

# Why Lightning Must Be Added to India's Disaster Relief Framework?

## Central Idea

This report makes a case for the inclusion of lightning in India's list of notified disasters under the State Disaster Response Fund (SDRF) and National Disaster Response Fund (NDRF). Although lightning accounted for 40% of all deaths from natural forces in 2022 as reported in the National Crime Records Bureau (NCRB), it continues to be excluded from official disaster frameworks, thereby denying financial relief and institutional mitigation support to thousands of affected families.

## Why This Report?

Lightning kills thousands of people in the country and disproportionately affects India's poor, such as farmers and laborers working outdoors during storms. Even after many reports, it remains excluded from disaster relief funding, leaving victims with insufficient support. Climate change is exacerbating the problem, with lightning incidents increasing by 30–40% from 1995–2014. This report is important as it exposes systemic neglect, highlighting a gap in disaster management that impacts the most vulnerable, and calls for urgent policy action to address this growing crisis.

## 3. Key Sources:

- **NCRB data** (2021–2022)
- **Parliamentary Answers**
- **13th, 14th, and 15th Finance Commission Reports** and recommendations
- **Statements from experts**, including M.N. Rajeevan (*The Economic Times*, July 2023)
- **The Indian Institute of Tropical Meteorology** report
- **The Hindu** and *Economic Times* articles on disaster response and climate trends
- **NDMA guidelines** and SDRF/NDRF policy framework

Lightning is one of the deadliest yet most underestimated natural hazards in India. Despite claiming 40 percent of the total deaths caused by Natural forces according to the National Crime Records Bureau (NCRB)<sup>i</sup>, it is still not officially recognized under the country's notified list of disasters eligible for financial support from disaster relief funds.

According to the National Disaster Management Authority (NDMA), lightning is caused by the build-up of electrical charges in clouds, leading to discharges either within the same cloud (intra-cloud lightning), between different clouds (cloud-to-cloud), or between the cloud and the ground (cloud-to-ground).<sup>ii</sup> The most dangerous of these is cloud-to-ground lightning, which frequently results in fatalities, especially in rural India where people are often engaged in agricultural activities without any access to safe shelter or early warning systems.

The impact of lightning is especially severe on rural populations. Most of the people killed during lightning events

were engaged in outdoor activities such as transplanting paddy in fields, grazing cattle, or seeking shelter under trees to protect themselves from rain—actions driven more by necessity than choice. These patterns underscore the vulnerability of agricultural workers and those whose livelihoods tie them to open spaces during the monsoon season. Yet, when it comes to disaster relief, lightning remains conspicuously absent. India's disaster relief system is structured around two major funds: the State Disaster Response Fund (SDRF), which is primarily funded by the central government up to 75% (90% in the case of special category states), and the National Disaster Response Fund (NDRF), which is fully financed by the Centre.<sup>iii</sup> These funds are designated to provide immediate relief and rehabilitation for a list of specified disasters including cyclones, droughts, earthquakes, fires, floods, tsunamis, hailstorms, landslides, avalanches, cloudbursts, pest attacks, frost, and cold waves. Notably, lightning does not figure in this list, despite its toll on

human life far exceeding that of many other listed disasters.

The severity of lightning's impact is evident in official data. As per the National Crime Records Bureau (NCRB), 2,880 people lost their lives to lightning in 2021 alone. This accounted for nearly 40% of all accidental deaths due to natural forces that year, making lightning the single largest contributor to such deaths.<sup>iv</sup> These fatalities are not evenly distributed; they primarily affect those from socio-economically weaker backgrounds such as farmers, daily wage laborers, and schoolchildren in rural areas—populations with minimal access to shelter or early warnings.

The situation is further complicated by climate change. Former Secretary in the Union Ministry of Earth Sciences, Madhavan Nair Rajeevan, noted in a report published in the *Economic Times* that climate change is intensifying the formation of convective or thunderstorm clouds.<sup>v</sup> He explained that lightning is attributed to deeper clouds with large vertical extensions, and “with climate change increasing the moisture-holding

capacity of the air, more such clouds are forming.” This atmospheric shift leads to a higher incidence of lightning events. Supporting this claim, data from the Indian Institute of Tropical Meteorology shows that lightning incidents in India increased by 30 to 40 per cent between 1995 and 2014<sup>vi</sup>—a trend that has only become more visible in recent years with the surge in extreme weather patterns.

Despite repeated efforts, lightning has not been granted the official status of a disaster eligible for relief funding. The first significant attempt was made in 2010 when the Ministry of Home Affairs proposed to the 13th Finance Commission that lightning be included in the notified list. However, the proposal did not lead to any action, and the Commission did not recommend its inclusion.<sup>vii</sup> A second proposal was moved in 2014, this time before the 14th Finance Commission. The Home Ministry again advocated for the recognition of lightning as a disaster, highlighting the rising fatalities and growing demand from state

governments. But once more, the request was declined, and no official justification was provided for its exclusion. The issue resurfaced before the 15th Finance Commission (2020–25), which acknowledged the recommendation in paragraph 8.143 of its report but stated that the current list of disasters “largely covers the needs of the states.” Consequently, it found little merit in expanding the list and lightning was once again omitted.<sup>viii</sup>

This continued exclusion is particularly puzzling given India’s capabilities in lightning forecasting. India is among the five countries in the world that has a functioning early warning system for lightning. Forecasts can now predict lightning events up to five days in advance, and real-time alerts can be issued as early as three hours before an incident. Mobile-based tools like the Damini App<sup>ix</sup> provide hyper-local warnings and advisories, helping reduce the risk of fatalities.

These advancements in forecasting make it possible to implement effective mitigation strategies, but without official

recognition, there are no funds dedicated to scaling up these efforts, especially in the high-risk rural and tribal regions.

The financial allocations for disaster management further highlight the paradox. Between 2021 and 2026, the Government of India has earmarked ₹45,724 crore for disaster mitigation and response efforts, with ₹13,693 crore assigned to the National Disaster Mitigation Fund (NDMF) and ₹32,031 crore to the State Disaster Mitigation Fund (SDMF).<sup>x</sup> However, none of this funding can be used for lightning-related initiatives unless lightning is formally notified as a disaster. This renders states helpless in deploying preventive infrastructure such as lightning arresters, public awareness programs, or compensatory mechanisms for victims’ families. Some states, particularly in southern India where lightning events have intensified in recent years, made renewed demands in 2023 for its inclusion. However, their appeals remain unaddressed.<sup>xi</sup>

In the Lok Sabha on 9 August 2023, the Ministry of Earth Sciences reiterated the position of the Central government, confirming that lightning would not be added to the notified list.<sup>xii</sup> This statement was in response to direct queries regarding the issue and clearly indicated the government's current stance. This policy inertia continues despite the growing body of evidence linking climate change to increasing lightning activity and the overwhelming human toll it exacts each year.

In a country where over 40 percent of deaths are due to lightning annually, and where climate models predict a

future with even more frequent and intense lightning storms, the absence of formal recognition is more than just a bureaucratic gap—it is a moral failure.

Recognizing lightning as a disaster under the NDMA's official list is not merely about access to funds; it is about acknowledging the lived reality of thousands of Indians who remain exposed to a silent, sudden, and increasingly common killer. Until this recognition is granted, the most vulnerable citizens of India will continue to face death and displacement without the dignity of institutional support or compensation.

## Reference and Endnotes

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- <sup>i</sup> <https://data.opencity.in/dataset/accidental-deaths-and-suicides-in-india-2022>
- <sup>ii</sup> <https://ndma.gov.in/Resources/awareness/lightning#:~:text=More%20Visuals,78.2%20MB>)
- <sup>iii</sup> <https://ndmindia.mha.gov.in/ndmi/responsefund>
- <sup>iv</sup> <https://data.opencity.in/dataset/accidental-deaths-and-suicides-in-india-2022>
- <sup>v</sup> <https://economictimes.indiatimes.com/news/science/climate-change-causing-more-frequent-and-deadly-lightning-strikes-scientists/articleshow/111716900.cms?from=mdr>
- <sup>vi</sup> <https://www.deccanherald.com/india/climate-change-causing-more-frequent-and-deadly-lightning-strikes-scientists-3104614>
- <sup>vii</sup> <https://indianexpress.com/article/india/india-others/include-lightning-as-disaster-eligible-for-compensation-ministry-of-home-affairs/>
- <sup>viii</sup> [https://sansad.in/getFile/loksabhaquestions/annex/1712/AU2791.pdf?source=pqals#:~:text=\(c\)%20As%20per%20the%20Guidelines,of%20natural%20disasters%20eligible%20for](https://sansad.in/getFile/loksabhaquestions/annex/1712/AU2791.pdf?source=pqals#:~:text=(c)%20As%20per%20the%20Guidelines,of%20natural%20disasters%20eligible%20for)
- <sup>ix</sup> <https://web.umang.gov.in/landing/departement/damini-lightning-alert.html>
- <sup>x</sup> <https://ndmindia.mha.gov.in/ndmi/responsefund>
- <sup>xi</sup> <https://www.deccanherald.com/india/declare-lightning-a-natural-disaster-demand-states-1199428.html>
- <sup>xii</sup> [https://sansad.in/getFile/loksabhaquestions/annex/1712/AU2791.pdf?source=pqals#:~:text=\(c\)%20As%20per%20the%20Guidelines,of%20natural%20disasters%20eligible%20for](https://sansad.in/getFile/loksabhaquestions/annex/1712/AU2791.pdf?source=pqals#:~:text=(c)%20As%20per%20the%20Guidelines,of%20natural%20disasters%20eligible%20for)