

2-DAYS RESIDENTIAL TRAINING PROGRAMME ON LIGHTNING RISK MANAGEMENT AND SAFETY AWARENESS

DATE: 28TH – 29TH AUGUST 2023



Gujarat Institute of Disaster Management
Behind Pandit Deendayal Petroleum University
Raisan Village, Gandhinagar, Gujarat,
India - 382007

2-Days Residential Training
on
Lightning Risk Management and Safety Measures

Date: 28th - 29th August, 2023

CONCEPT NOTE

A. 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.

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 centres 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 residential training programme is to enhance participants' knowledge and understanding of lightning risk.
- Another objective is to instil a culture of safety consciousness among the participants. By highlighting real-life examples, case studies, and statistics related to lightning incidents, the program aims to create awareness about the potential dangers of lightning strikes.
- The training program seeks to enable participants to conduct lightning risk assessments and implement appropriate safety management strategies.
- The training program aims to enhance participants' emergency preparedness in lightning-prone situations. Objectives include educating attendees about emergency response plans, evacuation procedures, and first aid measures specific to lightning incidents.
- The final objective is to foster collaboration and encourage the implementation of lightning risk mitigation measures. By facilitating interactive sessions, group discussions, and sharing good practices, the program aims to create a network of individuals who can collectively promote lightning safety within their communities.

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/ Organisations	Level of Participants
<ul style="list-style-type: none"> • Agriculture and Co-operation Department • Directorate of Animal Husbandry 	L1, L2

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|---|--|
| <ul style="list-style-type: none"> • Forest & Environment Department • Climate Change Department • Revenue Department • Commissioner of Relief • Panchayat, Rural Housing & Rural Development Department | |
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5. TRAINING METHODOLOGY

The proposed methodology for the training programme will focus on an interactive and practical approach. It will include lectures, presentations, case studies, group discussions, and hands-on exercises. Guest speakers may be invited for delivering the sessions and knowledge checks of each individual will be conducted. The participants will be provided with study materials for enhanced knowledge development and participant engagement.
