



सत्यमेव जयते

# MOCK EXERCISES

CAPACITY BUILDING THROUGH FORMAL TRAINING



REFORMS THAT TRANSFORMED



**NATIONAL DISASTER MANAGEMENT AUTHORITY**  
MINISTRY OF HOME AFFAIRS, GOVERNMENT OF INDIA

# CAPACITY BUILDING THROUGH FORMAL TRAINING

## Introduction and background

### Absence of formal mechanisms for tackling disaster

India, with its vast geographical area of 329mha and varied geo-climatic conditions, is vulnerable to most types of natural hazards (floods; earthquake; cyclones) and manmade disasters (including chemical, biological, radiological and nuclear (CBRN), oil spills, forest fires). Prior to the Odisha super cyclone in October 1999 and the Bhuj earthquake in January 2001, disaster management in India was characterized by the following features:

- (a) The focus was on drought and famine.
- (b) There was no formal response mechanism, leading to severe shortcomings in tackling disasters. The overall approach was reactive and relief-centric.
- (c) There was no formal training (e.g., mock exercises) for capacity building to tackle diverse hazards.





Response agencies need to interact with their communities, and make them familiar with the essential drill of disaster response.



- Shri Narendra Modi, Prime Minister  
AMCDRR, 2016



### Guidelines for Incident Response System, for 'whole-of-the-government' response

In 2005, the Government of India enacted the Disaster Management Act, The Act proposed to establish disaster management authorities at national, state and district levels. Under its specified powers and functions, the National Disaster Management Authority issued guidelines for an 'Incident Response System' (IRS). IRS is intended to be the preferred disaster response mechanism for states/union territories (UTs) and their districts in the event of any type of hazard or disaster, big or small. Disaster management requires a 'whole-of-the-government' approach and response, and one of the main characteristics of the IRS is facilitation of such an integrated, multi-departmental, synergistic response.

### Capacity building

Post-2005, the NDMA began conducting mock exercises as a means of capacity building, most of which were held at the district level.

## Challenges in capacity building

In spite of these capacity-building measures, there was low awareness of the following aspects of disaster management:

- (a) Incident Response System (IRS), and incident response teams (IRTs).
- (b) Structuring of the teams/task forces/groups under the IRTs for response, relief and restoration tasks.

Enabling technologies for effective disaster management.

## Review of the Mock Exercise Programme

In mid-2016, a review of the Mock Exercise Programme was conducted at NDMA. This review observed that:

- ✧ As most of the mock exercises had been conducted at the district level, awareness and capacity building at the state/union territory level had lagged. This also affected the overall coordination of response to disasters.
- ✧ Although GoI had established a number of agencies for putting out hydrological, meteorological, seismic and geomorphological information, utilization by the states/union territories of the forecasts and alerts by the agencies was sub-optimal.
- ✧ There was lack of awareness among the states/union territories and their respective districts about agencies who are working on consolidating core data, hazard-specific data and geospatial data to support disaster management.



Earlier, in India, disaster management was 'response' centric. Now it is based on prevention, preparedness, action, relief and rehabilitation.



- **Shri Amit Shah**, Union Home Minister  
Conference of SDRF, Civil Defence,  
Home Guards & Fire Services (29 Jun 2019)



### Leading from the front - Hon'ble Prime Minister of India Shri Narendra Modi

The Hon'ble Prime Minister of India, Shri Narendra Modi, presented a ten-point agenda at the Asian Ministerial Conference on Disaster Risk Reduction held in November 2016 in New Delhi. The agenda was to provide an impetus to disaster risk reduction (DRR) efforts, both in India and the entire Asia-Pacific region. In this agenda, *inter alia*, the following points were emphasized:

- ✧ The need to leverage technology to enhance the efficiency of India's disaster risk management efforts.
- ✧ The need to build on local capacity and initiative, and take advantage of traditional best practices and indigenous knowledge.

### Restructuring of the Mock Exercise Programme

Taking into account the review of the exercise and the directions of the Hon'ble Prime Minister, NDMA decided to restructure its Mock Exercise Programme. This resulted in:

- ✧ Enhancement and expansion of the exercise to cover many administrative levels: It was decided that instead of the NDMA running mock exercises mostly at the district level, the exercises would henceforth be conducted at the state or multi-state level, with every district in each State/UT participating. This would ensure better integration and effective control by the states during disasters.
- ✧ Hazard risk vulnerability-appropriate mock exercises: Every state mock exercise would be based on the hazard risk of the individual State/UT and its districts. In specific cases, where hazard risk varies for different districts of the state, mock exercises would be conducted for individual districts too.
- ✧ Enhanced training content: Technologies relevant to disaster management and methods of leveraging them for disaster risk management would also be included in the training.



### Aims and objectives of the mock exercise

The aim of conducting mock exercises is to assist the States/UTs and their districts in building inclusive capacity to competently prevent, or mitigate, or prepare, or handle the aftermath of any hazard/ disaster utilizing standardized, pre-prepared mechanisms and formats, with pre-trained, pre-designated officials and nominated resources/equipment.

### Mock exercises – the methodology

Currently, mock exercises are part of a robust process that commences with the formulation of an annual calendar prior to commencement of the next fiscal. The current design of the mock exercise, and the subjects and aspects of disaster management on which training is imparted, are described next.

The table below shows at a glance the four-step process in a mock exercise, which is conducted by an NDMA Coordinator in conjunction with State/UT authorities:



Fig 1: Step-I of the Mock Exercise process – training of officials



Fig 2: Step-I of the Mock Exercise process - Orientation & Coordination Conference

Table 1: Mock exercise process

Step	Event	Participants
Step-I	<p><b>Training in the Incident Response System and associated aspects by the NDMA Coordinator:</b></p> <ul style="list-style-type: none"> <li>✦ <b>Part-I:</b> Reiteration of the importance of disaster management, its linkage to disaster risk reduction and sustainable development, and India's three-tier Disaster Response Mechanism</li> <li>✦ <b>Part-II:</b> Training in the Incident Response System, including how to:               <ul style="list-style-type: none"> <li>➤ Form Incident Response Teams (IRTs)</li> <li>➤ Structure strike teams/task forces/groups for response, relief and restoration</li> </ul> </li> <li>✦ <b>Part-III:</b> How to leverage technology in support of disaster management. This includes:               <ul style="list-style-type: none"> <li>➤ Resource mapping.</li> <li>➤ Building situational awareness.</li> <li>➤ Using geospatial resources.</li> <li>➤ Fusing hazard-specific data, damage assessment data and core data.</li> </ul> </li> </ul> <p>Orientation &amp; coordination conference: Here, the detailed modalities and preparations required for the impending mock exercise are discussed and finalised.</p>	<ul style="list-style-type: none"> <li>✦ <b>District-level:</b> Officials and other stakeholders – through video-conferencing</li> <li>✦ <b>State-level:</b> Officials and other stakeholders – through physical presence at the video-conference</li> </ul>
Step-II	Table-top exercise – conducted by the NDMA Coordinator	

Step	Event	Participants
Step-III	Mock exercise – by the NDMA Coordinator under the overall guidance of the chief secretary/additional chief secretary/secretary (disaster management) of the concerned state	Physical conduct/ participation at all levels as per charter of duties/responsibilities
Step-IV	<ul style="list-style-type: none"> <li>❖ After-action report by NDMA coordinator to NDMA.</li> <li>❖ Final report by the State/UT to NDMA.</li> <li>❖ Intimation of 'lessons learnt' and 'best practices' to the State/UT and, where required, to other States/UTs too</li> </ul>	NDMA, State/UT, jointly





### Aspects of disaster management emphasized during step-I training and practised in Step-II/III:

- ❖ How to build a reliable, fail-safe communications structure for disaster management operations.
- ❖ The three elements that will ensure an expeditious, credible response in the wake of a disaster:
  - ❖ A disaster-resilient emergency operations centre (EOC); its components, equipping and functioning.
  - ❖ Importance of 'situation awareness' in the immediate aftermath of a disaster, and means of attaining it.
  - ❖ Importance of 'resource mapping' during normal/pre-disaster periods, and means of attaining resource awareness during a disaster.
- ❖ The National Early Warning System (NEWS); agencies comprising it and the web portals they are running; the information put out by each; and how to leverage this information for effective disaster management.
- ❖ How to leverage ISRO's geoportal - Bhuvan and the National Database on Emergency Management (NDEM) portal.
- ❖ Utilization of the Indian Disaster Resource Network (IDRN).
- ❖ Importance and utilization of GIS platforms.



Fig 3: Step-II : Table-Top Exercise (TTE)



## Provision of funds to states/UTs for mock exercises

The Mock Exercise Programme is sustained by means of financial support provided to the states/UTs, with the NDMA allocating Rs. 1 lakh per district for conduct of a mock exercise.

## The COVID-19 pandemic and reorientation of the Mock Exercise Programme

The four-step mock exercise process, and particularly step-III, requires the physical presence/participation of a very large number of officials and other stakeholders, including the public. In March 2020, it became evident following the outbreak of COVID-19 that physical gatherings of persons would have to be avoided.

In keeping with the recommended safety measures, the NDMA then proactively devised a short yet comprehensive online training package. This online training comprises:

- ❖ A review of a state's disaster management plans, its State Disaster Response Force (SDRF), and medical plan, as also its preparedness to manage the primary hazard threat.
- ❖ Steps I and II of the mock exercise process (i.e., training on the IRS and conduct of a table-top exercise).
- ❖ COVID-19 advisories, particularly on how to manage and conduct disaster management activities during the pandemic.

The online training is conducted through video-conferencing with officials at the State/UT and district levels participating from their respective locations.

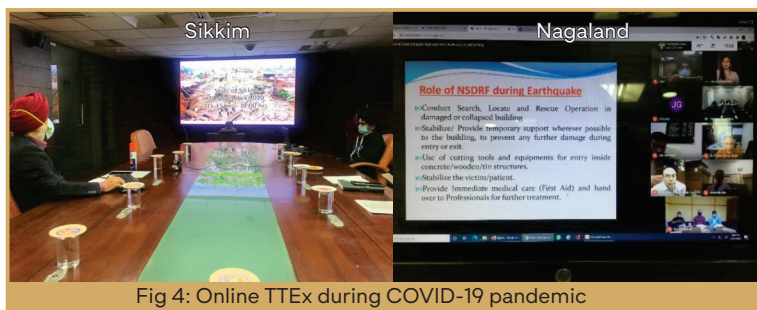


Fig 4: Online TTE during COVID-19 pandemic



In FY 2020-21, NDMA has already conducted such online training for over 27 States/UTs, as at the time of publication of this booklet. NMDA aims to address every State/UT by the end of the current financial year.

#### **Review by Hon'ble Home Minister**

It was on 30 June 2020 that the Hon'ble Home Minister of India, Shri Amit Shah, carried out a review of the country's disaster management activities and thereafter directed that mock exercises should be conducted in all districts of the country at least once every three years for the following purposes:

- ❖ To ensure that every district can constitute and field trained teams for disaster response.
- ❖ To test the efficacy of every district's disaster management plans and its preparedness component.
- ❖ To bring in greater cohesion and coordination amongst, and between, different stakeholders.

It was also directed that on the day of a district's mock exercise, the fire and emergency services of the concerned district and of the State/UT shall also visit schools in their jurisdiction and conduct mock drills in 10 to 20 pre-identified schools in the district.

## District-level Mock Exercise Programme by NDRF

In accordance with the directions of the Hon'ble Home Minister, the NDRF has been tasked with conducting mock exercises at the district level. This training is being implemented in phases, as indicated below:

Table 2: District-level programme

Phase	FY	Districts to be covered
Phase-I	2020-21 (1 Oct 2020 - 31 Mar 2021)	154
Phase-II	2021-22	Remaining districts
Phase-III	2022-23	

## Other initiatives in disaster management

Joint humanitarian assistance & disaster relief (HADR) exercises: The Hon'ble Prime Minister Shri Narendra Modi had, during the December 2015 Combined Commander's Conference (CCC), directed that HADR exercises be conducted by the Armed Forces, involving all stakeholders, including Central Armed Police Forces (CAPFs) and the civil administration, down to municipal level. These HADR Exercises are being jointly planned as an annual calendar and coordinated by the HQ Integrated Defence Staff (IDS) and NDMA. The aim of these exercises is to foster joint planning and preparation towards effective inter-agency collaboration during disaster rescue and relief operations. Consequently, a number of joint HADR exercises have been held. The details are as below:



Fig 5: Joint HADR exercises

**Table 3 : Joint HADR exercises**

Lead Formation	Main Participants	Scenario	Date
Indian Navy (Naval Station, Karwar)	Naval Station, Karwar, NDMA, civil administration other stakeholders	Tsunami	18–20 May 2017
Eastern Air Command, Shillong	IAF, Indian Army, NDMA, NDRF, CAPF, State of Meghalaya	Landslides	06–08 Jun 2017
21 Corps, Indian Army	Indian Army, IAF, NDMA, NDRF, CAPF, State of Telangana (cities of Hyderabad & Secunderabad), other stakeholders	Urban Flooding	12 Sep and 23 Sep 2017
Central Air Command, Allahabad	NDMA, IAF, NDRF, CAPF, State of Uttar Pradesh, other stakeholders	Floods	25-26 Sep 2018
Headquarters, Tamil Nadu & Puducherry Naval Area	NDMA, IAF, Indian Coast Guard, NDRF, CAPF, State of Tamil Nadu, UT of Puducherry, other stakeholders	Cyclone and Urban Flooding	02-05 Aug 2019

### International cooperation on disaster management

The Hon'ble Prime Minister of India, Shri Narendra Modi, has also stressed upon the following issues in his ten-point agenda on disaster risk reduction:

- ❖ Investment in global risk mapping for common understanding of disaster risks.
- ❖ Greater cohesion in international response to disasters.

Accordingly, as part of an international outreach and cooperation exercise in the field of disaster risk management, India has hosted and participated in a number of international disaster risk management programmes. Some of the important ones have been listed in the following table:

**Table 4 : International Cooperation**

Event	Hosted by	Participants	Date
Signing of Memorandum of Association (MoA) on establishment of BIMSTEC Centre for Weather & Climate (BCWC)	India. (India had put forward a plan to establish the BCWC)	BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical & Economic Cooperation)	4 May 2015
South Asian Annual Disaster Management Exercise (SAADMEx-2015)	India (at NCR/Delhi)	SAARC Countries (delegations and rescue teams from each of the SAARC nations i.e., Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka)	23–26 Nov 2015
1 <sup>st</sup> BIMSTEC Annual Disaster Management Exercise	India	19 representatives from the member states	10–13 Oct 2017
Meeting of the Indian Ocean Rim Association (IORA) Group on Disaster Risk Management	India (NDMA, in collaboration with the Ministry of External Affairs, NDRF and Indian Ocean Rim Association)	India, Australia, Bangladesh, Indonesia, Malaysia, Mozambique, Oman, Sri Lanka, South Africa	5–6 Feb 2019

Event	Hosted by	Participants	Date
Shanghai Cooperation Organization (SCO) Joint exercise on 'Urban Earthquake Search & Rescue', 2019, and 10th Meeting of Heads of SCO Countries' Departments of Disaster Prevention	India (New Delhi)	All member-countries of SCO	1-8 Nov 2019
2 <sup>nd</sup> BIMSTEC Disaster Management Exercise	India (Puri / Bhubaneswar, Odisha)		<ul style="list-style-type: none"> <li>✧ Preparatory Meeting – 15–16 Nov 2019</li> <li>✧ Disaster Management Exercise - 11–13 Feb 2020</li> </ul>

### Civil Defence and Community Mobilisation

In order to augment the in-house response capacity of states/UTs, emphasis is also being laid on the following schemes:

- ✧ Aapda Mitra' scheme.
- ✧ Training of SDRF and civil defence volunteers.
- ✧ Integration of NCC, NYKS, NSS, anganwadi workers, NGOs with specialization, Panchayati Raj Institutions, urban local bodies, etc., into the IRT's task forces/groups for response, relief and restoration.



Fig 6: Training of civil defence volunteers

## The capacity building programme – a summary

The current capacity building programme is briefly summarized below

Table 5: Capacity-building programme

Institution / Organization	Activity
Lal Bahadur Shastri National Academy of Administration, state administrative training institutes and CAPFs/police academies	Foundation course in disaster management and Incident Response System
National Institute of Disaster Management	Progressive courses on Incident Response System and specific appointments in Incident Response Teams
National Disaster Response Force	Familiarization Exercises
	Mock drills for specific response force
	Training of state disaster response forces, Aapda Mitra, civil defence volunteers
	Schools – training in safety skills for a disaster
	District-level mock exercises
National Disaster Management Authority	Mock exercises at state/UT Level and/or multi-state Level



“ I am glad to note that with the active support from NDMA, the Government of Tripura was able to organise theme-based mock exercises (earthquake & flood) at the State, district and sub-district levels since the last few years. We need such continuous support from NDMA for testing our disaster management efficacy and for moving forward towards a disaster-resilient Tripura. The Government of Tripura is grateful for the initiative and support.”

- Shri Saradindu Choudhuri, IAS,  
Special Secretary, Revenue (Disaster Management)  
Government of Tripura





“ The State of Arunachal Pradesh had under the guidance of NDMA, conducted state level training on disaster management (earthquake scenario). The training was attended by all concerned officials, organisations and Departments of Government of Arunachal Pradesh at state and district level, NDRF, CAPF, Armed Forces including the Border Roads Organisation and representatives of BSNL, local bodies, NGOs etc. The training was very useful as it brought out many lessons and led to adoption of many best practices ”

- Shri Dani Salu,

Secretary, Disaster Management,  
Government of Arunachal Pradesh

### Benefits of the Restructured Mock Exercise Programme and Related Initiatives

The restructured Mock Exercise Programme, the District Mock Exercise Scheme and the Joint HADR Exercises aim to optimize disaster risk management, and have resulted in the following outcomes:

- ✦ **Increased granularity:** mock exercises are now hazard-vulnerability-appropriate: Every mock exercise being conducted now is designed around the primary hazard risk of the State/UT and its districts. In the case of certain states, where hazard vulnerability varies for different districts, mock exercises are also conducted for individual districts.
- ✦ **Dynamic disaster management plans:** The exercises are ensuring that States/UTs and districts systematically evolve, implement and review their respective disaster management plans.
- ✦ **Resource awareness:** Clear identification of gaps in resources, manpower, equipment, communication, systems and protocols has been done, and positive feedback for upgradation of disaster management plans has been provided.



- ❖ **Greater stakeholder synergy:** The mock exercises have helped institutionalise the coordination between States/UTs, district authorities and all other stakeholders, including response forces like the National Disaster Response Force (NDRF), Central Armed Police Forces (CAPFs) and Armed Forces.
- ❖ **Leveraging of technology:** There is greater understanding and progressive induction and use of disaster management-related technologies such as UAVs/ drones, satellite imagery, 'ham' radio networks, SATCOM, geographic information technologies (GNSS; remote sensing) and GIS platforms. There is also greater understanding of the linkages between disaster risk reduction, disaster management and sustainable development.



“ The Nagaland State Disaster Management Authority (NSDMA) expresses immense gratitude to NDMA for the support extended in the training and capacity building programme. The support and guidance provided by NDMA has tremendously strengthened the disaster risk reduction initiatives and disaster management activities in the State of Nagaland. NDMA has guided the NSDMA in conducting a mega state-wide emergency response exercise, the Nagaland Emergency Preparedness Exercise (NePEX), Community First Responder (CFR) training, etc.”

- Shri Johnny Ruangmei,  
Officer on Special Duty,  
NSDMA, Government of Nagaland

- ❖ **Benefits to the community:** As outlined in the section titled 'Aims and Objectives', the benefits of the mock exercises reach to the community level when there is actual occurrence of a disaster. Some of the benefits are described below:
  - ❖ Less damage to life and property from disasters than used to be witnessed earlier.
  - ❖ The sustained effort of conducting mock exercises also involves community volunteers in coordination with the local administration. By participating in the familiarisation exercises (FAMEx) and mock exercises for specific hazards, the community's level of awareness about these disasters increases. This is enhancing the community's preparedness and resilience.
  - ❖ The programme has immensely contributed in capacity building of state disaster management authorities (SDMAs), district disaster management authorities (DDMAs), line departments, urban and rural local bodies, first responders and community volunteers.





“India's motto is  
'Reform, Perform, Transform'.”

Prime Minister **Shri Narendra Modi**