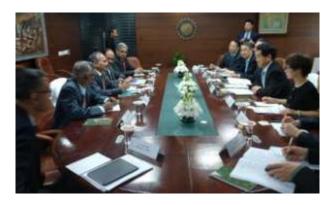


Chemical Industrial Mock Exercise





Chinese Delegation visits NDMA

A high-level eight-member delegation from China led by Mr. Zheng Guoguang, Vice Minister, Ministry of Emergency Management (MEM) and Administrator of China Earthquake Administration (CEA), visited NDMA on November 9, 2019. The discussions explored ways to further the cooperation in the field of emergency management between the two countries.

NDMA made a presentation on the global trends in disasters, India's institutional mechanism for DRR and the functioning of the Authority. The presentation also covered the various projects being implemented by NDMA with effective community participation such as the National Cyclone Risk Mitigation Project (NCRMP), National School Safety Programme (NSSP) and other Capacity Building projects.

NDMA also made a presentation on the Coalition for Disaster Resilient Infrastructure (CDRI), which was launched by the Hon'ble Prime Minister of India at UN Climate Action Summit in September 2019.

Mr. Guoguang provided a detailed profile of natural calamities faced by China and existing institutional arrangements for Disaster Management in the country. He also informed about the various projects being undertaken by China for effective preparedness and strengthened response to disasters.

Nepalese Delegation visits NDMA

A 20-member Nepalese delegation visited NDMA on November 15, 2019, with an aim to share cross-country experiences, institutional arrangements and best practices in areas of reconstruction and recovery, and to further explore the areas of cooperation in the field of disaster management.

To set the tone of the interaction, NDMA made a presentation outlining the global trends in disasters, the institutional mechanism for DRR in India and the functioning of the Authority.

The delegation appreciated the efforts of



Government of India in providing support for postearthquake reconstruction of houses in Gorkha district of Nepal. Under the GoI-UNDP Owner Driven Reconstruction Collaborative of India (ODRC), local community members are involved in the construction process so as to built a culture of safety with greater ownership of villagers in the reconstruction process.

NDMA suggested that the Nepal Government could consider involving Non Government Organisations in the reconstruction process and adapt owner driven construction for ensuring community participation. Restoring/generating livelihood was emphasised upon as an important area of concern.

Bhutanese Delegation visits NDMA

A 15-member Bhutanese delegation visited NDMA on November 18, 2019, with an aim to share cross-country experiences, institutional arrangements and the role of media during various phases of disasters.

Discussions were held on the role of print and electronic media in Information, Education and Communication. NDMA's initiatives for effective awareness generation through various social media platforms and digital newsletter "Aapda Samvaad" that publish success stories, expert interviews and best practices were showcased.

The need to take up holistic measures to reduce



disaster risks and blending traditional cultural architecture with modern technology were discussed.

Both India and Bhutan are highly vulnerable to earthquakes and other common hazards like Glacial Lake Outburst Floods, Landslides, etc., and they have a cooperation agreement on Disaster Management as member countries of South Asian Association for Regional Cooperation.

Vietnamese Delegation visits NDMA



An eight-member Vietnamese delegation visited NDMA on November 22, 2019, with an aim to discuss institutional arrangements and best practices, and explore further areas of cooperation in the field of disaster management.

Preparedness for non-seasonal hazards such as earthquakes and CBRN (Chemical, Biological, Radiological and Nuclear) disasters, institutional and financial arrangements for disaster preparedness, response and relief, and restoring livelihoods were discussed.

ToT programme on MRDS

NDMA has been running a pilot project on radiological emergency management and Mobile Radiation Detection System under which police personnel are being equipped and trained on management of radiological emergencies. Under



this project, a two-week training of trainers programme was conducted from November 4-16, 2019 at the National Disaster Response Force (NDRF) 5th Battallion location near Pune. The programme was inaugurated by Dr. D.N Sharma, Member, NDMA.

Thirty six police personnel from 14 States/UTs and a few NDRF personnel participated in the programme. The participants were requested to take the programme forward by training their colleagues for effective implementation of the programme.

Training programme for CBRN emergencies

NDMA conducted a basic five-day training training programme at the Kolkata Port Trust from November 18-22, 2019. The programme was aimed at enhancing the preparedness of Seaport Emergency Handlers (SpEHs) to respond to CBRN emergencies at the seaports.

CBRN emergencies pertain to threats emanating due to Chemical, Biological, Radiological and Nuclear material.



The training programme was conducted in collaboration with the Indian Port Association and Institute of Nuclear Medicine & Allied Sciences (INMAS).

The programme consisted of lectures as well as field training, including live demonstrations of detection and decontamination including use of Personal Protective Equipment (PPE). Besides equipping the SpEHs to handle CBRN emergencies, the training programme also enabled them to provide medical first aid and initial psycho-social support.

Experts from domain departments such as Department of Atomic Energy (DAE), National Institute of Mental Health & Neuro Sciences (NIMHANS) and National Disaster Response Force (NDRF) trained the participants.

Participants representing various agencies responsible for operation and maintenance of the

seaport were trained on various aspects of CBRN emergencies. Working level staff were sensitized on the subject in a half-day module.

This is the eighth in a series of such programmes being conducted at seaports across the country to enable SpEHs to respond suitably till the arrival of specialised response teams.

Earthquake Mock Exercise in Tripura

NDMA in collaboration with the Government of Tripura conducted a mock exercise on earthquake preparedness on November 28, 2019. The exercise helped participating agencies and stakeholders in evaluating the effectiveness of their disaster response plans.



In the run-up to the mock exercise, a coordination and orientation conference and the table-top exercise was held on November 27 with all the districts through videoconferencing for working out the detailed modalities and preparations required for the exercise.

This exercise is significant as Tripura falls under seismic vulnerability zone V.

Meeting on museums and cultural heritage issues

NDMA held a meeting with representatives of National Mission of Manuscripts, National Museum, National Archives of India and Archaeological Survey of India on October 24, 2019, to take stock of the progress on decisions taken in the NDMA's meeting in October 2018 concerning museums and cultural heritage issues under the chairmanship of the Hon'ble Prime Minister. Earlier, a meeting was held in this regard in August 2019.

It was decided that the National Museum will prepare a draft Disaster Management Plan for the Museum, which will serve as a model for preparation of DMP for other museums. The NMM will give



monthly progress report on documentation of manuscripts and trainings/ workshops/ seminars held in this regard. The ASI shall prepare DMP for at least 4 protected monuments.

Meeting on domestic support for disaster relief guidelines

NDMA conducted a meeting of the expert committee for formulating policy guidelines on channelising domestic support/assistance for disaster relief and recovery on October 22, 2019.

NDMA clarified that the provisions of Chief Minister's Relief Fund (CMRF) and Prime Minister's National Relief Fund (PMNRF) exist for providing relief to disaster victims. However, alternatives other than the existing provisions need to be discussed by the Committee. Representatives of various State Governments, Central Ministries and NGOs offered their views in the matter.

Issues to be addressed in the draft Standard Operating Procedure (SOP) were identified such as provision for receiving online voluntary donations by SDMA/ Relief Commissioners from individuals/ organizations, providing relief to family members of missing persons, clear communication strategy for management of relief work and utilising social media for disseminating information to the voluntary organizations and victims of disasters, among others.



Workshop on Reservoir Management

very time a major flood makes headlines, a reservoir also makes it under the spotlight. This is because reservoirs are one of the most important structural measures for reducing the impact of floods, and their well thought-out operationalization is a pre-requisite to minimizing the frequency, duration and impact of floods in downstream areas.

India has more than 5,000 large dams in operation

and another few hundred under construction. In addition, there are several thousand smaller dams. These dams are vital for ensuring water security in the country; and meeting irrigation, hydropower generation and other water needs of communities living in their vicinity.

Moreover, there have been instances of unregulated release of water from the reservoirs resulting in an increase in the impact of flood events





(Kerala 2018 and Madhya Pradesh 2019). In June 2014, sudden water release from Larji Hydroelectric dam in Mandi, Himachal Pradesh, resulted in the death of several tourists.

Reservoirs may not offer absolute flood protection and embankments along the downstream river are often required as a supplementary measure to contain the residual floods. However, they are an important component in flood management and also ensure optimum utilization of water resources. Reservoir Management thus constitutes a major responsibility in terms of asset management and safety.

National Disaster Management Authority (NDMA) in collaboration with Ministry of Jal Shakti conducted a national-level workshop on the Management of Floods: Reservoir Management, in New Delhi on October 18, 2019.

To set the tone of the workshop, NDMA made a presentation highlighting the progress made so far, key issues and challenges, and the way forward for improving our management of reservoirs for better flood control.

Speaking on the occasion, Shri G. V. V. Sarma, Member Secretary, NDMA, referred to NDMA Guidelines of 2008 and 2010, which elaborated a number of action points by various agencies and State governments. He urged all stakeholder agencies and State governments to coordinate their efforts towards improved reservoir management in the country. "There is a need for better flood response and preparedness in terms of overall coordination among all stakeholder agencies," he said.

Shri Upendra Prasad Singh, Secretary, Department of Water Resources, River Development and Ganga Rejuvenation emphasized the need for judicious operationalization of dams by State authorities based on the data provided by India Meteorological Department (IMD) and Central Water Commission (CWC). "There is a need to revisit our policies as the changing climate has posed new challenges," he said. He also stressed the need to have proper dissemination of flood-related alerts and transparency in reservoir operations.

Stakeholders discussed a range of issues pertaining to better management of reservoirs and the role of rainfall prediction, flood forecasting and early warning and wide dissemination of advisories and alerts. The need to manage gaps in reservoir operations and to remove encroachments on flood plains were also highlighted. State governments presented case studies on the management of dams.

It was decided to work towards an operational mechanism that would ensure timely exchange of information among all stakeholders so that reservoir operation during floods can be better regulated, based on advanced forecasting techniques.

NDMA Members and officials, senior officials from IMD, CWC, National Remote Sensing Centre (NRSC), National Disaster Response Force (NDRF), representatives of State Governments and representatives of the civil society participated in the event.•



Preparing Gujarat for Chemical emergencies

NDMA conducts first-ever State-wide Chemical Industrial Disaster Mock Exercise

he chemical industry forms a major part of the flourishing industrial sector in India. Gujarat has one of the largest Industrial sector which makes the State vulnerable to chemical Industrial disasters. These may occur due to human error, accidental exposure, terrorist attacks and sabotage. Such disasters may also get triggered as a secondary disaster after an earthquake, cyclone or a Tsunami, etc.

Handling such emergencies need specialised skills and efforts, and coordination among all stakeholders. Any major Chemical accident can lead to a situation faced during the Bhopal Gas Tragedy.



Chemical disasters, though few and far between, can cause immense immediate as well as long-term losses to both lives and property. It is, therefore, important to ensure the preparedness and resilience of regions with vulnerable establishments. One way to achieve that is through conducting Mock Exercises on the principles of the Incident Response System, which clearly attributes roles and responsibilities, to each stakeholder thus resulting in a swift, effective and streamlined response.

In October this year, National Disaster Management Authority (NDMA) in collaboration with the Gujarat State Disaster Management Authority (GSDMA) conducted the first-ever Statewide Chemical Industrial Disaster Mock Exercise covering six districts - Vadodara, Valsad, Jamnagar, Ahmedabad, Surat and Bharuch - and more than 216

Objectives

To review DM Plans of the State/Districts

To evaluate Standard Operating Procedures

To highlight roles & responsibilities of all stakeholders

To generate awareness by involving NGOs, community, etc.

Identify gaps in resources, manpower, communication, etc.

Major Accident Hazard (MAH) industrial units. The vulnerability of these districts increases manifold as huge quantities of hazardous chemicals are stored and transported at industrial plants, and even a mild earthquake can cause major damage and destruction. Add to that the coastal location of these districts and the risk of cyclones and tsunamis can also not be ruled out.

Prior to this exercise, NDMA has conducted 87 Chemical Industrial exercises across the country. "NDMA has been constantly striving to upgrade the

capacities at the State, multi-State and national levels. Over the years, we upscaled these exercises that we had started at the industry level, graduated to industrial areas and then to the district level. We have now conducted our first-ever State-level wide Chemical Industrial Disaster Mock Exercise," said Lt. Gen. N. C. Marwah, Member, NDMA.

COVER STORY



In the run-up to the exercise, an Orientation and a Co-ordination conference was conducted on September 25, which was followed by a table-top exercise on October 10. These exercises helped prepare the State and the participating districts for the actual exercise.

On October 11, the exercise began at 9 AM with the simulation of an earthquake with a magnitude of 7.7 on Richter scale near Bhuj in Kutch district, causing damage to various industries and its secondary effects on the neighboring areas. Immediately, sirens blew out at the State Emergency Operation Centre (SEOC) at Gandhinagar, IRS got activated and all stakeholders were informed about the situation through the SEOC.

As the communication network and power lines were affected, satellite phones were used to gather information on the resultant damage at various locations. Multiple scenarios - gas pipeline leakage, involving Ammonia and Chlorine gases, rupture in Naphtha Storage and crude oil and other situations which led to offsite scenarios - were simulated during the mock exercise to test the efficacy of the Emergency Response Plans of the districts as well as the industries.

The exercise tried to create a scenario close to reality so as to assess and improve the preparedness and response mechanism of all stakeholder agencies in the event of a disaster situation. Vulnerable people were evacuated and the injured were taken to hospitals. The drills were carried out with support from all stakeholder agencies such as National Disaster Response Force, State Disaster Response



Force, Police, Army, Air Force, Navy, Coast Guard, health department, local administration, Aapda Mitras (disaster volunteers) and resources from the industrial establishments. The Emergency Operation centres at the State and the District level were activated and the Crisis Groups planned the response and Mobilised the resources in all the Districts.

In the post-exercise analysis, done through videoconferencing, all the participating districts and Industries discussed the challenges faced during the exercise. Ways to fix the gaps were also discussed. "Such exercises help improve coordination among participating agencies, which plays a crucial role during an actual disaster situation. It also helps revise, upgrade and streamline SOPs for emergency situations," said NDMA's Maj. Gen. V.K. Datta (Retd.), who led the exercise.

This exercise is significant as any disaster in the country's chemical corridor can lead to severe economic losses affecting the regional as well as the national economy. •



Sensitisation Workshop for Nodal Officers

he Disaster Management Act 2005 mandates all the Central Ministries / Departments to prepare their Disaster Management Plans in line with the template prescribed in the National Disaster Management Plan. Each of these Ministries / Departments have appointed Nodal Officers to coordinate with NDMA, get their Disaster Management Plans approved and oversee all the activities of their respective Ministries/Departments related to Disaster Risk Reduction (DRR).

As these Disaster Management Plans include measures for mitigation, preparedness capacity building and response for effective management of disasters, their preparation and implementation is



important for promoting the resilience of infrastructure systems, an area that India has taken a lead in with the Prime Minister recently launching the Coalition for Disaster Resilient Infrastructure (CDRI) during the Climate Action Summit at New York. Further, integrating disaster resilience into all facets of development is also a critical attribute towards the vision of 'ease of living' for all, and a 5 trillion economy by 2024.

To sensitise the nodal officers on the framework for DRR; coherence among the Sendai Framework, Sustainable Development Goals and the Paris agreement; and the global perspective on DRR, a two-day workshop was organised by the Ministry of



Home Affairs (MHA) and NDMA on the directions of Hon'ble Prime Minister Shri Narendra Modi. The workshop was held on October 10-11, 2019, at Vigyan Bhawan in New Delhi.

Speaking on the occasion, Shri G. V. V. Sarma, Member Secretary, NDMA, said that nodal officers are the key sources in implementing policies during disaster and post-disaster events. He urged the nodal officers to prepare, periodically update and take measures to ensure the effective implementation of their DM Plans.

Presentations at the workshop were aimed at enabling the nodal officers to understand the process of developing and implementing their DM Plans. Issues of climate change adaptation, ecosystembased resilience, housing and structural safety, governance and financial instruments, participatory approach and integration of disaster management into plans and schemes of the government were discussed.

Around 120 persons participated in the workshop, including senior officials from MHA, NDMA, National Disaster Response Force (NDRF), National Institute of Disaster Management (NIDM), India Meteorological Department (IMD), disaster management experts and technical institutions. •



Warming up to Cold Wave

Follow simple precautions

- **Ÿ** Have adequate winter clothing
- Ÿ Stay indoors as much as possible
- Ÿ Prefer mittens over gloves; mittens provide more warmth and insulation from cold
- Ÿ Listen to radio, watch TV, read newspapers for weather updates
- Ÿ Drink hot drinks regularly
- **Y** Take care of elderly people and children
- Ÿ Store adequate water as pipes may freeze
- **Y** Have emergency supplies ready





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