

MASTER OF PUBLIC HEALTH
Johns Hopkins Bloomberg School of Public Health

PRACTICUM REPORT

By

Dr. Shruti Dabas

Cohort-9

2021-2023

Under the guidance of

Dr. Nutan Prabha Jain

Professor

IIHMR University

&

Dr. Mukta Girdhar

Senior Consultant

Delhi Disaster Management Authority

CERTIFICATE BY SCHOLAR

This is to certify that the project named “Building Resilience against Disasters in NCT of Delhi, with a focus on earthquakes” submitted by me, Dr. Shruti Dabas, Enrollment No.IIHMR- U/07/2021-2023/0056 under supervision of Dr. Nutan Prabha Jain and Dr. Mukta Girdhar for award of Master of Public Health carried out during period of 20th March, 2023 till 26th April, 2023 represents my original work and has not formed the basis for award of any diploma, degree, fellowship, associateship, titles in this or any other institute or other similar institutions of higher education.

Dr. Shruti Dabas
MPH Cohort -09
2021-2023

CERTIFICATE BY ORGANISATION

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Dr. Shruti Dabas, a student of Master of Public Health (MPH) offered by IIHMR University, Jaipur in co-operation with Johns Hopkins Bloomberg School of Public Health, USA has undergone practicum internship at Delhi Disaster Management Authority starting from 20th March 2023.

Dr. Shruti has successfully carried out the roles and responsibilities assigned to her during the training period under the guidance of Dr. Mukta Girdhar, Senior Consultant DDMA.

As part of her internship, she has been exposed to various activities and departments involved in implementation of public health schemes and successful conduct of state level meeting and exercise. She has actively assisted in planning out important activities aimed towards building resilience to disasters in NCT of Delhi.

We find her to be a dedicated and smart individual with a curious mind. We wish her all the best for her future endeavors.

Dr. Mukta Girdhar
Senior consultant,
DDMA



SL No.: /402610



NATIONAL INSTITUTE OF DISASTER MANAGEMENT
(Ministry of Home Affairs, Govt. of India)
New Delhi

CERTIFICATE

This is to certify that

Shruti Dabas

has participated in the face to face training programme on **"State level Consultation on Updation of Disaster Management Plans of Delhi with Focus on Earthquakes and Urban and Industrial Fires"** from **18 Apr 2023 to 20 Apr 2023** organized by **National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India** in collaboration with **Delhi Disaster Management Authority**


Dr. Garima Aggarwal
Senior Consultant RID
NIDM


Sushil Singh IAS
Special CEO
Delhi Disaster Management Authority


Rajendra Ratnool, IAS
Executive Director
NIDM

ACKNOWLEDGEMENT

The present work was done under the guidance of Dr. Nutan Prabha Jain, Professor, IIHMR University and Dr. Mukta Girdhar, Sr. Consultant, DDMA HQ.

I would like to express my sincere thanks and gratitude to my faculty advisor Dr. Nutan Jain, who has always supported and motivated me throughout the practicum journey and mentored me along the way. I would also like to thank my practicum preceptor Dr. Mukta Girdhar for giving me the opportunity to learn under her. I want to express my sincere thanks truly being a guiding force during this journey of mine.

I'm grateful to the entire faculty at IIHMR as well as Johns Hopkins Bloomberg School of Public Health for being such excellent teachers and guides. Their constant support and encouragement have been instrumental in pushing me to do better during the course.

I am also thankful to my family who has supported me in this endeavor of mine and has always been my biggest cheerleader.

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1. ABOUT THE ORGANISATION

The Delhi Disaster Management Authority (DDMA) was established on March 19, 2008, under the chairmanship of the Hon'ble Lieutenant Governor of Delhi, to create a framework that is practical and effective for management of disasters in Delhi. The Divisional Commissioner of Delhi is the Convenor of the DDMA and the head of the nodal department for disaster management in Delhi. In the broader perspective, the framework should give way to unified command, control, and coordination, with the ability to meet Delhi's needs in regard of disaster management as well keep in view the legalities of the same (systems that focus on assigning roles to every part of government and institutions, work on spreading awareness, capacity building and management of disasters at all levels through specialized teams as well as an Incident command System)

Key priority areas

- Spreading awareness
- Develop plans for Preparedness at the level of community.
- Develop response plans at level of administration.
- Building capacity of govt. institutions in management of disasters and forming a link between govt. and the civil society.
- Develop a centralised database on vulnerability, risk & hazard of Delhi.
- Development of Emergency Operation Centre at the level of State & district to coordinate activities for relief & rescue during the time of emergency¹.

2. PRACTICUM OBJECTIVES

As a part of the practicum opportunity provided by the Delhi Disaster Management Authority, my role was to assist my preceptor in the ongoing projects at the department. At the time of my joining, two projects were going on simultaneously:

1. Multi state Mock Exercise for earthquake in NCT of Delhi
2. Upscaling of AAPDA MITRA Scheme (Community volunteers).

Both these activities undertaken by the DDMA were aimed towards increasing the preparedness of the community towards unforeseen disasters.

The overall goal of the practicum was to put into practice certain learning objectives from MPH curriculum. The learning objectives were:

1. To build upon and enhance communication skills:

DDMA is a govt. organization where various stakeholders are engaged to achieve desired outcomes. Principles of management and project management modules from my course curriculum were instrumental in developing my stakeholder analysis and communication skills. The first project that I worked on during my tenure at DDMA HQ was the Multi state level Mock Exercise for Earthquake in NCT of Delhi. For this exercise, co-ordination with stake holders was an essential element. I utilized my skills that I gained at IIHMR to identify stakeholders and formulate communication plans for the same. I even interacted with some district authorities to go over the planning and gather any missing information. Taking help from what I learnt during the module of behavioral communication, I assisted in formulating communication plans aimed towards public to mitigate any sort of panic during the mock drill. I also designed informative posters for the same, to be shared on social media and other electronic media. For AAPDA MITRA scheme. I have been given the responsibility of preparing a questionnaire for post training period to gauge the knowledge levels of the volunteers as well as to decipher which learning methods were most useful. Keeping the learnings from behavioral communication in mind, I shall be preparing the questionnaire in both Hindi and English keeping in mind the varied educational as well as social backgrounds of the volunteers. Keeping with the ethical aspects of data security, consent will be obtained from all individuals and the data will be handled in the most secure manner.

2. To enhance skills for communicating with Community / stakeholders:

During my tenure at DDMA HQ, I also attended a 3-day state level meeting/training program for updation of state disaster management plan. I interacted with various community members as well as individuals from other organizations. My interaction with them helped me better understand the loopholes when it comes to disaster management. Human Resource module in MPH had taught me how to interact with various individuals from various level of the system as well as backgrounds. I learnt that it is always as a unit that you can work towards a solution and that is what stands true for disaster management as well. Due to my learnings from that course, I was able to better understand and navigate communications like that where initially the discussions started with responsibility shifting but ended on a note of solidarity. Not only HR, but almost all my subjects during MPH taught me to be sensitive of people's background, communities, and over-all individuality. Those learnings helped me extract the most out of this experience as when you're on ground level, your understanding of community needs is of utmost importance.

3. To develop Policy development/Program planning skills:

The Mock Exercise for earthquake was one of its kind exercises. A lot of planning and preparation went into it as a lot of high-level officials were a part of the evaluation committee. The skills that I learnt from project management as well as strategic management were very useful to me to systematically organize the work and complete each task step by step. I assisted our team at DDMA for successful organization of the Mock Exercise by being of help in whatever capacity that was required of me during that time. I also assisted my preceptor in preparing meeting documents, presentations for DDMA HQ and the final report of the Mock Exercise.

In AAPDA MITRA scheme, the questionnaire being developed by me utilizing skills from behavioral communication would be instrumental in developing any kind of suggestions of change in the training program.

PRACTICUM JOURNEY- BUILDING RESILIENCE AGAINST DISASTERS IN NCT OF DELHI, WITH A FOCUS ON EARTHQUAKES

3.MULTI-STATE MOCK EXERCISE FOR EARTHQUAKE IN NCT OF DELHI

a. Introduction

The Delhi NCR has the Indo-Gangetic alluvial plains to its north and east, has a desert (Thar) to its west, and Aravalli hills to the south side. Delhi consists of flat terrain for most part, except for a low NNESSW trending ridge that is an extended part of Aravalli hill ranges of Rajasthan and with the river Yamuna flowing south in the eastern area of the city. The area is divided into three major units based on its geo-morphology, namely the Delhi ridge, older alluvium, and newer alluvium².

The seismicity of Delhi seems to be linked to a geological structure which is called the Delhi-Hardwar Ridge. It corresponds with the extended part of the Aravalli belt beneath the Ganges basin's plains(alluvial) to the northeastern part of Delhi towards the Mountains of Himalaya. Delhi region has a long history of seismicity wherein reports of it being shaken by earthquakes of both local and Himalayan origin are common^{2,3}

The capital is distinguished by numerous dominant features, including the Himalayan Main Boundary Thrust (MBT) and Main Central Thrust (MCT), the Delhi-Hardwar ridge, the Delhi-Lahore ridge, the Aravalli-Delhi fold, the Sohna fault, the Mathura fault, the Moradabad fault, and the Rajasthan Great Boundary Fault, as well as several minor lineaments. It is difficult to attribute Delhi's seismicity to a specific tectonic unit. Several lineaments appear to be seismically active at the same time, but to varying degrees^{2,4}.

Earthquake risk mitigation has gained attention worldwide, in recent years, this can be attributed to the devastating earthquakes that caused the loss of thousands of lives as well as massive economic losses to infrastructure and industry. Earthquake is one of the most destructive natural disasters in the world, and no one can claim to have accurately predicted it. Many earthquakes in the past have left many lessons to be learned, emphasizing the importance of planning ahead of time for this disaster².

Keeping in mind that Delhi falls in the zone IV area, has high seismic activity and generally most earthquakes here are of 5-6 magnitude with a few having magnitude of 6-7 and occasionally 7-8 magnitude, a mega mock exercise on earthquake was jointly organized by the DDMA and NDMA, Government of India on 24th March 2023.

b. Objectives of the Mock Exercise:

-  To review the preparedness & response times of different Emergency Support Functionaries (ESFs) in the districts of Delhi for any possible disasters to identify areas for further improvement.
-  To assess the functions of all Emergency Support Functionaries (ESFs) in managing disasters in the districts.

c. Stakeholder Analysis Process

For successful conduction of the Mock Exercise, a step-by-step plan was devised.

Two meetings were organized before the Mock Exercise to get a run up on the preparations and for engagement of stakeholders. First one was a co-ordination and orientation meet and the second one being a Tabletop Exercise. To kickstart the preparations:

First, major stakeholders were identified which included:

1. Lieutenant Governor of Delhi: The DDMA is governed by an apex committee which is headed by the Lieutenant Governor of Delhi.
2. Principal Secretary Revenue Department: The principal secretary of Revenue department is an active member of the governing apex committee and is crucial for assigning funds for the mock Exercise.
3. NDMA –The National Disaster Management Authority (NDMA), led by India's Prime Minister, is the apex body for disaster management in the country. The NDMA is charged with developing policies, plans, and guidelines for disaster management to ensure a timely and effective response to disasters.
4. District Disaster Management Authority (All districts): District DMA was established by the Parliament of India under Section 25 of the Disaster Management Act, 2005. L.G. has notified the same under F. DRM/ADM (HQ)/DM/Rules/2006 (i). The DDMA, East, is the district's apex planning body in charge of disaster risk reduction initiatives⁵.
5. Public Works Department (PWD)- This is a premier agency of the Delhi government responsible for the planning, design, construction, and maintenance of government assets in the built environment and infrastructure development. Hospitals, schools, colleges, technical institutes, police buildings, prisons, courts, and so on are examples of assets in the built environment; assets in infrastructure development include roads, bridges, flyovers, footpaths, and subways, among others.⁶

During a disaster, public works workers work closely with disaster management teams to assess damage, identify solutions, and put them into action. During major events, water supply and transportation/access are frequently two critical areas of focus for public works workers. The Public Works Department has been asked to send in heavy machinery and laborers to clear the rubble and allow rescue or evacuation crews access.

6. Delhi Fire Service Department: Fire Department in NCT of Delhi serves the people of Delhi by providing firefighting and rescue services. Govt. of NCT of Delhi is the body of administrative control for the Fire Service Department. In case of emergencies. In any emergency, the role of fire services is critical. In fact, fire services are used not only for firefighting but also for rescue operations as part of emergency services in the developed world⁷.
7. Civil Defense Department: The goals of Civil Defense are to save lives, minimize property loss, maintain production continuity, and boost public morale. During times of war and emergency, the Civil Defense organization plays an important role in protecting the hinterland, assisting the Armed Forces, mobilizing citizens, and assisting civil administration. Over time, the concept of Civil Defense has evolved from damage management against conventional weapons to include threat perceptions against nuclear weapons, biological and chemical warfare, and natural and man-made disasters⁷.
8. Police Department: Delhi Police Department was recognized as an important stakeholder for the Mock Exercise as in case of an emergency, maintain law and order becomes important. Also, police department plays a major role in assessing the extent of damage, search and rescue and establishing communication in case of power outage. The NDRF and Police Department in 2022 signed an MoU for training of police professionals in disaster management⁸.
9. National Disaster Response Force- The NDRF is a distinguished, one-of-a-kind force that operates across the country under the Ministry of Home Affairs, Government of India, under the overall command, control, and leadership of the Director General, NDRF. It is a dedicated force for disaster response related activities, and hence a positive stakeholder for the Mock Exercise⁹.
10. National Seismology Centre- The National Center for Seismology is the GoI'S nodal agency which monitors seismic activity in India. NCS maintains a National Seismological Network of more than 150 stations, each with cutting-edge technology and spread across the country. It was recognized as the main source of information for earthquake and hence a major stakeholder for the ME¹⁰.

11. Media: Media is an important stakeholder for any kind of events that are meant for preparedness and awareness. So, the right kind of publicity was imperative to get the focus on issue at hand.
12. General population: Since this drill was done in public setting, general population was identified as an important stakeholder.

After identification of the stakeholders, they were arranged into a framework based on the power and influence that the stakeholders possess (Fig-1) . Based on that, an approach to management of these stakeholders was decided.

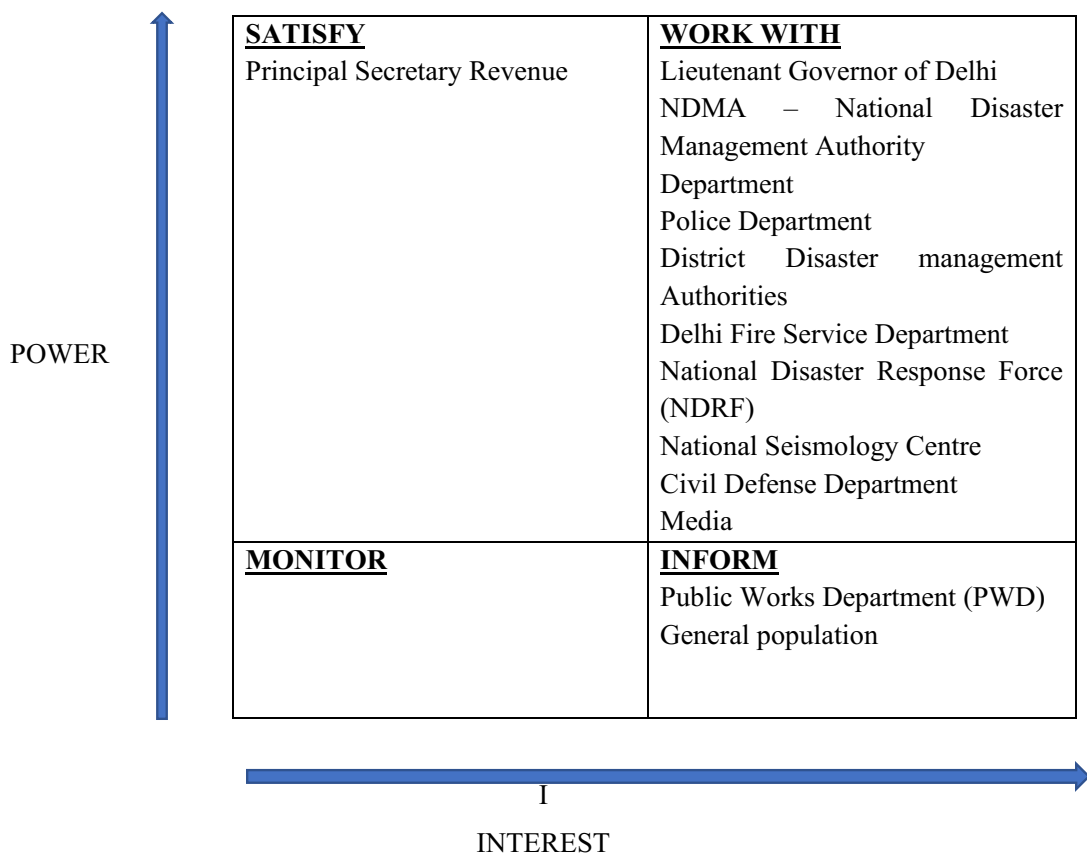


Fig 1: Stakeholder analysis

d. Communication Strategies:

Based on the framework above, communication plans were decided for all the stakeholders.

The Principal Secretary revenue was briefed about the schedule and agendas of meeting preceding the mock Exercise as well as about the Mock Exercise personally by Senior Consultant from DDMA and NDMA.

For the right upper quadrant stakeholders, official notification signed by the Apex board members of the Delhi Disaster Management Authority were emailed to them to request their enthusiastic participation in the Mock Exercise. Further individual district authorities were contacted over call and email both for obtaining necessary information regarding the Exercise. All the 11 respective districts were required to fill a form provided by the State authority, to maintain bilateral communication.

The Public works department was informed about the mock exercise through emails and a presentation regarding protocols on earthquake was asked from them as an input to the meetings preceding the mock exercise.

The general population was informed of the mock drill through posters shared on social media platforms. This was done to ensure no panic situation arises among the masses during the exercise.

Many other actions were also taken by the Disaster Management Cell, Department of Revenue, to engage the stakeholders for the Mock Exercise. A WhatsApp group was also created with all the members of the State IRT, Observers and the staff of district DDMA's. Posters and other information material regarding the Mock Exercise was circulated through these WhatsApp groups and other social media platforms. Apart from correspondence, a virtual meeting was also organised with the stakeholders to discuss the Mock Exercise.

Co-ordination and orientation meet

A Co-ordination and Orientation meet was organized on 18th March, 2023 regarding the same. This was to sensitize all the stakeholders to the need of the impending mock exercise and spur them into action for the same. The meeting was attended by all the senior officials from the stakeholder organizations including the Principal Secretary Revenue department and special CEO of DDMA HQ. The need of the exercise was highlighted and there were discussions on the powers vested with the District Administration under Section 30 of the Disaster Management Act, (2005). The districts were instructed to be prepared with their Incident Response Teams for the exercise.

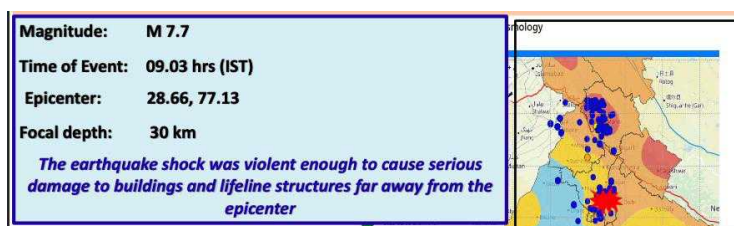
e. Table Top Exercise

Following the Orientation and Coordination conference, a Tabletop Exercise was held on the 22nd of March 2023 under the chairmanship of the worthy Principal Secretary (Revenue) to the Government of the NCT of Delhi. All 11 districts and their respective Incident Response Teams participated in the meeting via Video Conferencing (VC). This exercise drew many personnel from both the state and district levels. During the first half of the meeting, all the stakeholder organizations presented the participants with their plans in place in case of a disaster. The second half of the meeting was meant for briefly describing the sequencing and modalities of various disaster situations and scenarios developed at the state level and to be presented to district administration/line departments. DCs/line departments were expected to elicit actions and generate appropriate responses. The aim of the exercise was to:

- Exercise and rehearse key disaster managers in their roles and responsibilities
- Discern gaps prior to the ME
- Evolve viable response plans

f. Mock Exercise

The Mock Exercise was planned in 11 districts of NCT of Delhi. DDMA HQ instructed District Disaster Management Authorities of individual districts to choose five incident sites, one staging area and one relief Centre for their respective districts. These lists were sent to the HQ with details of their nodal officers. A hypothetical scenario with hypothetical damage reports (Dig-1) was handed to every district to plan out relief activities



Dig 1- Hypothetical scenario for earthquake

Preparatory Actions:

Setting up of EOC (Emergency Operations Centre) : At State level, the Emergency Operation Centre (EOC) established at DDMA HQ was set up with various communication

systems like Wireless system, VSAT, ERSS, fixed line phones , HAM radio, computers and laptops and a functional IRS (Incident Response System) . All the districts were also instructed to set up a fully functional EOC with an active Incident Response System.

Establishment of Sections of Incident Response System: Different sections of the IRS were established; which included section for Planning, Operations & Logistics. The IRT members/representatives as per the State notified IRT were deployed in their respective sections for the coordination with the districts for assessment of damage and loss reports and effective response. The copies of IRS Training Module were placed in the State Emergency Operations Centre (SEOC). At the State HQ, Chief Observers were deputed from ITBP, NDRF and Army.

Day of the Exercise

NDMA reported the occurrence of hypothetical Earthquake of magnitude 7.7 on the Richter Scale at 9:03 A.M. The first response was to “Duck, Cover, Hold” and evacuation. After ensuring safety of everyone on site, the SEOC was activated immediately and information regarding earthquake was communicated to the State Incident Response Team members. Simultaneously, all the District EOCs were contacted and the report of the damage and loss were sought by the SEOC both through wireless sets and landlines. Copy of the earthquake bulletin issued by NDMA for the hypothetical earthquake is attached below (fig-1).

Following the announcement, all the respective districts started with the exercise at the appointed incident sites.

All districts were instructed to set up an Emergency Operation Centre and be in contact with the State EOC post reports of the earthquake. The activities taking place were live streamed to the SEOC through video call. Observers from NDRF, ITBP were appointed for all the incident sites to observe the activities during the exercise. A printed Performa was given to all the observers for their observations.

The DDMA HQ and NDMA officials from the State Emergency Operation Centre monitored the activities through live stream and visited 5 sites for surprise inspection to see the drill live. The drill was then called off by NDMA at 12:30 P.M.

Following the drill, a debriefing session was then held at SEOC where all the District Magistrates presented the report of their individual districts, along with any observations. The observers also presented their reports and later, a statement was released to the media regarding the same. Following the mock exercise, a detailed report was then formulated by

the department describing the activities undertaken for a successful multi-state level Mock Exercise.

4. UPSCALING OF AAPDA MITRA SCHEME (Community Volunteers)

4.1 Introduction

India has historically been prone to natural disasters due to its unique conditions when it comes to its geo-climate. Floods, cyclones, landslides, and earthquakes are common occurrences in the country. Almost 58.6 percent of the total landmass is vulnerable to earthquakes of moderate to very high intensity; nearly 5,700 kilometers of coastline is prone to tsunami (the total being 7,516 kilometers); over 12 percent of land (40 million hectares) is at risk of floods and river erosion; and areas of the hilly region are vulnerable to avalanches and landslides.

In the event of a disaster or emergency, the community must respond immediately before any government agencies and support arrive or some other help from outside is mobilized. As the community serves as the immediate surroundings, the first responders are usually the community members. Keeping this in mind, it is critical that there is adequate community awareness and preparedness, particularly among those who live in areas of the country that are most vulnerable to natural disasters¹¹.

Community volunteers can have a huge impact in disaster response because the damage, whether human or economic is greatly influenced by the initial response to a disaster. As a result, there is an urgent need to train these volunteers in basic disaster management skills so that they can be prepared to respond quickly, efficiently and further assist emergency functionaries in operations for rescue and relief^{11,12}.

The AAPDA MITRA scheme is designed to teach volunteers from the community the fundamental skills required to efficiently respond to the immediate needs of the community in case of a disaster. Basic techniques taught during the training can be used by these volunteers to save lives during disasters^{11,12}.

4.2 Objectives:

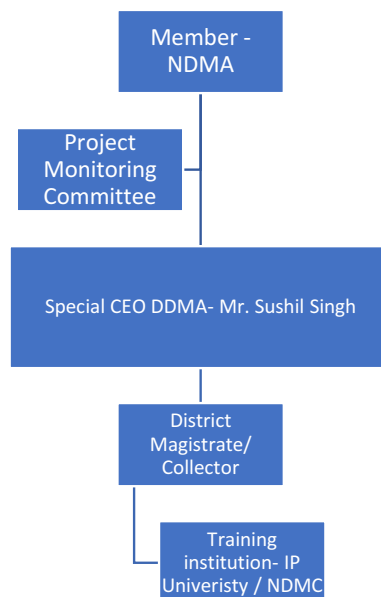
1. To train 1800 volunteers in the NCT of Delhi
2. To regularly update the standardized training module
3. To empanel institutions for training of selected volunteers
4. To provide each trained community volunteer with a personal protective equipment/emergency responder kit as well as Group Insurance covering Life and Medical Facility.

5. To establish a District/Block level Community Emergency Essential Resource Reserve containing equipment essential for search and rescue, kits for first aid, and so on^{11,12}.
6. To develop an Information Management System (inclusive of software, inventory database, and knowledge tools, among other things) for ongoing training courses, refresher courses, and the deployment of trained human resources during disasters in collaboration with the central govt^{11,12}.

4.3 Expected Outcomes

- Increased community response capability
- Increased number of trained volunteers equipped with Emergency Responder Kits;
- Availability of Emergency Essential Resource Reserves at the district level
- State-level training capacity has been enhanced.

4.4 Project Management and Monitoring for the State of Delhi (Dig:2)



Dig 2: Organogram for hierarchy of reporting for AAPDA MITRA scheme for NCT of Delhi

4.5 Eligibility Criteria for selection of volunteers

- Age- Between 18- 40 (relaxation may be provided for special cases, such as retired)
- Should be a resident of the concerned district
- Education- Passed the 7th standard minimum
- Medical fitness certificate is mandatory
- 20% participants to be from NCC, Bharat scouts and guides, NSS. Preference to be given to ex-servicemen, civil defense, fire-services, home guard.
- Gender no bar
- Prior experience preferable

Criteria for deciding number of volunteers

S.no.	Population	Number of volunteers
1.	>30 lakhs	500
2.	10-30 lakhs	300
3.	5-10 lakhs	200
4.	<5 lakhs	100

Criteria for selection of training institution

- A lecture hall with a seating capacity of at least 30 people.
- A Training Hall for hands-on instruction.
- Fundamental Flood/Earthquake/Cyclone/Landslide Rescue Equipment.
- Minimum of 8 Instructors who have completed the NCDC's Flood/Cyclone/Landslide/Earthquake Disaster Responders Programme or any other Specialist Training Institution.
- A water pool or tank for practical training in the use of Flood Rescue Equipment and the learning of various techniques.
- Residential units with dining facilities for a total of 30 inmates.

Based on the above criteria, two organizations have been selected by the NCT of Delhi for training of AAPDA MITRAS. Funding for the training and training material is being provided by NDMA.

- Guru Gobind Singh Indraprastha University, Delhi

- National Skill Development Centre, Delhi

4.6 Project Activities

State level:

A standard operating procedure was provided by the NDMA for step-by-step implementation of the scheme. Following this, an MoU was signed by the NDMA and DDMA to govern the implementation of the scheme. Post signing of MoU, funds were released by the NDMA according to its predecided schedule (Table 1)

Funds released to the state	Milestone
10%	Post signing of MoU
50% of the total sanctioned funds	After submission of progress report, and plan of action.
40% of the total sanctioned funds	Post submission of utilization certificates of 75% of total sum received, statement of expenditure and progress report.

Institution level:

1. Printing of training modules provided by NDMA
2. Preparing ID cards for participants
3. Preparing certificates for the participants
4. Provision of Emergency responder kit to all participants
5. The training institution will also furnish documents like list of participants with contact details, statement of expenditure, IEC material used during training.

4.7 Current Progress

The MoU between Delhi Disaster Management Authority and NDMA was signed in early 2022. Following this a proposal for plan of action with a detailed focus on expenditure of individual volunteers and districts was submitted to the NDMA for approval. The plan was approved, and further scheme activities were initiated.

The selected institutions were granted the funds in March 2023 to commence training at the individual institutions. Also, all 11 districts are to be issued a set amount of funds for preparation of their Emergency Response Reserve.

The first batch of training commenced at both the organizations from the last week of march. Indraprastha university is currently training a batch of 100 volunteers and NSDC has a batch of 250 volunteers. In total Indraprastha will train 600 volunteers while NSDC will train 1200 volunteers. It is a 30-day training where the stay and food will be provided by the training organization. The curriculum of the training is based on the guidelines provided by the NDMA which emphasizes focus on certain areas. The focus areas being:

- Basic concepts of Disaster Management
- Disaster preparedness
- Earthquake and safety
- Lifting and stabilizing load
- Basic Search and rescue
- Fire Safety
- Flood/Lightening/Thundering/Drought
- Community Based First-Aid
- BLS/CPR
- Control Bleeding and wound care
- Musculoskeletal injuries
- Lifting and moving patients
- Snake bites and animal bites
- Rope rescue techniques and improvisation
- Nuclear/ Chemical hazards
- Heat Wave and cold wave

The training is to be done through theoretical teaching as well as demonstration and practical as well. The institutions are mandated to send weekly updates to the DDMA HQ regarding the training and its progress. Following the completion training, a questionnaire that is being developed at the DDMA HQ will be utilized to assess the knowledge of the volunteers.

5.LEARNINGS FROM MY PRACTICUM EXPERIENCE

Delhi Disaster Management Authority is the implementation arm for National Disaster Management Authority. In college we were taught how to do in-depth planning for any event or program. During my tenure here at DDMA, I have learnt how to put that planning into action. It taught me how even if you plan for everything, there might still be things that go wrong and how to tackle those situations if it happens. So, it taught me to always have contingency plans in place.

Delhi has 11 districts, and those 11 districts are prone to different disasters due to its geographical setting. My time here also taught me how important it is to factor in diversity when planning for the population. Delhi is prone to all kinds of disasters right from Heatwave, Cold wave, Earthquakes, Urban fires, Pandemics, Chemical Biological, Radiological, Nuclear disasters, Terrorist attacks, Urban floods etc. Before working here, I had no idea Delhi was prone to so many things, so My outlook towards disaster has totally changed now. I have learnt that anything which is not planned out properly can turn into a disaster. To avoid that everybody needs to have a disaster management plan. It is not only the duty of states and districts to have a plan but even individual families, residential buildings, educational institutions should have their own Disaster Management Plan.

Since it is a state level authority, one of its major functions is to act as a link between various districts and NDMA and monitor the implementation of orders of NDMA by the district authorities. I have learnt how that works on a day-to-day basis where the tasks are efficiently delegated among districts while keeping the senior authorities in loop as well.

I learnt about the state level efforts being put into making Delhi prepared and resilient to disasters. Delhi has a well-equipped State Emergency Operation Centre with 24-hour functional ERSS (Emergency Response Support System). It is a software with an updated data base on emergency functionaries of the state. Through this anybody can reach for help in case of emergencies by dialing 102 or if you have the app, you can simply press power button thrice and the SEOC will be informed. Much like the 911 in USA, this system enables the state to acquire the location of the individual and provides the information of emergency functionaries closest to the individual in need and mobilizes them towards the location. Other such systems aimed towards quick response in case of emergencies have also been placed at the SEOC and I have enjoyed learning about them in my time here.

Overall, my experience here at DDMA HQ has been very fruitful and full of learning, where I not only got to use my learned skills but also gained a lot of learning from the everybody here.

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