

# PREPARING FOR HEAT WAVE





#### Maldivian delegation visits NDMA

NDMA officials on November 28, 2019 met a delegation from Maldives. The visit was a part of the Third Training Programme for civil servants of Maldives organised by the National Centre for Good Governance, Mussoorie, from November 18-30, 2019.

The Programme aims to integrate cross-country experiences and best practices in field administration. It is led by the Ministry of External Affairs, Govt. of India.

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.

Maldives is one of the most vulnerable countries to the increasing impact of climate change and sea level rise. Hazards common to both India and Maldives such as Tsunami and Forest Fires were discussed.

#### **Emergency Preparedness Exercise held**

Nagaland conducted a State-level Mock Exercise, the Nagaland Emergency Preparedness Exercise-2019 (NEPEx-2019), simulating an Extreme Weather Event, on November 20-21 2019.

The exercise commenced with the NDMA reiterating the Incident Response System and percolating awareness on how to leverage technology in disaster situations. This was followed by a Table-Top Exercise.



The Mock Exercise was carried on November 21 under the aegis of the Officiating Chief Secretary, Shri Meukhol John, with NDMA as the Main Observer.

Officials of the State Government, Armed Forces, National Disaster Response Force, Central Armed Police Forces, Non Government Organisations and communications participated in the exercise.

#### **Lecture on CBRN Management**

NDMA delivered a lecture-cum-presentation on 'CBRN - Current and Future Threats - Preparation and Management of CBRN Incidents' to the Medical Officers of the Indian Armed Forces during a workshop on medical management of CBRN Casualties. The workshop was organised by Headquarters Integrated Defence Staff (Medical) and Defence Research and Development Organisation, Ministry of Defence from December 17-20, 2019 in New Delhi.

The lecture was aimed at (i) drawing a distinction between a catastrophic incident arising from 'Nuclear, Biological & Chemical Warfare' (NBCW), and a CBRN Emergency; (ii) dispelling some of the myths surrounding CBRN incidents; (iii) delineating the outcome profile of each component of the quaternary (Chemical, Biological, Radiological & Nuclear); (iv) generating awareness about the nodal components of the National Mechanism for advice, management and mitigation of a CBRN Emergency; and (v) assisting the Indian Armed Forces in capacity building and preparation for participating in an integrated response to a CBRN Emergency.

#### Training programme for CBRN emergencies



NDMA conducted a basic five-day training programme at the Chennai Port Trust from December 9-13, 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.

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.

### Int'l Conference on "Landslides Risk Reduction and Resilience-2019"

The First International Conference on "Landslides Risk Reduction and Resilience" was held in New Delhi on November 28, 2019. It was inaugurated by the Union Minister of State for Home Affairs, Shri G. Kishan Reddy.

Shri Reddy called for developing technology to anticipate disasters like landslides and develop infrastructure to quickly respond to minimise the damage.

The Minister, while congratulating the National Institute of Disaster management (NIDM) for organizing the first of its kind conference in the country, called for making extensive collaborative programmes involving international community and all the stakeholders at national, state and regional levels to address landslide risk.



Executive Director, NIDM; Member Seceretry, NDMA; Members, NDMA; and Joint Secretary (Disaster Management at MHA) were present on the occasion. Besides, scientists, engineers, technologists, planners, developers, administrators, policy makers from different States as well as other from countries participated in the conference.

## Meeting on 'Emerging challenges in mitigating air pollution' held

Air pollution is one of the major challenges today and poses a substantial risk to human well-being. To raise its awareness about specific measures being implemented to address pollution in the National Capital Region(NCR), NDMA held a meeting with various stakeholders on December 10, 2019.

All the major implementing agencies briefed the



Authority about the progress made to control air pollution. NDMA observed that while the data over the last few years points out improvement in the situation, a lot needs to be done. Concerned Ministries / State Governments were requested to keep NDMA informed of the progress made towards reducing Air pollution and highlight coordination issues, if any.

#### Consultation on Women and Children in Disaster

The National Commission for Women organised a consultation on the need of a policy for women and children in a disaster on December 17, 2019 in New Delhi.

Shri G. V. V. Sarma, Member Secretary, NDMA mentioned that the National Disaster Management Policy has gender-sensitive elements wherein all aspects of welfare of women & children are taken care of. He said that the Ministry of Women and



Child Development (WCD) is the nodal Ministry for issues concerning women and children and more aspects the can be added to Disaster Management Policy with its recommendations.

#### Preparatory Meeting for BIMSTEC DMEx-2020

A two-day preparatory meeting for the second BIMSTEC Disaster Management Exercise - 2020 was conducted on November 14-15, 2019 in Puri, Odisha. Representatives from all seven member nations of Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) - Bangladesh, India, Myanmar, Sri Lanka, Thailand, Nepal and Bhutan - participated in the meet.



The aim of the meeting was to work out the modalities and requirements for the BIMSTEC DMEx -2020, scheduled to be held in February this year. The conduct of Table Top Exercise, Field Training Exercise and After Action Review were discussed.

BIMSTEC is rich in cultural heritage but prone to disasters, said Lt. Gen. (Retd.) N. C. Marwah, Member, NDMA. He emphasised on the need for comprehensive and systematic action to ensure the safety of heritage sites during a disaster.

The BIMSTEC DMEx -2020 will test the existing emergency procedures for notification, preparedness and emergency response in a coordinated manner during a major earthquake scenario at cultural heritage site. This will also test inter-agency coordination.







## SCO Joint Exercise -2019

pproximately 40% of the global population lives in the region that forms the Shanghai Cooperation Organisation. With about 22% of the global geographical area, the region contributes 20 % to the global GDP. As the region represents today's fastest growing economies in the world, it is natural that SCO countries - Republic of India, Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Islamic Republic of Pakistan, the Russian Federation, the Republic of Tajikistan and the Republic of Uzbekistan - come together to reduce their disaster risks.



During the 9th meeting of the Heads of Departments of SCO countries dealing with the prevention and elimination of emergency situations, held at Kyrgyzstan in August, 2017, India volunteered to organize the "Shanghai Cooperation Organization Joint Exercise on Urban Earthquake Search & Rescue-2019" for the region. In line with that, a four-day exercise was conducted by the National Disaster Response Force (NDRF) as the lead agency from November 4-8, 2019 in New Delhi.

Inaugurating the exercise, Union Home Minister Shri Amit Shah said that this joint exercise will be very useful for improving the collective preparedness and building a common understanding of internationally recognized procedures to coordinate post-earthquake responses. Establishing the centrality of SCO Nations in tackling disasters, Shri Shah said that none of the global targets on reducing disaster losses - whether they are enshrined in the Sendai Framework or Sustainable Development Goals - can be met by 2030, unless achieved by the SCO countries.

The aim of the exercise was "to also provide an opportunity to enhance the coordination and cooperation involving multiagency operations in an earthquake scenario". Internationally recognized procedures were used during joint search and rescue



exercises. In addition, participants also shared best practices to strengthen regional response system, mutual cooperation and coordination.

Mongolia participated in the exercise as an observer. In addition representatives from International Search and Rescue Advisory Group (INSARAG), United Nations Development Programme (UNDP), United Nations Children's Fund (UNICEF) and World Health Organisation (WHO) also participated in this simulation exercise.

Addressing the participants at the Valedictory Session, Minister of State for Home Affairs, Shri Nityanand Rai, said that organizing such exercises will boost our process and standardization and strengthen the response efficiency.

### Meeting on Prevention and Elimination of Emergency Situations



The tenth Meeting of the Heads of Departments of Member States of the Shanghai Cooperation Organization, dealing with prevention and elimination of emergency situations, was held in New Delhi on November 8, 2019. The meeting was chaired by the Union Minister of Home Affairs, Shri Amit Shah.

The delegation heads delivered reports on the major emergencies that happened in the SCO Member States. They also exchanged opinions on future cooperation in Prevention and Elimination of Emergency Situations within the SCO framework.

Based on these reports, the parties agreed on the need to step up their joint efforts to strengthen cooperation and provide assistance in the field of Prevention of Emergency Situations and provide assistance. They would continue to promote their interaction to implement the agreements reached within the framework of the organization.

The Action Plan to implement the intergovernmental SCO agreement on emergency relief cooperation in 2020-2021 was also approved during the meeting.



# PREPARING FOR HEAT WAVE 2020

eat wave develops gradually, adversely affects humans, animals, crops and even causes death. In fact, it has emerged as one of the major severe weather events around the globe in recent years. The years 2015, 2016, 2017 and 2018 have been confirmed as the four warmest years on record. In 2019, unlike earlier years, even night temperatures refused to come down.

India too is experiencing increased instances of heat waves every year - 23 States were affected by heat waves in 2019, up from 19 in 2018. Many cities recorded all-time high temperatures, exceeding 45 degrees Celsius in some of the worst-affected States. We had to prepare for harsher heat waves in 2020.

Earlier, NDMA used to organise its national workshops on heat wave in collaboration with State Governments in February (2017 at Hyderabad, Telangana; 2018 at Vijayawada, Andhra Pradesh; and 2019 at Nagpur, Maharashtra) as the heat wave onslaught in the country typically starts by the latter half of March. This time, the planning and preparedness had to start even earlier. Consequently, the fourth National Workshop on Heat Wave was organised on December 5-6, 2019, in collaboration with the Government of Karnataka.



Speaking on the occasion, Shri G. V. V. Sarma, Member Secretary, NDMA, stated that Climate Change has led to the rise of average summer temperature by 0.5 degrees Celsius in past five years. Since 2016, much has been done already with the active involvement of different state governments and civil society. Shri Sarma was referring to the release, updation and effective implementation of the National Guidelines on Heat Wave, preparation of Heat Action Plans by vulnerable States and cities, regular follow-up and monitoring by NDMA, extensive awareness generation campaigns and preparedness workshops in 2017, 2018 and 2019.

The number of deaths due to heat wave related illnesses has reduced drastically 2016 onwards. However, there is no scope for complacency, he said.

Besides sensitising the States to the need of updating and implementing specific Heat Action Plans, this workshop also discussed the integration

#### What is a heat wave?

Heat wave is a period of abnormally high temperatures, more than the normal maximum temperature that occurs during the premonsoon (April to June) summer season. The extreme temperatures and resultant atmospheric conditions adversely affect people living in regions reeling under heat wave conditions as they may cause dehydration, heat exhaustion, physiological stress and sometimes even death.

of various development plans into heat action plans, increasing forest coverage and green areas to reduce heat wave risk well as climate change impacts.

Some vulnerable States shared their experiences and best practices to help other stakeholders prepare and implement their Heat Action Plans. The success stories from these States emphasised the importance of advanced planning, better preparedness and timely intervention.

Over the two days, stakeholders discussed the road map for further reducing the adverse effects of heat wave in 2020. We are hopeful that this timely intervention and effective communication campaigns will empower vulnerable communities to deal with the deadly heat waves.•

#### **Technical Sessions**

- Climate change and Planning Heat wave risk reduction
- Early warning, forecasting and Preparedness for heat wave
- Experience Sharing & lessons learnt for heat wave mitigation measures
- Capacity building &Enhancing effective response to Heat wave
- Inter agency coordination and effective governance

## How to care for cattle during a heatwave?



Extreme heat causes significant stress to livestock. Keeping an eye on weather forecasts and developing a mitigation plan for the heatwave season is crucial to their well-being. Use these simple tips to keep them safe during a heatwave.

- Keep animals in shade and give them plenty of clean and cold water to drink. Water intake increases 40 to 50 per cent during the summers.
- Do not make them work between 11am to 4pm.
- Cover the shed roof with straw, paint it white or plaster with dung-mud to reduce temperature.
- Use fans, water spray and foggers in the shed.
- During extreme heat, spray water and take cattle to a water body to cool off.
- Give them green grass, protein-fat bypass supplement, mineral mixture and salt. Make them graze during cooler hours.
- In case of a sunstroke, take them to a veterinary hospital immediately.

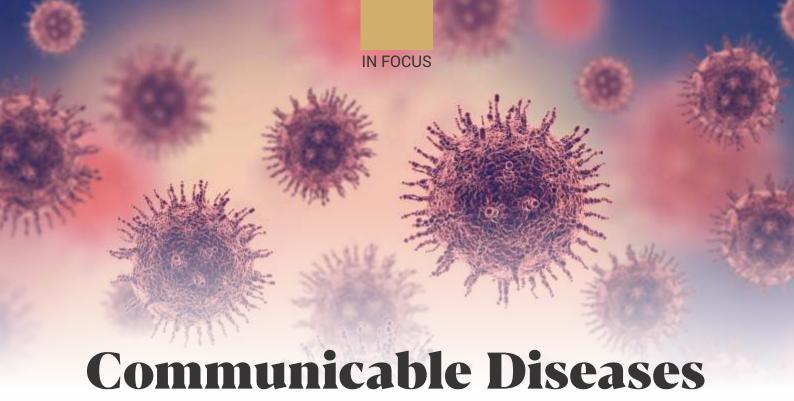
## For a cooler home during Heatwave?

It may not be possible to halt the onslaught of a heat wave but it is very well possible to reduce its effects. Here are some simple, effective and low-cost solutions to ensure your home stays cool through the scorching summers:

- Use solar reflective white paint and cool roof technology. It will reflect more sunlight and absorb less heat, thus reducing the amount of heat conducted to your home. Studies have shown that cool roofs can be up to 30 degrees Celsius cooler than conventional roofs and can bring the indoor temperatures down by 3-5 degrees Celsius.
- Use dark colour curtains, tinted glass/ shutters or sunshade through the day. Keep your windows, especially those right opposite another, open during mornings and late evenings when the air is comparatively cooler.
- Go for green roofs, green walls and indoor plants. They reduce heat by cooling the building naturally and reducing air-conditioning requirements. You can also keep haystacks on roofs.

- Install temporary window reflectors such as aluminium foil-covered cardboard to reflect heat back outside.
- Use energy-efficient appliances, clean fuel and alternative sources of energy. Turn off lights when not in use they radiate heat and fuel your power bills too.
- Maintain AC temperature at 24 degrees or higher. This will reduce your electricity bill and keep you healthier.
- If possible, use natural materials such as lime or mud to coat walls.





A communicable disease is one that spreads from one person to another through a variety of ways that include: physical contact with an infected person, contact with a contaminated surface/ object/ food/ water, breathing in an airborne virus; or by being bitten by a vector. Here are some simple Do's and Don'ts to follow to prevent communicable diseases from spreading:

#### **BEFORE**

- Watch television, listen to radio, or surf the Internet for official news of any outbreak.
- Practice good hygiene and keep your premises clean.
- Use mosquito nets/repellents at night.
- Boil water before drinking. Chlorinate it, if possible.
- Thoroughly wash all vegetables/fruits before cooking/eating.
- Use insecticides to contain the vectors.
- Don't consume stale and/or contaminated food products.
- Immediately report any sickness with unusual and/or suspicious symptoms in the family/ neighbourhood to health authorities.
- Seek medical attention if you are sick; keep a stock of your regular prescribed medicines.

#### **DURING**

- Keep distance from and avoid direct contact with the affected person.
- Avoid going to crowded areas.
- Use a respiration mask for protection.

#### **AFTER**

- Follow official instructions and help authorities dispose of contaminated items such as food, poultry, crops, vectors and other materials, if advised.
- Ensure that all the required immunizations are done and necessary precautions taken.

## Protect yourself from Coronavirus

The 2019 Novel Coronavirus was first identified in Hubei Province, China. Hundreds of cases have been confirmed and more cases are being identified in a number of countries. It is a rapidly evolving situation and demands preparedness from each one of us. Follow these simple precautions to considerably reduce the risk of infection:

Clean hands with soap and water or alcohol-based hand rub.





Cover nose and mouth when coughing and sneezing with a tissue or flexed elbow.

Avoid close contact with anyone with cold or flu-like symptoms.





Thoroughly cook meat and eggs.

Avoid unprotected contact with live wild or farm animals.



## Frostbite is an injury caused by freezing of the skin and underlying tissues.

#### **Treatment:**

- If possible, relocate to a relatively warmer environment.
- Re-warm affected area by placing it in warm water(not too hot to touch)until the flesh softens and feeling becomes normal.
- Completely cover the damaged area with a bandage - sterile if the possible and warm area clothing as well.

#### **Recovery:**

- Proper medical aid should be sought as soon as possible.
- Aloe Vera should be applied to the affected area, which should be then splinted, elevated and wrapped in a dressing.
- A tetanus shot, may be penicillin, can be used to protect infection.
- A patient may require ibuprofen to combat inflammation.
- Drugs may be required to reduce the high level of pain than occur when sensation returns during warming.





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