

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**LOK SABHA**  
**UNSTARRED QUESTION NO. 2791**  
TO BE ANSWERED ON 07.08.2023

**Cases of Lightening**

2791. SHRI PRADEEP KUMAR SINGH

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) the details of the cases of lightening strikes in the country during the current year, State-wise;
- (b) the number of the people killed due to lightening strikes, State-wise;
- (c) the details of assistance provided by the Government to the family members of such persons;
- (d) whether the incidents of lightening have increased due to deforestation; and
- (e) if so, the concrete steps being taken by the Government to check/prevent the incidents of lightening strikes?

**ANSWER**

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE  
(SHRI ASHWINI KUMAR CHOUBEY)

(a) The details of the lightning strikes in the country for the current year is given in **Annexure -I.**

(b) The number of deaths reported due to lightning strikes, State-wise, is given in **Annexure-II.**

(c) As per the Guidelines issued by Ministry of Home Affairs, based on recommendation of 15<sup>th</sup> Finance Commission for Constitution and Administration of State Disaster Response Fund (SDRF)/ National Disaster Response Fund (NDRF), lightning is not included in the centrally notified list of natural disasters eligible for relief under SDRF/NDRF.

However, a State Government can use up to 10% of the annual funds allocation of the SDRF, subject to fulfilment of certain prescribed conditions and norms, for providing immediate relief to the victims of natural disasters that they consider to be 'disasters' within local context in the State and which are not included in the centrally notified list of natural disasters.

(d) There are no proven studies linking the increase in the lightning due to de-forestation, However, associated with the global warming, increase in various extreme weather conditions

including lightning events have been observed in the country in line with increase in such events observed over various other parts of the globe.

(e) Ministry of Earth Sciences, through India Meteorological Department (IMD), issues forecast and warnings for thunderstorms and associated weather phenomena five days in advance with regular updates. Indian Institute of Tropical Meteorology (IITM), Pune, an autonomous research institution under the Ministry of Earth Sciences (MoES), has established a lightning location network strategically installed at 83 places in the country to detect and locate lightning strikes with utmost accuracy. Central processor of this network located at IITM, receives and processes the signal received from the network and identifies the location of lightning strikes with less than 500 m accuracy. The output from this network is shared with IMD and various State Governments and is used for nowcasting purposes.

From National Weather Forecasting Centre in IMD, these forecasts and warnings are given in meteorological sub-divisional scale whereas State Meteorological Centres issue the same in district level. In addition to that, thunderstorms and associated disastrous weather phenomena are covered by nowcast (forecast for next 3 hours issued every 3 hours) in the location/district level by State Meteorological Centres. At present this facility is extended to all the districts and for about 1084 stations across the country.

In 2020, Damini Lightning apps was developed by IITM-Pune. The App is monitoring all lightning activity which are happening over India and alert the person if lightning is happening near the person by GPS notification under 20KM and 40KM radius. Detailed description of instruction, precautions is provided in the mobile app while in lightning prone area. It also provides the lightning warning at the location valid for next 40 minutes. There are more than 5 lakhs downloads of Damini app over India.

Apart from the above, National Disaster Management authority (NDMA) has taken effective steps for mitigation action in the concerned issues. NDMA has issued Guidelines for Action Plan on Thunderstorm & Lightning/ Squall and Strong wind in 2018-2019 and sent to all State Governments/ UTs and uploaded on the website of NDMA.

Further NDMA has taken initiatives as following:

- NDMA issued specific advisories Do's and Don'ts on Thunderstorm and Lightning to State Governments/ UTs for taking necessary action.
- NDMA Reviewed the preparedness & mitigation measures on Thunderstorm and Lightning through Video Conferencing (VC) with most affected States.
- Develop a protocol for early warning dissemination on Thunderstorm and Lightning,
- NDMA produced IEC materials like TVCs, Pocket Books containing do's and don'ts, audio-visuals on thunderstorm and lightning.
- Special panel discussion (TV Debate) on 'AapdakaSaamna' show on Doordarshan.
- Doordarshan and All India Radio - NDMA has run campaign through TV (Doordarshan) and Radio (All India Radio) for awareness generation among masses on 'Thunderstorm & Lightning' during April 2021 in the States prone to the disaster including North Eastern States and West Bengal.
- Social Media campaign on thunderstorm and lightning are being conducted by NDMA. Do's and don'ts are being shared on NDMA's social media platforms and videos are being continuously posted on twitter and facebook.

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## Annexure-I

### Number of Lightning Strikes in the current year

State	Jan	Feb	Mar	Apr	May	June	July
Andhra Pradesh	0	0	85203	176987	250300	92791	38920
Arunachal Pradesh	0	493	1239	5786	2420	2118	378
Assam	0	2095	18358	103892	38737	43947	3513
Bihar	17	0	18495	22916	53564	113926	122716
Chhatisgarh	0	15	66400	144448	69698	119387	56857
Goa	0	0	5	209	7579	433	43
Gujrat	4451	0	35988	13981	58596	63079	32224
Haryana	428	552	13140	7645	26266	15265	12186
Himachal	1964	1985	7708	10769	9977	19917	3409
Jharkhand	0	0	55462	33300	106364	183363	73648
Karnataka	53	0	19604	128793	354067	37279	4392
Kerala	1474	0	12704	33697	72879	14332	1095
Madhya Pradesh	3250	328	103581	167899	81774	173677	176885
Maharashtra	67	0	79934	390240	99944	52921	37681
Manipur	0	6	1591	8734	2343	3251	218
Meghalaya	0	725	14101	40428	35460	47100	2891
Mizoram	0	0	4992	17520	12975	11447	1053
Nagaland	0	43	948	6066	1318	2276	172
Odisha	0	17	114986	180788	313619	344401	46862
Punjab	313	323	17388	6359	22140	15502	11174
Rajasthan	16624	1455	65796	43538	264404	150943	88122
Sikkim	0	68	772	2278	302	56	-
Tamilnadu	29	373	46272	76350	152212	58435	21515
Telangana	0	0	60558	194740	111070	30812	10578
Tripura	0	6	6389	16559	6488	22387	945
Uttar Pradesh	3902	260	55655	45370	70475	111612	194349
Uttarakhand	593	1094	8519	5739	11324	15287	4544
West Bengal	0	169	103774	104011	202011	224250	57310
Chandigarh	1	0	14	16	40	54	19
Dadar & N Haveli	0	0	80	27	-	44	-
Daman & Diu	0	0	8	4	-	-	-
Delhi	13	4	697	329	686	461	712
Lakshadweep	41	0	2	3	8	15	-
Puducherry	0	0	139	133	102	1154	141
Jammu & Kashmir	1312	826	2954	10366	7082	7880	5877
Ladakh	0	0	0	4	26	99	69
Andaman and Nicobar	213	23	36	523	704	1319	438

Source: MoES

## Deaths reported due to lightning

SN	State/UT	Lightning		2021
		2019	2020	
1	Andhra Pradesh	109	93	100
2	Arunachal Pradesh	0	0	0
3	Assam	28	14	16
4	Bihar	400	436	286
5	Chhattisgarh	212	246	230
6	Goa	2	0	1
7	Gujarat	64	78	40
8	Haryana	11	3	11
9	Himachal Pradesh	1	5	4
10	Jharkhand	334	336	254
11	Karnataka	99	75	121
12	Kerala	15	8	15
13	Madhya Pradesh	400	429	496
14	Maharashtra	189	182	238
15	Manipur	0	0	0
16	Meghalaya	7	8	7
17	Mizoram	1	0	0
18	Nagaland	0	1	0
19	Odisha	271	275	287
20	Punjab	7	8	13
21	Rajasthan	88	48	132
22	Sikkim	0	0	0
23	Tamil Nadu	57	64	109
24	Telangana	96	64	66
25	Tripura	10	5	4
26	Uttar Pradesh	321	304	219
27	Uttarakhand	2	10	1
28	West Bengal	147	170	228
<b>TOTAL STATE(S)</b>		<b>2871</b>	<b>2862</b>	<b>2878</b>
29	A & N Islands	1	0	0
30	Chandigarh	2	0	0
31	D&N Haveli and Daman&Diu @ +	1	0	0
32	Delhi UT	0	0	0
33	Jammu & Kashmir @ *	1	0	2
34	Ladakh @	-	0	0
35	Lakshadweep	0	0	0

36	Puducherry	0	0	0
<b>TOTAL UT(S)</b>		<b>5</b>	<b>0</b>	<b>2</b>
<b>TOTAL (ALL INDIA)</b>		<b>2876</b>	<b>2862</b>	<b>2880</b>

Source: NCRB, MHA

‘+’ Combined data of erstwhile D & N HAVELI AND DAMAN & DIU UT during 2019

‘\*’ Data of erstwhile JAMMU & KASHMIR State Including LADAKH during 2019

‘@’ Data of newly created Union territory 2020