central Government Health Scheme (CGHS)

Situation Assumptions

- Emergency Medical care and trauma counselling will be required
- Hospital services would be affected
- Communication and transport services would be disrupted

SOP OF NODAL AGENCY

- Upon finding out about any hazardous event, ESF-TL will contact the District/State EOC by any means possible (phone, wireless, personally)
- If asked to activate the ESF, Team leader (TL) will call nodal officers of supporting agencies of the ESF.
- QRTs will be activated and deployed at the affected sites.
- Medical and Trauma Counselling Response Teams to be activated, based on report from the QRTs.

– Provide systematic approach to patient care (Mass Casualty Management)

- Triage done to determine who needs to be taken to a medical facility on a priority basis and who can be treated on-site. (CATS, DHS, CGHS)
- First-aid provided as required (CATS, DFS, CD, Red Cross, St. Johns)
- Patients Stabilized before transport (CATS, DHS)
- Patients transported to nearest available medical facility having the required facilities (CATS, CD, St. Johns)
- Trauma counselling provided to the victims and their relatives at the site and in the hospital

– In the hospital emergency department, triage carried out again to prioritise treatment, and appropriate care provided

– Maintain patient tracking system to keep record of all patients treated

– Deploy mobile hospitals as needed

If medical facilities severely affected by the disaster, or roads blocked preventing transport of patients to the hospital, mobile hospitals deployed at required sites.

- Provide regular updates to the IC at the District/State EOC based on reports from the field and the hospitals
- Coordinate with the Transportation ESF if a large number of medical professionals need to be sent to the affected sites and/or a large number of victims need to be transported to health facilities.
- Ensure the provision and continuous supply of medical facilities (medicines, equipments, ambulances, doctors and manpower etc) required at the disaster affected site and the hospital health centres catering to disaster victims.
- Coordinate with the ESFs on Law & Order, Evacuation, and Debris and Road Clearance, for setting up of field medical posts, transport of victims, and setting up of mobile hospitals.

SOP of Quick Response Team (QRT)

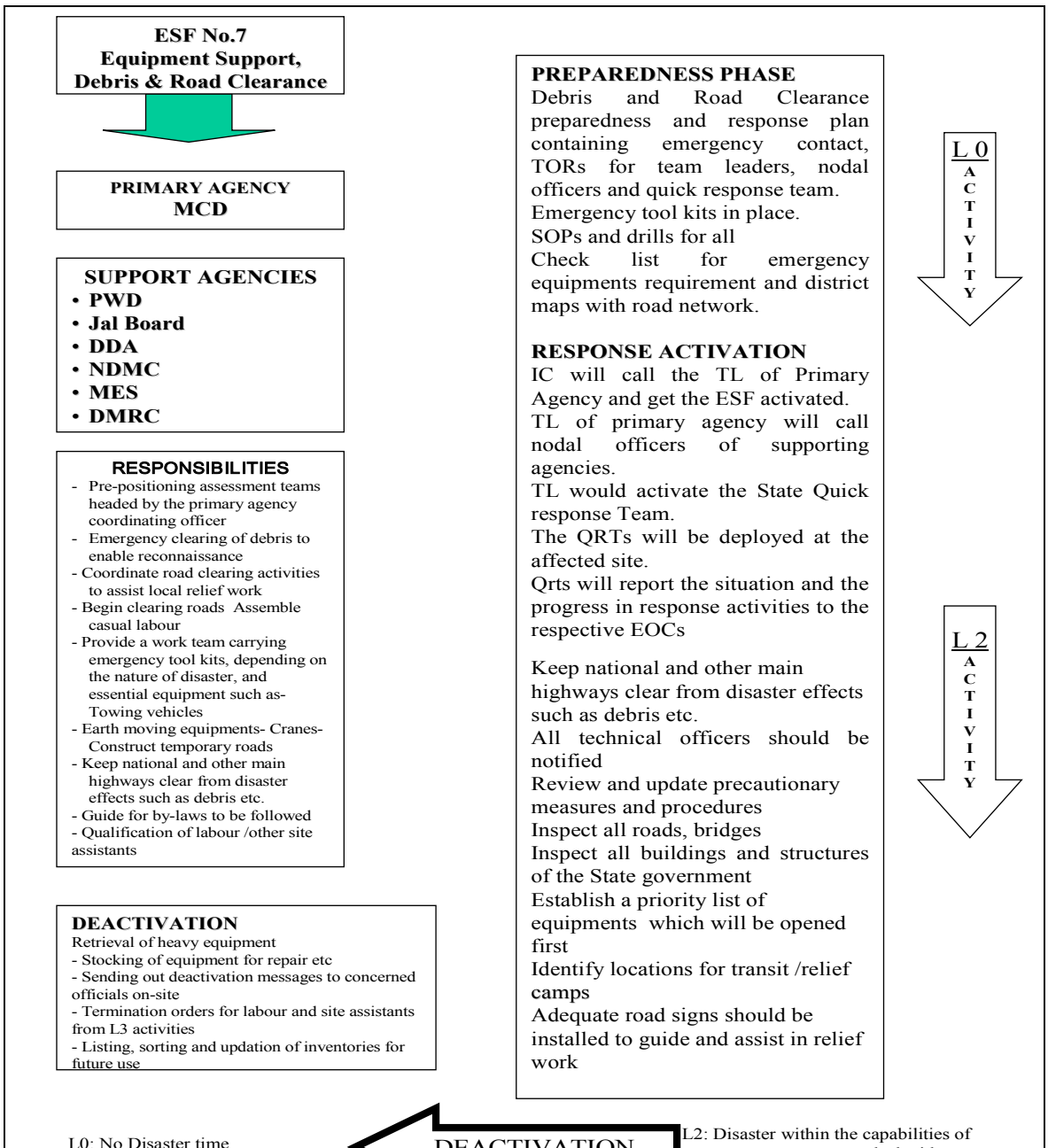
- QRT's will assess the damage: type of injuries, number of people affected and possible medical assistance need.

- QRTs will provide situation and progress reports on the action taken by the team to the ESF-TL
- QRTs will ensure timely response to the needs of the affected victims by establishing field medical posts at disaster sites, as needed
- QRTs should maintain check posts and surveillance at each railway junction, bus depots and all entry and exit points from the affected area, especially during the threat or existence of an epidemic.

BACKGROUND

The purpose of this Emergency Support Function is to provide, in a coordinated manner, the resources (human, technical, equipment, facility, materials and supplies) of member agencies to support emergency transportation needs during an emergency/disaster situation. This ESF may also obtain resources through agency contractors, vendors, and suppliers. Resources may also be obtained from agency related local, State, regional, national, public, private associations, and/or groups.

Response Framework



Primary Agency: Municipal Corporation of Delhi (Commissioner MCD)

Support Agencies: New Delhi Municipal Corporation (NDMC)
Public Works Department (PWD)
Central Public Works Department (CPWD)
Delhi Cantonment Board (DCB)
Military Engineering Services (MES)
Delhi Jal Board (DJB)

SOP FOR NODAL AGENCY

- Team leader (TL) will activate the ESF on receiving the information of the disaster from State EOC.
- TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.
- TL will coordinate with the supporting agency to mobilize equipments from the ware houses through IDRN database
- The respective supporting agencies will contact their respective personal to move the equipments to central warehouse
- The equipments like JCB, concrete cutters identified as per the need will be transported to the site.
- As per the information the nodal officer of Debris road clearance will make an assessment on of the damages of roads and built structures at the site and surrounding areas
- The nodal officers of Supporting Agencies will immediately start debris clearance operation to enable movement to the affected site.
- Review of the current situation is taken up by the nodal agency to update the support agencies and to delegate their respective personnel to take precautionary measure to plan de-routes for the transportation ESF's to be operational
- All supporting agencies will inspect the road and rail network and structures within the disaster site and surrounding.

- TL will also ensure proper corpse disposal and post mortem by coordinating with ESF on medical response.

SOP FOR QUICK RESPONSE TEAM

- Damage assessment including locations, number of structures damaged and severity of damage
- The QRTs will be deployed at the affected site.
- Enlisting the types of equipment as compiled from IDRN resource inventory required for conducting the debris clearance
- The QRTs will report the situation and the progress in response activities to the respective EOCs.
- Undertake construction of temporary roads to serve as access to temporary transit and relief camps, and medical facilities for disaster victims.
- Repairing of all paved and unpaved road surfaces including edge metalling, pothole patching and any failure of surface, foundations in the affected areas by maintenance engineer's staff and keep monitoring their conditions.

Equipment Support and Facilities Pool

The following is the public works and engineering equipment, personnel, and facilities pool of all Emergency Support Function 07 agencies from which certain and specific resources are referenced and assigned as the responsibility of each Emergency Support Function 07 agency identified herein:

1. Trucks and/or trailers of various types, sizes, and combinations with drivers/operators;

2. Front-end loaders, bulldozers, and excavators of various sizes and types, to include rubber-tired and tracked, with operators;

3. Cranes, bucket trucks, and pole trucks of various types and sizes, with operators;

Heavy equipment transporters, trucks, trailers, vans, and vehicles, with drivers, to transport the public works and engineering equipment, equipment support and service vehicles, and personnel listed herein;

5. Electrical generators, welding machines, cutting torches and tanks, work lights, pumps with and without pipe and hose, and work boats and work barges, of various types and sizes;

6. Skilled and semi-skilled carpenters, low and high voltage electricians, masons, plumbers, pipe fitters, welders, general construction personnel, and debris clearing personnel, with trade safety equipment and hand and power tools;

7. Public works and civil engineering engineers, technicians, specialists, managers, and supervisors;

8. Mobile and non-mobile repair facilities, equipment, and personnel to be used for repairs to various types of public works and engineering equipment;

9. Parking and storage areas to be used for the staging, parking, and storage of various types of public works and engineering equipment; and

10. Mobile and non-mobile motor pool and service facilities, equipment, and personnel to be used for refuelling and servicing various types of public works and engineering equipment.

Background

This ESF encompasses sheltering at Incident site post and providing for long term shelter rehabilitation in case of widespread damage to existing accommodations due to disasters. Damage to structures in a disaster like earthquake will require additional resources to be directed to the Operational Area. Most engineering and construction work which needs to be done will have a responsible government agency co-ordinating the ESF, which can arrange for the shelter needs of the affected area and prioritize rehabilitation efforts in the areas according to the needs.

NODAL AGENCY

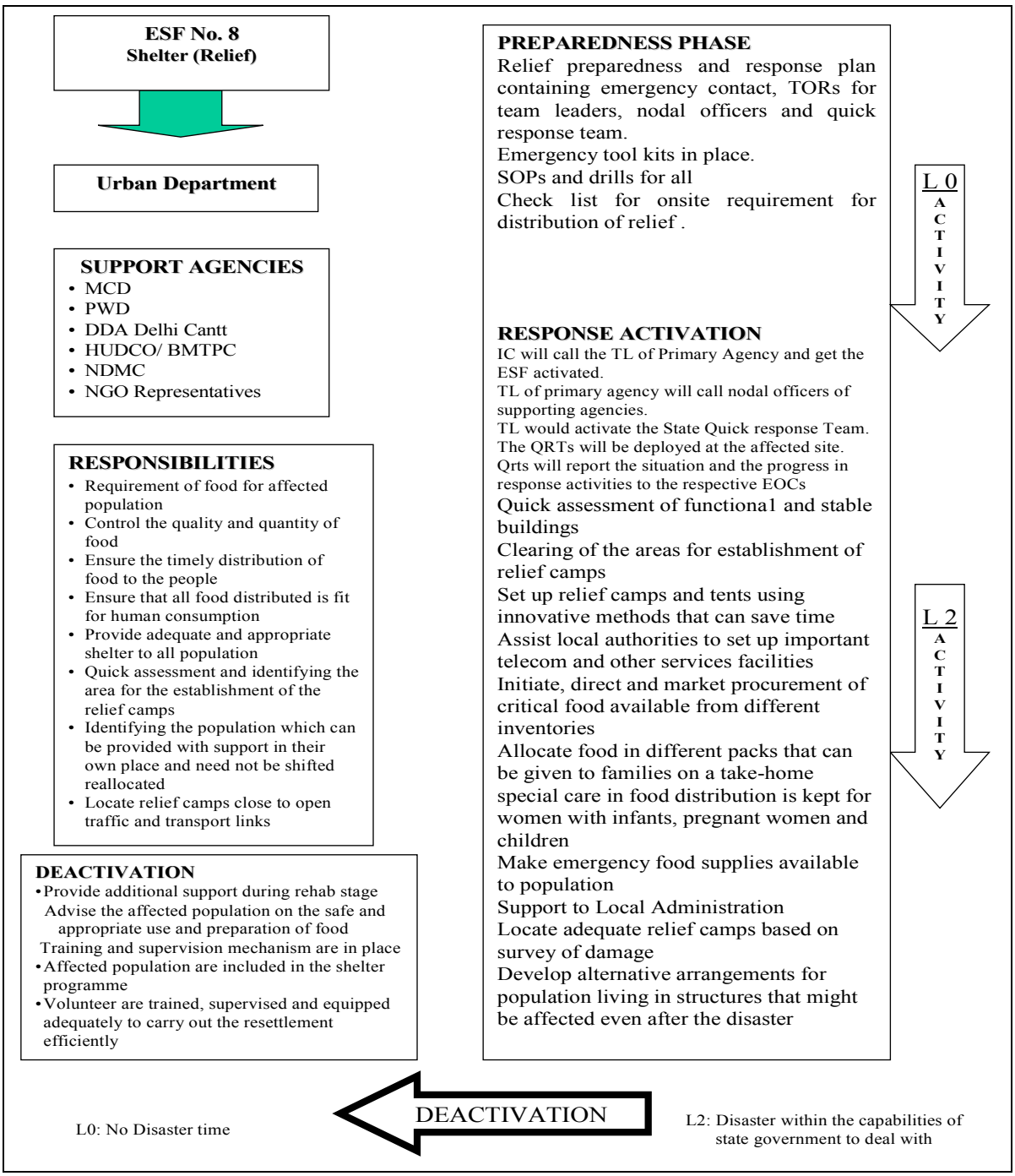
The coordination of shelter requirements and resources is a function of the Department of Urban Development.

SUPPORT AGENCIES

a. **Other Government Agencies:** MCD, NDMC, Delhi Cantt., PWD, (DDA, CPWD – Central Agencies)
b. **Engineering and Construction Resource Agencies**. HUDCO, BMPTC.

c. **Private Sector:** SPA, SIFI, private construction firms (with whom the coordinating agency /support agencies have entered into a pre-contract)

Response Framework



SOP OF THE NODAL AGENCY

The emergency operations necessary for the performance of this ESF include, but are not limited to:

- TL will activate the ESF on receiving the information of the disaster from State EOC.

- TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation
- Damage survey preparation of damage assessment report
- Locating emergency shelters camps based on damage survey
- Manage and operate emergency shelters in coordination with the Incident Commander
- Secure personnel to operate emergency shelters,
- Secure transportation;
- Establish communications between shelters, and other support agencies;
- Close and restore shelters to pre-emergency conditions;
- Coordinate public information and provide updates for ESF Information and Planning;
- Maintain financial records on personnel, supplies and other resources utilised and report to the Incident commander upon request; and
- Prepare a comprehensive plan for organised and sustained rehabilitation
- Resume day-to-day operations.

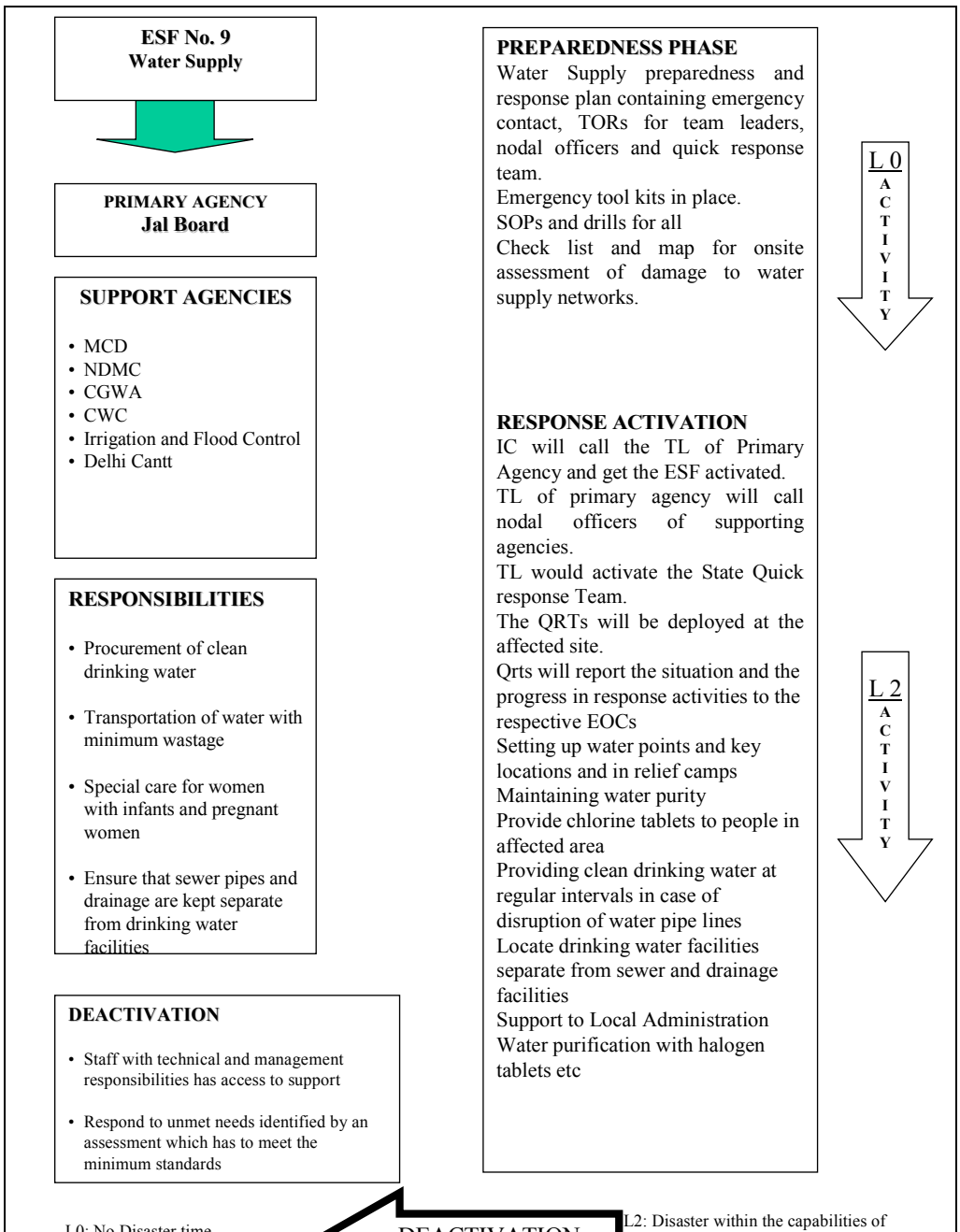
SOP OF QUICK RESPONSE TEAM (QRT)

- QRTs will report to site of the relief camps
- QRTs will be responsible to manage and set up emergency shelters at the incident site and all other activities needed to perform the same (use of innovative methods, .
- QRT's will be responsible for reporting the progress on action taken by the team to the EOC.
- QRTs will provide information to their Team Leader about the need of additional resources.
- Assist local authorities to set up important telecom and other service related facilities
- Ensuring support to Local Administration
- Locating adequate relief camps based on damage survey
- Develop alternative arrangements for population living in structures that might be affected even after the disaster

Background

The purpose of this Emergency Support Function is to identify water and ice needs and restore basic water supply if damaged, in the aftermath of a disaster or emergency. Till the time water supply to the damaged areas is restored water requirements need to be arranged by the ESFs and distributed either using their own transportation mechanisms or in coordination with transportation agencies.

Response Framework



NODAL AGENCY

Delhi Jal Board

SUPPORT AGENCIES

Municipal Corporation of Delhi, New Delhi Municipal Council, Central Ground Water Authority, Central Water Commission, Irrigation and Flood Control Department, Delhi Cantonment Board

Situation Assumptions:

- Existing water storage bodies will be damaged and unusable.
- There would be an urgent need of water to assist victims in rescue operation.
- Break down of sanitation system.
- Contamination of water due to outflow from sewers or due to breakage of water pipelines.

SOPs for Nodal Agency

- Team leader (TL) of ESF on Water Supply will activate the ESF on receiving the intimation of the disaster from State EOC.
- TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.
- TL will ensure special care for women with infants and pregnant women.
- Provide for sending additional support along with food, bedding, tents
- Send vehicles and any additional tools and equipments needed.

SOP for Quick Response Team (QRT)

- QRTs will ensure that supply of drinking water is made available at the affected site and relief camps
- QRT's will ensure the temporary sewerage lines and drainage lines are kept separate.
- QRTs will report the situation and the progress on action taken by the team to the EOC.
- QRTs will intimate their TL of the additional resources needed.
- Carry out emergency repairs of all damages to water supply systems.
- Assist health authorities to identify appropriate sources of potable water.

- Identify unacceptable water sources and take necessary precautions to ensure that no water is accessed from such sources, either by sealing such arrangements or by posting the department guards.
- Arrange for alternate water supply and storage in all transit camps, feeding centres, relief camps, cattle camps, and also the affected areas, till normal water supply is restored.
- Ensure that potable water supply is restored as per the standards and procedures laid down in "Standards for Potable Water".
- Plan for emergency accommodations for staff from outside the area.
- QRTs will ensure timely response to the needs of the affected victims.
- QRTs will set up temporary sanitation facilities at the relief camps.

ESF #10 - ELECTRICITY

Background

The ESF on electricity will facilitate restoration of electricity distribution systems after a disaster. In the event of a disaster there would be major electricity failure with many power stations damaged. Delhi Power System is an integral part of Northern Regional Power System having an effective generation capacity of about 29345 MW with a peak demand of 24000 MW. Out of this, the effective generation capacity within Delhi is about 1300 MW including BTPS owned by Government of India and managed by NTPC of 705 MW. Peak demand of Delhi is about 3500 MW.

STATE NODAL AGENCY

TRANSCO

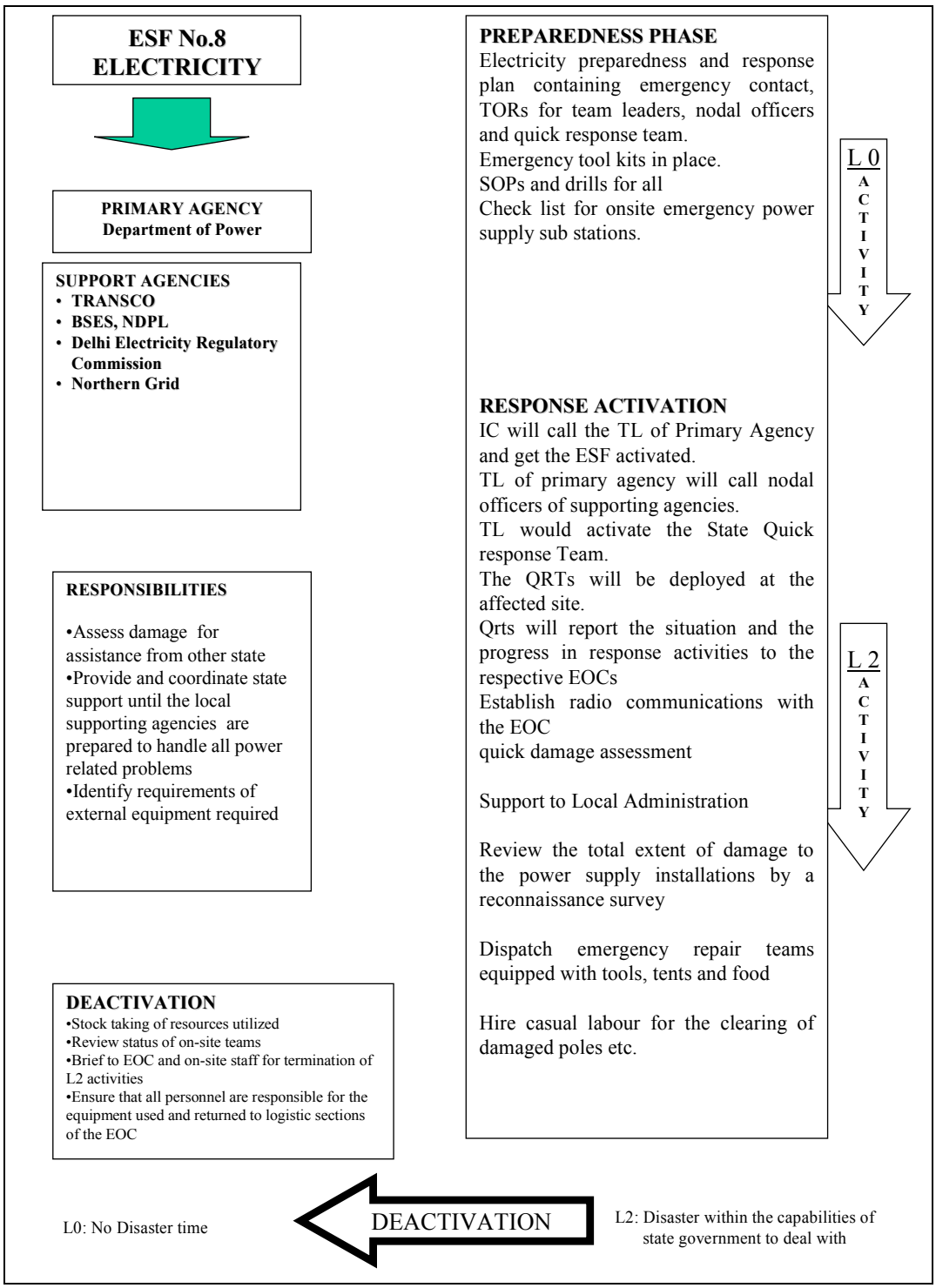
SUPPORT AGENCIES

Department of Power, BSES, NDPL, DERC

SITUATION ASSUMPTIONS

- There will be prolonged electricity failure.
- The affected victims will be panicked
- Halt of all activities specially jamming communication networking systems in the affected site.

Response Framework



SOP FOR NODAL AGENCY

- Incident commander will call the Nodal Officer of TRANSCO and get the power ESF activated.

- Nodal Officer of primary agency will call nodal officers of supporting agencies (BSES & NDPL).
- As per the information from IMTs, the nodal officer of primary agency will activate the State Quick Response Teams at field level.
- The Quick response teams will be deployed at the affected site.
- TL will dispatch emergency repair teams equipped with tools, tents and food.
- In case of survival of Delhi inner ring, Delhi shall immediately extend start-up power to Badarpur.
- In order to strengthen the survived network it shall be synchronized, at the earliest, with the supply from Faridabad (Gas) on 220 kV Ballabhgarh-BTPS Circuit at BTPS.
- In case of collapse/non-survival of Delhi inner ring, the Delhi GT's machines are to be self-started and supply is to be extended for meeting the emergency loads, to Badarpur as start-up power and to 220 kV Park Street for railway traction through 220 kV IP Extn.-Park Street Circuits.
- DTL has to ensure that I.P and Rajghat units are also extended power at the earliest suitable opportunity through 220 kV IP Extn.-IP-RPH circuits.
- The built-up system would be synchronized with the supply available from Faridabad (gas) at the first opportunity.
- As soon as stabilized power supply from the BBMB Subsystem is available at the periphery of Delhi (say at 400 kV Ballabhgarh/Mandola), the Delhi Area (consist of generating units in Delhi system, Faridabad gas and BTPS) shall synchronize with the same.

Standard Operating Procedures for Quick Response Team

S. No.	Name of the Station	Sources	Restoration procedures
1.	**Mehrauli**	1. 220 KV BTPS-Mehrauli Double Circuit 2. 220 KV Bamnauli-Mehrauli Double Circuit.	Normally 220/66 KV 100 MVA Transformers are fed from 220 KV BTPS circuits. 220 KV Bamnauli No.1 feeds 220 KV Vasant Kunj and 220 KV Bamnauli No.2 is kept open. To reduce loading on 220 KV BTPS-Mehrauli section, supply from Bamnauli can be extended to Mehrauli.

			Priority by restoration Supply to the following feeders is to be restored on priority :- i) 66 KV IAAI feeder. ii) 66 KV Bijaswan circuits.
2.	**Vasant Kunj**	220 kV Mehrauli – Vasant Kunj Double Circuit.	In case of outage of Mehrauli (source) back-feed can be taken from Ridge Valley at 66 KV level as per capacity available, as Ridge Valley supply to be extended for essential services as per requirement of DISCOM i.e through 66KV Malviya Nagar D/C depending upon the loading conditions thereof.
3.	**Okhla**	220 KV BTPS-Okhla Double Circuit.	Outage of supply from BTPS 66KV and 33KV load be met through other sources to the extent possible as per the requirement of DISCOM.i.e. through 66 kV Malviya Nagar-Okhla Circuit.
4.	**Sarita Vihar**	T-Off from 220 KV BTPS-IP Extension Circuit No. I.	In case of outage from 220 KV supply, 66 KV Mathura road-Sarita vihar D/C Line could be formed as a source depending upon availability at Mathura Road and loading conditions of Power transformer at Okhla / BTPS Okhla Line.
5.	**Mathura Road**	T-Off from 220 KV BTPS-Okhla Circuit No.1	In case of outage from 220 KV supply 66 KV Mathura road-Sarita vihar D/C Line could be formed as a source depending upon availability at Sarita Vihar and loading conditions of BTPS-IP Extension Circuits.

S. No.	Name of the Station	Sources	Restoration procedures

6.	**Lodhi Road**	T-Off from 220 kV BTPS-IP Extension Circuit No. I & II.	In case of ***outage of one circuit*** the load can be taken on the other circuit through respective 220/33 KV transformer and part load can be taken from 33 KV Vidyut Bhawan-Lodhi Road circuit depending upon the load condition of 66 KV GT-Vidyut Bhawan circuits and 66/33 KV 50 MVA transformer at Vidyut Bhawan. ***In case of outage of both the 220 KV circuits*** the essential load be met through 33 KV Vidyut Bhawan- Lodhi Road circuit depending upon the loading conditions mentioned above and load of other area being fed from Lodhi Road is back-fed wherever possible.
7.	**Park Street**	220 KV IP Ext – Park street U/G Double Circuit Line.	***In case of outage of one cable circuit*** load of Ridge Valley, Shankar Road, Faiz Road, Motia Khan is diverted to other sources to the extent possible. ***In case of outage of both the 220 kV Circuits***, essential load can be met through 66 kV Ridge Valley Park Street circuit.
8.	**I.P. Extn.**	**1**. BTPS – IP Extn. **2**. G.T. – IP Extn. through 66/220 kV 100 MVA Transformers. **3**. Pragati – IP Extn. **4**. I.P. – IP Extn.	IP Extn. is an important link between various generating stations. One 220 kV Bus is charged from BTPS, Pragati and G.T. The other bus is charged from I.P., Pragati STG. Normally the load of Park Street is taken on BTPS and Bus coupler at IP Extn.is kept open to avoid over-loading of 220 KV Circuits. In case of outages of any of the circuits, the generation of GT/Pragati is shifted from one Bus to other as per Load Generation Balance.
9.	**Patpatganj**	1. 220 kV Mandola - Patpatganj Double Circuit Line. 2. 220 kV IP Stn. –	Patpatganj 220 kV S/Stn. is the inter-linking sub station to keep IP, RPH and Pragati (one Unit and STG) in synchronism with Mandola supply. In case of outage of Mandola

		Patpatganj Double Circuit Line. 3. 220 kV Sahibabad – Patpatganj Main 4. 220 kV Sahibabad – Patpatganj T-Off	circuit, if supply is available through 220 kV IP-Patpatganj Circuits, load is to be regulated depending upon availability. ***If IP supply is also not available*** then all the loads (66/33 kV loads) should be thrown off and start up supply to be extended to Generation complex after availing supply from Mandola as per the advise of SLDC. The supply from Sahibabad is kept open at Patpatganj due to load restriction by UP on the circuit. Supply can be taken in emergency as per availability.

S. No.	Name of the Station	Sources	Restoration procedures
10.	**Gazipur**	220 kV BTPS-Noida-Gazipur Circuit.	The main incoming supply is from BTPS through 220 kV Noida-Gazipur Circuit. In case of outage of circuit, load can be diverted on 66 kV network depending upon the loading conditions of 220/66 kV 100 MVA Transformer No.1 and 2 at Patpatganj.
11.	**South of Wazirabad-I**	T-Off 220 kV Mandola-Patpatganj circuit 1.	South of Wazirabad – I is on single source on 220 kV and in case of outage of 220 kV circuit load of 66 kV Bus can be taken on South of Wazirabad-II through 66 kV Inter-connector depending upon loading conditions of 220/66 kV 100 MVA Transformer at Wazirabad II.
12.	**South of Wazirabad-II**	T-Off 220 kV Mandola-Gopalpur Circuit 2	South of Wazirabad – II is on single source on 220 kV and in case of outage of 220 kV circuit load of 66 kV Bus can be taken on South of Wazirabad-I through 66 kV Inter-connector depending upon loading conditions of 220/66 kV 100 MVA Transformer

			at Wazirabad I.
13.	**Gopalpur**	220 kV Mandola-Gopalpur Double Circuit Line.	***In case of outage of one 220 kV circuit***, the part load can be taken on single circuit to feed essential loads on 66-33 kV level. ***In case of outage of both the circuits,*** the essential loads can be met on 66/33 kV network from other sources.
14.	**Subzi Mandi**	220 kV Gopalpur-Subzi Mandi Double Circuit Line.	In case of outage of one circuit, part load can be diverted on 33 kV network In case of outage of both the circuits, the essential loads can be met on 33 kV network from other sources. from other sources.
15.	**Kashmere Gate**	T-Off 220 kV Mandola-Patpatganj Circuit 2 T-Off 220 kV Mandola-Gopalpur Circuit 2.	***In case of outage of one circuit,*** the load can be met through other circuit. ***In case of outage of both the circuits***, the part load can be shifted to 33 kV network. The load of Metro is to be diverted to Rohini – Rithala 66 kVm circuit.

S. No.	Name of the Station	Sources	Restoration procedures
16.	**Narela**	220 kV Mandola-Narela-Double circuitLine. 220 kV Bawana-Narela 220 kV Shalimar Bagh-Narela 220 kV Panipat-Narela Circuit I,II,III	In Normal supply position of one 220 kV Bus of Narela is with Mandola source and the other 220 kV Bus is with Panipat source. The load of 220 kV Rohini-Shalimar Bagh and 100 MVA Transformers at Narela is kept on Mandola bus. The load of 220 kV Rohtak Road circuits and 220/132 kV BBMB transformers is kept on Panipat Bus. The Bawana source is kept off and utilized in case of emergency. In case of outage of any of the circuit from Mandola or Panipat the load is shifted as per system conditions and advise of SLDC.
17.	**Shalimar Bagh**	220 kV Narela-Shalimar Bagh 220 kV Bawana – Shalimar Bagh	The load of one bus of Shalimar Bagh is taken on Narela source. The load of other bus is taken on Bawana source. The load of 100 MVA Transformer is kept on one bus and Rohini on other bus. ***In case of outage of any one source,*** load can be met through available source and part load of 66/33 kV network is diverted to other sources. ***In case of outage of both the sources,*** essential loads are met on 66-33 kV network as per loading conditions.
18.	**Rohini**	220 kV Shalimar Bagh – Rohini D/C	In case of outage of one circuit, the load of Rohini can be met on other circuit. In case of outage of both the circuits, essential load can be met through 66 kV network from other sources. Priorities are given to feed Metro through Rohini-Rithala Circuit or load of Metro is met from Kashmere Gate.
19.	**Kanjawala**	T-Off 220 kV Bawana – Najafgarh Circuit No.II	In case of outage of 220 kV circuit, the load of Kanjawala is required to be diverted to other sources to the extent possible.

20.	**Najafgarh**	220 kV Bawana-Najafgarh D/C 220 kV Bamnauli-Najafgarh D/C	Normally load of Najafgarh is kept on Bawana circuits. Bamnauli circuits are kept in OFF position. The loading is regulated as per availability. In case of outage of Bawana source, the load can be met through Bamnauli depending upon loading of 400/220 kV ICT at Bamnauli.
21.	**Papankala**	220 kV Bamnauli-Papankala D/C	In case of outage of one circuit, the load can be taken on other circuit. In case of outage of both the circuits, the essential load can be met on 66 kV network from other sources.
22.	**Naraina**	220 kV Bamnauli-Naraina S/C	In case of outage of 220 kV circuit, the essential load of Naraina can be met on 33 kV network.

Responsibilities of the QRT in the field

- Required to reach the nearest field office immediately upon receiving notification from the HQ QRT / Central control room
- Co-ordinate with the field QRT from the support agencies
- Provide field assessment information to the ESF TL at the State EOC and to Central control room
- Assist the field office in the response activities
- the response activities

Responsibilities of the QRT at HQ

- Required to reach their head office immediately upon receiving notification from the ESF Team Leader control room
- Inform the field offices to contact their staff designated for the ESF
- Coordinate the ESF activities with the ESF Team Leader at the State EOC

ESF P# 11 - Transportation

Background

The ESF on Transport should ensure smooth transportation links at state and district level. Within the disaster context, quick and safe movement of material and humans are a priority. It should coordinate the use of transportation resources to support the needs of emergency support forces requiring transport capacity to perform their emergency response, recovery and assistance missions.

Situation assumptions

- The state civil transportation infrastructure will sustain damage, limiting access to the disaster area.
- Access will improve as routes are cleared and repaired.
- The movement of relief supplies will create congestion in the transportation services.

State nodal agency

State Department of Transport

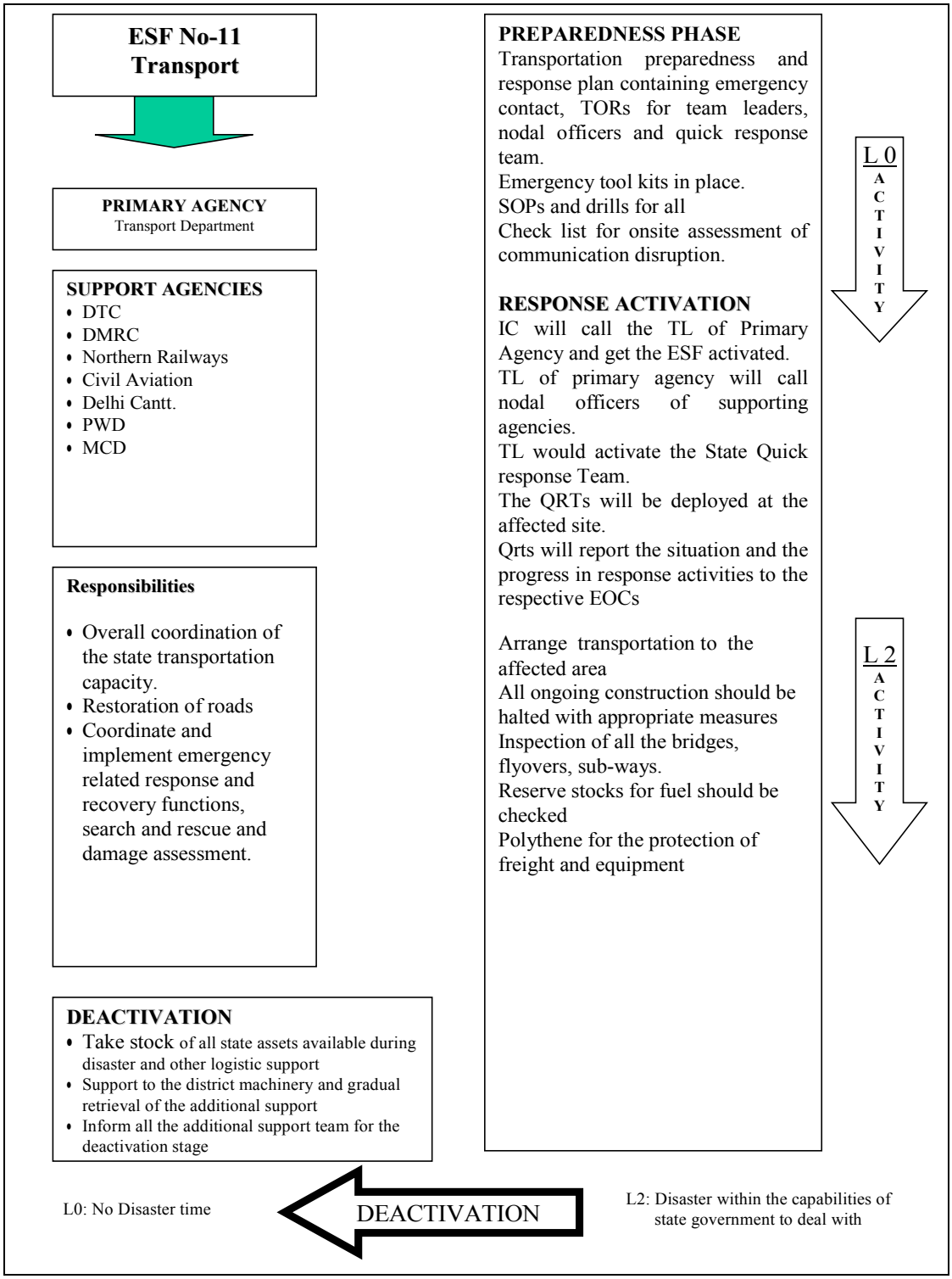
Support Agencies

DTC, DMRC, Northern Railways, Civil Aviation, PWD, MCD and Civil Defence etc.

SOPs for Nodal Agency:

- TL of Transportation ESF will activate the ESF on receiving the intimation of the disaster from State EOC.
- TL would inform Nodal Officers (NOs) of support agencies about the event and ESF activation.
- TL establishes contact with the district EOC for FIR
- TL requests for reports from local Transportation ESF contact person
- TL communicates situation to support agencies and requests for detailed information on the status of transportation infrastructure in the affected area(s).

Response Framework



SOP for Quick Response Team on Help Lines, Warning Dissemination

- The QRT members will reach to the nodal office as soon as they will get instructions to do so from the TL.

- As quick response teams will receive instructions from the nodal officer they would reach to the site immediately.
- QRTs would report the situation and the progress on action taken by the team to the respective EOCs
- QRT will send a requirement schedule for the different modes of transportation eg. trucks, boats, helicopters to be put on stand-by.
- QRTs will ensure timely re-establishment of the critical transportation links.
- The members of QRTs will establish temporary electricity supplies for relief material godowns.
- Compile an itemised assessment of damage, from reports made by various electrical receiving centres and sub-centres.
- Reporting about all activities to the head office.

ESF #12 - Help Lines and Information Dissemination

Background

Information is a powerful tool. In this day and age of instant news and the strides made by information technology, the information available is overwhelming and very comprehensive. In times of disaster, this information is often chaotic and sketchy. Correct information can not only help tremendously in the decision making process, but also allay the fears of the general public and provide them with the knowledge they can use to save themselves. Additionally, there is widespread panic and concern about the safety of friends and family. Help lines set up for this purpose can assist in locating and reuniting people.

NODAL AGENCY

State Department of Revenue

SUPPORT AGENCIES

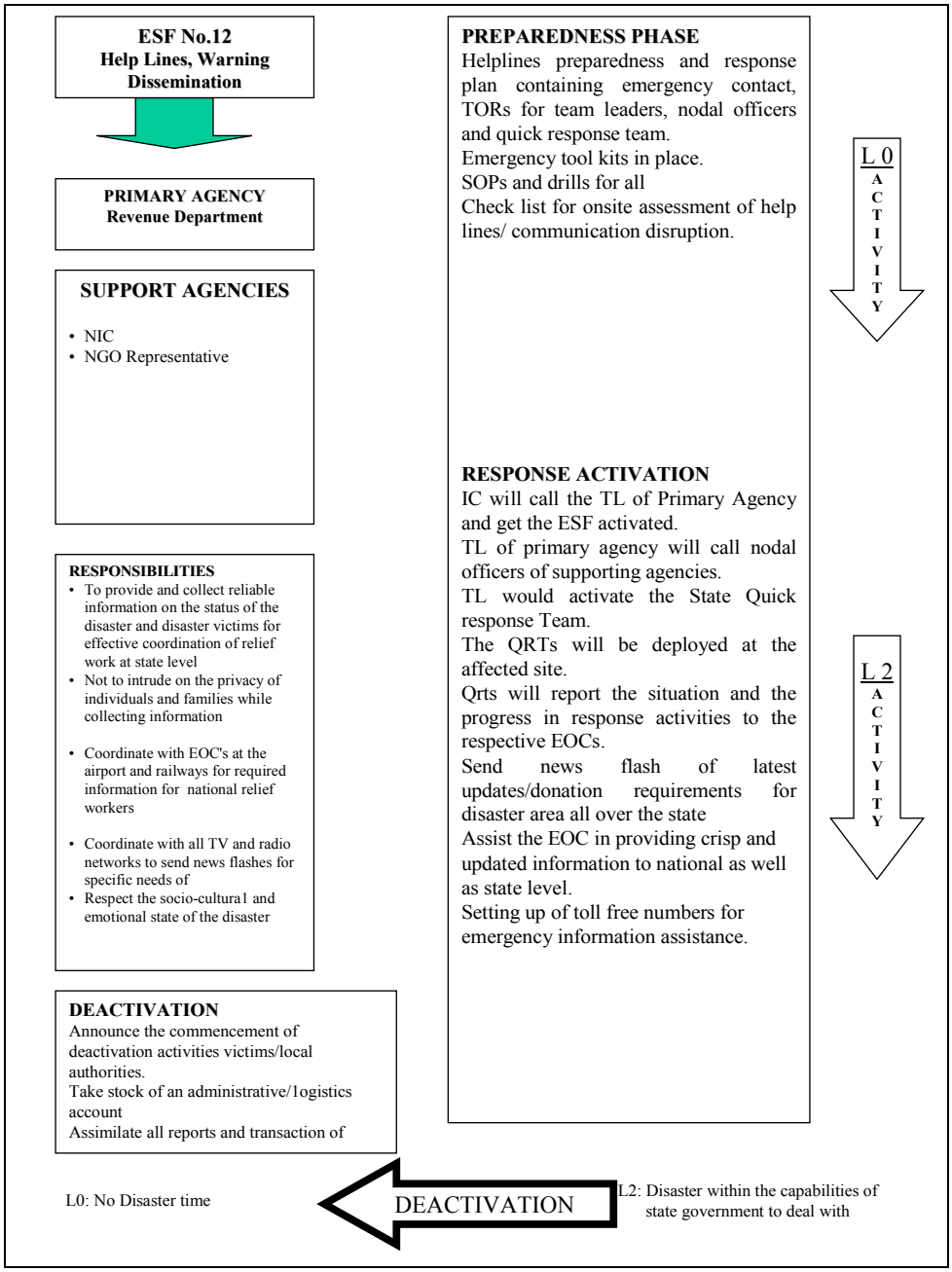
- Department of Information and Publicity
- Mahanagar Telephone Nigam Ltd. (MTNL)
- All India Radio (AIR)
- Doordarshan
- United News of India (UNI)
- Press Information Bureau (PIB)
- Press Trust of India (PTI)
- Indian Red Cross Society

SITUATION ASSUMPTIONS

- There may be a flood of information and confusion about the injured population.

The communication with affected area may be partially impaired

Response Framework



SOP OF NODAL AGENCY

- Upon finding out about any hazardous event, ESF-TL will contact the District/State EOC by any means possible (phone, wireless, personally)
- If asked to activate the ESF, Team leader (TL) will call nodal officers of supporting agencies of the ESF.
- QRTs will be activated and deployed at the affected sites.

- Coordinate with the different ESFs to get regular information in order to compile and prepare updates, situation reports, damage assessment reports, and media briefs
- Upon finding out about any hazardous event, Nodal officers will contact the ESF-TL / District EOC by any means possible (phone, wireless, personally)
- Provide support to the nodal agency / Incident Manager on-site.
- The agencies to mobilise their Quick Response Teams (QRTs)
- Activate and mobilise their personnel as per their SOP.

SOP OF QUICK RESPONSE TEAM (QRT)

- The QRT members will reach to the nodal office as soon as they will get instructions.
- QRT teams would reach to the site immediately after receiving instructions from the nodal officer
- On the site QRT members will take stock of the situation from the IC at the site and their counter parts.
- The QRTs will coordinate, collect, process, report and display essential elements of information and facilitate support for planning efforts in response operations.