MARCH 2021

AAPDA SAMVAAD

Keeping Cool This Summer!

Landslide Mitigation and DPR Training

On 1 March, NDMA with IIT Roorkee organised a 5 half-day online training program on 'Landslide Mitigation & Detailed Project Report (DPR) Preparation' from 01 - 05 March (9:30am-1:30pm). Lt Gen Syed Ata Hasnain (retd.), Member, NDMA inaugurated the training session.

Heat Wave Preparation

On 5 March, Shri Sanjeeva Kumar, Member Secretary, NDMA chaired a meeting with Secretary in-charge of Disaster Management in States prone to heat wave, India Meteorological Department, Ministry of Health and Family Welfare, IIPH Gandhinagar, to review preparedness and mitigation measures & discuss issues of forecasting & health data.

National Guidelines for Recovery and Reconstruction Assistance

On 10 March, NDMA conducted a meeting under the Chairmanship of Shri Krishna S. Vatsa, Member, NDMA, to discuss with States the draft National Guidelines for Recovery and Reconstruction assistance.

IRS and Table Top Exercise

On 10 March, Lt Gen Syed Ata Hasnain (retd.), Member, NDMA, chaired a training in Srinagar by the NDMA on the Incident Response System, followed by a Table-Top

Exercise on an earthquake scenario for the Kashmir Division of the UT of J&K, it's ten districts and the UT HQ.

Landslide Mitigation and DPR Training

On 15 March, NDMA with NIT Mizoram organised a five-day online training program on 'Landslide Mitigation & Detailed Project Report (DPR) Preparation' from 15 - 19 March (9:30am-1:30pm). Lt Gen Syed Ata Hasnain (retd.), Member, NDMA inaugurated the training session.

CBRN Training

On 23 March, NDMA in association with Airports Authority of India conducted a 3-day (23 - 25 March) training on CBRN (Chemical, Biological, Radiological & Nuclear) Emergency Management for the staff of Devi Ahilya Bai Holkar Airport, Indore and its stakeholders.

Aapda Mitra

On 25 March, Shri Rajendra Singh, Member, NDMA chaired a meeting with States/UTs to discuss the implementation strategy, role and responsibility of up-scaling the Aapda Mitra scheme.

Keeping Cool This Summer!

A heat wave is a period of abnormally high temperatures, more than the normal maximum temperature that occurs during the summer season in the north-western parts of India. Heat waves typically occur between March and June, and in some rare cases even extend till July. The extreme temperatures and resultant atmospheric conditions adversely affect people living in these regions as they cause physiological stress, sometimes resulting in death.

To combat the killer effects of heat waves, NDMA drew up the National Guidelines under the title **'Preparation of Action Plan–Prevention and Management of Heat Wave'** in 2016. The Guidelines were twice revised, first in 2017 and then in 2019. They were enriched with recommendations for more specific actions, based on scientific inputs derived from various research papers, reports and best practices; and provide a framework for implementation, coordination and evaluation of activities undertaken by local authorities to reduce the adverse effects of extreme heat waves.

The health impacts of heat waves typically involve dehydration, heat cramps, heat exhaustion and/or heat stroke.

The signs and symptoms are as follows:

- ***Heat Cramps: Ederna (swelling) and Syncope (Fainting) generally accompanied by fever below 39°C i.e.102°F.***
- ***Heat Exhaustion: Fatigue, weakness, dizziness, headache, nausea, vomiting, muscle cramps and sweating.***
- ***Heat Stroke: Body temperatures of 40°C i.e. 104°F or more along with delirium, seizures or coma. This is a potential fatal condition.***

The measures taken led to the preparation of Heat Wave Action Plans by heat wave prone states on a large scale in the country. In the last five years, 17 heat wave prone states have prepared their Heat Wave Action Plans.

And more than 120 districts/cities from 14 states have also prepared their own Action Plans.

In order to sustain the momentum of disaster risk management with respect to heat waves, NDMA has been regularly issuing advisories on heat waves to all heat wave prone States/ UTs.

NDMA has also been regularly conducting workshops since 2017 to timely prepare and implement mitigation measures and to ensure that the National Guidelines on Heat Wave and the actions to be taken for heat wave management, are implemented at the ground level.

As part of the overall efforts towards mitigation of heat wave this season, NDMA has come up with the 'Cool Roof Challenge 2021' to encourage the heat wave prone States and cities in adopting the 'Cool Roof Techniques' as part of their Heat Action Plans (HAPs) 2021.

Effective implementation of the Guidelines, annual workshops, proactive steps towards community sensitisation by some of the worst affected States has helped in mitigating the effects of this disaster to a major extent. The reduction of deaths caused by heat waves in India is no less than a success story - from 2 ,040 deaths in 2015 to just 4 in 2020.

If you think someone is suffering from the heat

- ***Move the person to a cool place under the shade;***
- ***Give water or a rehydrating drink (if the person is still conscious);***
- ***Fan the person;***
- ***Consult a doctor if symptoms get worse or are long lasting or the person is unconscious;***
- ***Do not give alcohol, caffeine or aerated drink;***
- ***Cool the person by putting a cool wet cloth on his/her face/body;***
- ***Loosen clothes for better ventilation.***

7 cooling techniques to beat the heat!

- Create a breeze inside your home by strategically opening your windows at opposite ends to enable cross ventilation.
- Remove unwanted furniture, books and other items which clutter the room to make it more airy.
- White roofs/terraces reflect the heat and help keep the house cool. Some of the other techniques to cool the roof are by - bamboo shading, using cellulose fibre, implementing a china mosaic pattern, CIS roofing system, green net shading, and using hollow clay tiles, inverted earthen pots and surkhi concrete while building the roof.
- Keep your home cool by using curtains, shutters or sunshade and open windows at night.
- Try to remain on lower floors, as hot air rises, the upper stories of a home will be warmer than the ground floor.
- Install temporary window reflectors such as aluminium foil-covered cardboard to reflect heat back outside.
- Green roofs, green walls and indoor plants reduce heat by cooling the building naturally, reducing air-conditioning requirements and release of waste heat.

FIGHTING LIGHTNING

During the summer months in north India, an occasional thunderstorm associated with lightning and rainfall may provide some respite from the intense heat. However, it also leaves a trail of destruction accounting for nearly 2,500 deaths caused by lightning strikes every year (Source: Annual Report, NCRB). Thunderstorm and lightning strikes have emerged as one of the major weather hazards of recent years in many parts of the country.

Why do thunderstorms and lightning occur?

The genesis of a thunderstorm is dependent on four factors - intense heating, moisture availability, instability in the atmosphere and a trigger. The reason why thunderstorms occur mostly during the summer season is because the lower level atmosphere and surface of the earth is hot. Heating makes the parcel of air lighter and leads to low density of atmosphere.

Secondly, if there is moisture, air becomes moist and hot, moist air is lighter than dry air and rises. As the air rises, it transfers heat from the surface of the earth to the upper levels of the atmosphere. The water vapour it contains begins to cool, releases heat, condenses and forms a cloud. The cloud eventually grows upward into areas where the temperature is below freezing and various types of ice particles can be created from freezing liquid drops.

Thirdly, instability in the atmosphere is explained through lapse rate, which means change of temperature with height.

However, we don't get thunderstorms everyday in the summer. Here, the 'trigger' comes into picture, which leads the air to move up rapidly. This triggering comes when there is a weather system. It may be a trough line, or a cyclonic circulation, or a Western Disturbance.

Lightning is an electrical discharge caused by imbalances between storm clouds and the ground, or within the clouds themselves.

Thunderstorm

A storm characteristised by the presence of lightning and thunder, formation of squall, strong updraft and downdraft, towering cumulonimbus associated with turbulence and icing, localised heavy rain and hailstorm.

Squall

A sudden increase of wind speed by at least 29 kmph with the speed rising to 40 kmph or more and lasting for at least one minute.

Dust storm

During the pre-monsoon season, the lowest atmospheric layers have very high temperature and relatively low moisture content, which makes the thunderstorms have high bases above the ground in the order of 3-4 km. As the ground remains dry over long periods, there is plenty of loose and fine dust available. These factors enable the severe thunderstorms of northwest India and can drastically reduce visibility, cause property damage and injuries.

What is the impact of thunderstorms and lightning?

Thunderstorm and lightning strikes result in loss of life and injuries, loss of livestock, livelihoods, and damage to infrastructure, thereby affecting the output of people and impacting revenue-generation. Thunderstorms and lightning strikes are potentially hazardous for the aviation sector, and for the transport, power, communication and other socio-economic sectors too.

Table 1: Deaths from thunderstorms and lightning-strikes in India

Years	Number of Deaths	Years	Number of Deaths
2001	1507	2011	2550
2002	1383	2012	2263
2003	1792	2013	2833
2004	1842	2014	2582
2005	2064	2015	2641
2006	2387	2016	1489
2007	2790	2017	2057
2008	2553	2018	2028
2009	2113	2019*	1771
2010	2622	2020*	946

Source: NDMA Guidelines for Action Plan on Thunderstorm & Lightning/Squall and Strong Winds
* Note: Death counts only from the south-west monsoon period

What has NDMA done?

It was in 2018, when severe thunderstorms and lightning hit several parts of India that their destructiveness was highlighted – a large number of human casualties and severe economic losses resulted. The increase in occurrence and severity of these events was a wake-up call for all the concerned agencies to take appropriate action for prevention, preparedness and mitigation to save lives, livestock, property and infrastructure.

NDMA drew up the national **'Guidelines for Preparation of Action Plan – Prevention and Management of Thunderstorm & Lightning/ Squall Dust/Hailstorm and Strong Winds'** for improving the capacity of the states to deal with these incidents in a scientific and planned manner and released it in 2019.

The National Guidelines on thunderstorm and lightning identified the issues pertaining to such disasters and defined the roles and responsibilities of the Central government and the states/ UTs in matrix format. This matrix consists of segments corresponding to the thematic areas of understanding risk, inter-agency coordination, investing in Disaster Risk Reduction (DRR) – non-structural measures and structural measures – and capacity development.

NDMA conducts regular meetings with vulnerable states prone to thunderstorms and lightning strikes to review their preparedness and the mitigation measures, such as the actions taken for early warning and dissemination of the same, community-based warning systems and disaster management, creation or arrangement of shelters, Information Education Communication (IEC) actions for behavioural change and long-term mitigation measures.

Due to regular monitoring and efficient implementation of the Guidelines, the number of deaths on account of thunderstorms and lightning strikes have been consistently reducing.

DO'S AND DON'TS FOR
THUNDERSTORMS/DUST STORMS

Before
- Prepare an emergency kit with essential items for safety and survival
- Secure your house; carry out repairs; don't leave sharp objects loose
- Secure outside objects that could blow away and cause damage
- Remove rotting trees/broken branches that could fall and cause injury or damage
- Listen to radio, watch TV or read newspapers for weather updates and warnings

During
- Keep a watch on local weather updates and warnings
- Try to stay indoors; stay off verandas
- Unplug all electrical equipment. Don't use corded telephones
- Don't touch plumbing and metal pipes. Do not use running water
- Stay away from structures with tin roofs/metal sheeting
- Don't take shelter near/under trees
- Stay put if you are inside a car/bus/covered vehicle
- Don't use metallic objects; stay away from power/telephone lines
- Get out of water - pools, lakes, small boats on water bodies - and take safe shelter immediately

After
- Stay away from storm-damaged areas
- Listen to local radio/TV stations for updated information or instructions on weather and traffic updates
- Help children, women, elderly and differently-abled
- Stay away from fallen trees/power lines and report them to nearest tehsil/district HQ immediately.

THE FIVE FAQS - **COVID-19 VACCINE**

1

Can a person presently having COVID -19 infection (confirmed positive or suspected), take COVID-19 vaccine now?

Person with confirmed or suspected COVID-19 infection may increase the risk of spreading the same to others at vaccination site. For this reason, infected individuals should defer vaccination for 14 days after symptoms resolution.

2

Is it necessary for the COVID-19 recovered person to take the vaccine?

Yes, it is advisable to receive complete schedule of COVID-19 vaccine irrespective of past history of infection with COVID-19. This will help in developing a strong immune response against the disease. Development of immunity or duration of protection after COVID-19 exposure is not yet established, therefore, it is recommended to receive vaccine even after COVID-19 infection. Wait for 4-8 weeks after recovery from coronavirus symptoms before getting the vaccine.

3

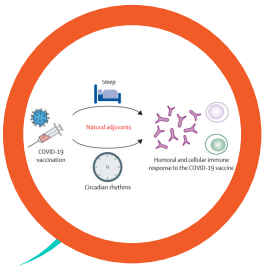
How long will I stay protected from COVID-19 infection after taking vaccine?

Longevity of the immune response in vaccinated individuals is yet to be determined. Hence, continuing the use of masks, hand washing, physical distancing and other COVID-19 appropriate behaviours is strongly recommended.

4

In how many days will the vaccination create adequate immune response and protection?

Adequate immune response takes 2-3 weeks after completion of entire vaccination schedule i.e., after the second dose of COVISHIELD® and COVAXIN®.



5

Do I need to take COVID-19 precautions after getting vaccinated?

Yes, since the longevity of the immune response in vaccinated individuals is yet to be determined, it is absolutely necessary that everyone who has received the COVID-19 vaccine should continue to follow the COVID-19 appropriate behaviour i.e., wearing a mask, maintaining social distance and frequently washing/sanitising hands to protect themselves and those around from spreading the infection.

BE SMART BE PREPARED

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