

**VIRTUAL TRAINING PROGRAMME
ON
LIGHTNING RISK MANAGEMENT
AND SAFETY MEASURES**

DATE:09th July 2024

TIMINGS: 02:30 PM to 04:30PM



2-Hours Virtual Training Programme
on
Lightning Risk Management and Safety Measures

Date: 09th July, 2024

Timings: 14:30hrs – 16:30hrs

CONCEPT NOTE

1. BACKGROUND:

In India, lightning strikes pose a significant risk and are responsible for a considerable number of casualties and property damage each year. India's geographical location, diverse climate patterns, and varying topography contribute to the occurrence of frequent thunderstorms and lightning activity across the country. India experiences two primary lightning seasons: pre-monsoon and monsoon. The pre-monsoon season, generally spanning from April to June, witnesses a surge in lightning activity due to the collision of hot and cold air masses. The monsoon season, from June to September, brings frequent thunderstorms, lightning, and heavy rainfall as the southwest monsoon sweeps across the subcontinent.

According to data from the India Meteorological Department (IMD), lightning strikes have been responsible for a substantial number of fatalities and injuries. Rural areas, with their predominantly agrarian population and lack of proper infrastructure, are particularly vulnerable to lightning-related incidents. The impact of lightning strikes extends beyond human casualties. Livestock, crops, and property are also susceptible to damage during severe thunderstorms. Furthermore, the rapid expansion of urban areas and increased dependence on electronic equipment and infrastructure make lightning protection a crucial concern in both urban and rural settings.

1.1 Lightning Risk Profile of Gujarat

Similarly, Gujarat, faces significant vulnerability to lightning and thunderstorm risks. The occurrence of lightning and thunderstorms is prevalent primarily between the months of June to October in the state. In recent times, Gujarat has witnessed a sudden increase in lightning and thunderstorm activities across various parts of the state. This surge can be attributed to several factors, including the recent spate of cyclones along the coastal regions of Gujarat, which has heightened the risk of lightning hazards. The rise in temperature and increasing pollution levels have further exacerbated the frequency of lightning strikes, particularly in tribal-dominated areas such as Purvi Patti, as well as in urban centers such as Ahmedabad, Vadodara, and Surat.

Although lightning and thunderstorm incidents have affected almost the entire state, specific regions within Northern and Central Gujarat have reported a higher frequency of fatal

lightning strikes. This concentration of lightning activity highlights the need for targeted interventions and preventive measures in these areas to mitigate the risks posed by lightning and thunderstorms. During the period spanning from 2021 to 2022, the state of Gujarat in India witnessed a substantial total count of 226,028 lightning strikes.

The data highlights the significant occurrence of lightning activity throughout the state, indicating the prevalence of lightning hazards and the associated risks posed to the population and infrastructure in Gujarat.

To effectively address the lightning risk in Gujarat, it is crucial to develop comprehensive strategies that encompass both urban and rural settings. This includes raising awareness among the general public about lightning safety guidelines, implementing lightning protection systems in critical infrastructure, and conducting lightning risk assessments in vulnerable areas. Collaborative efforts between government agencies, meteorological departments, and local communities are essential to mitigate the impact of lightning strikes, safeguard lives, and protect property in Gujarat.

2. OBJECTIVES

- The primary objective of this programme is to equip participants with comprehensive knowledge, to dispel common misconceptions and foster a better understanding of this natural phenomenon.
- To provide participants with the tools and methodologies necessary to assess lightning risks effectively, including understanding the factors influencing lightning strikes.
- To educate participants on essential safety measures and best practices for protecting themselves, others, and structures during thunderstorms. This includes personal safety tips, structural protection strategies, and emergency preparedness plans to minimize the impact of lightning.

3. NEED FOR THE TRAINING PROGRAMME

The training on lightning risk management and safety awareness is crucial to equip individuals with the knowledge and skills needed to respond effectively during thunderstorms. It enables participants to understand lightning hazards, recognize safe locations, and implement appropriate safety measures, ensuring their safety and that of others.

Lightning strikes can result in fatalities, injuries, and property damage. Training empowers individuals to assess lightning risks, implement preventive measures, and mitigate potential dangers. By understanding lightning risk management strategies, participants can significantly reduce the likelihood and impact of lightning-related incidents.

Lightning strikes can cause significant damage to buildings, electrical systems, and other assets. Training provides participants with the knowledge to implement lightning protection systems and adopt preventive measures, safeguarding property and infrastructure from lightning-related risks.

Conducting training on lightning risk management and safety awareness promotes a culture of safety within communities. It enables individuals to disseminate knowledge, educate others, and create a safer environment. By empowering individuals with the necessary skills, training strengthens community resilience against lightning hazards.

4. TARGET PARTICIPANTS

Departments/ Organizations	Level of Participants
<ul style="list-style-type: none"> • Agriculture and Co-operation Department • Directorate of Animal Husbandry • Forest & Environment Department • Climate Change Department • Revenue Department • Commissioner of Relief • Panchayat, Rural Housing & Rural Development Department • Education Department 	L1, L2