

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

DATE: 17th July 2026

TIMINGS: 02:30 PM to 04:30PM



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

Date: 17th July, 2026

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

- To help participants understand what lightning is and clear up common myths about it.
- To creating a comprehensive understanding of identifying and assessing the risk of lightning strikes by understanding when and where they are most likely to happen.
- To aware simple, effective safety tips for staying safe during thunderstorms, including how to protect yourself, others, and buildings from lightning.

3. NEED FOR THE TRAINING PROGRAMME

Lightning is one of the most frequent and fatal weather-related hazards in India, causing significant loss of human lives, injuries, livestock fatalities, and damage to property every year. Despite its recurring nature, lightning remains an under-recognized hazard, and many casualties occur due to a lack of awareness regarding appropriate safety measures and timely response. The growing frequency of extreme weather events associated with climate variability has further highlighted the need for strengthening preparedness and enhancing community awareness on lightning safety.

Recognizing the increasing impact of lightning, the **16th Finance Commission (2026–31)** has recommended the inclusion of lightning and heatwaves in the list of nationally notified disasters. This recommendation underscores the importance of integrating lightning risk management into disaster risk reduction strategies and strengthening institutional capacities for preparedness, early warning dissemination, and community resilience.

In this context, the training programme on "**Understanding Lightning Risk & Safety Measures**" aims to enhance the knowledge and capacities of government officials, frontline functionaries, and other stakeholders on lightning hazards, associated risks, and scientifically validated safety measures. The programme will familiarize participants with lightning science, early warning systems, safe practices before, during, and after thunderstorms, and effective response mechanisms to reduce casualties and losses.

The programme will also contribute towards promoting a culture of preparedness by enabling participants to disseminate awareness within their respective communities and institutions. By strengthening individual and institutional capacities, the training supports the broader objectives of disaster risk reduction and the development of resilient communities that can effectively manage lightning-related risks.

4. TARGET PARTICIPANTS

Departments/ Organizations	Level of Participants
• 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
