

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION NO. 2918
ANSWERED ON 13/08/2026

EFFECTIVENESS OF WARNING SYSTEMS

2918. # SMT. MAHUA MAJI:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether Government has conducted any national study on the time lag between the issuance of lightning warnings and the dissemination of such information to the last person in remote villages;
- (b) whether an automated warning system based on sirens, community radio and village-level equipments are being developed for areas lacking mobile network connectivity; and
- (c) whether there is any proposal to launch a pilot project of a 'Last-Mile Lightning Warning Grid' in Jharkhand?

ANSWER

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)

- (a)-(c) The India Meteorological Department (IMD), under the Ministry of Earth Sciences (MoES), issues impact-based lightning forecasts and nowcasts using observational data, numerical weather prediction models, and lightning detection systems. IMD has also conducted a nationwide online public survey to assess and improve its lightning and thunderstorm alert services. The survey was made available through the IMD website in 13 vernacular languages to facilitate wider participation. The responses received were analysed to assess user awareness, satisfaction, and suggestions for further improvement of the services.

The National Disaster Management Authority (NDMA), under the Ministry of Home Affairs (MHA), is implementing the Mitigation Project for Lightning Safety (MPLS) across 50 identified lightning-prone districts in the country, including Jharkhand, with a focus on reducing lightning-related fatalities and strengthening community resilience. Under the project, Automated Lightning Early Warning Systems comprising Electric Field Mills (EFMs) are being installed at four locations in each identified district. Each EFM is integrated with five Public Alert Poles to enable the timely dissemination of lightning warnings to vulnerable communities. The project includes the installation of 60 Lightning Protection Devices (LPDs) in rural areas and 10 LPDs on Government buildings in urban areas of each identified district. In

addition, one Charge Transfer Mechanism (CTM)-based Lightning Protection System is being installed in each district at a selected high-footfall public location, such as tourist destinations, marketplaces or other public gathering places, to establish lightning-safe zones.

These measures strengthen the dissemination of timely lightning warnings, enhance the protection of vulnerable communities and critical infrastructure, and support the reduction of lightning-related risks in identified high-risk areas.
