

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

RAJYA SABHA
UNSTARRED QUESTION NO. 1934
TO BE ANSWERED ON 08.08.2024

Losses due to forest fires

1934 SMT. JEBI MATHER HISHAM:

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

- (a) the State/UT-wise details of forest fires over the last five years;
- (b) the details of the loss of flora and fauna due to forest fires, the State/UT-wise details thereof over the last five years;
- (c) the details of extinct wildlife in forest fires, the State/UT-wise details thereof over the last five years; and
- (d) the details of areas that have been found prone to high-intensity forest fires, the State/UT-wise details thereof?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI KIRTI VARDHAN SINGH)

- (a) Seasonal forest fires occur every year due to various natural and anthropogenic reasons including accumulation of inflammable materials such as dry leaves, twigs, pine needles, etc. Most of the forest fires in the country are ground fires in which ground vegetation, etc., are burnt. The number of incidences of forest fire in the country varies from year to year depending on the vulnerability of the forests to various forest fire risk factors.

The State/UT-wise number of forest fire detections made by the Forest Survey of India (FSI), Dehradun, using satellite-mounted sensors, in the last five forest fire seasons are given in **Annexure I**.

- (b) & (c) Till the year 2023-2024, no survey of forest fire burnt area has been made by the Forest Survey of India, Dehradun.

However, the FSI has carried out a forest fire burnt scar assessment based on the requests received from the State Forest Departments of Kerala and Uttarakhand for the forest fire season 2021-2022 and of the State of Manipur for the forest fire season 2022-2023.

Approximately, 85.89 square kilometers were delineated as forest fire burnt scars in Kerala, and approximately 1781.39 square kilometers were delineated as forest fire burnt scars in Uttarakhand during the forest fire season 2021-2022. For the State of Manipur, approximately 861.32 square kilometers of forest fire burnt area was delineated during the forest fire season 2022-2023.

No estimation of loss of forest and wildlife due to forest fire in the country has been made by the Ministry.

- (d) The FSI, Dehradun has carried out a study on the identification of fire prone forest areas based on the spatial analysis of Moderate Resolution Imaging Spectroradiometer (MODIS) forest fire detections from 2004 to 2021. The extent of forest cover under different fire-prone classes has been determined for each State/UT and the particulars are given in **Annexure II**.

ANNEXURE REFERRED TO IN THE REPLY TO PART (a) OF THE RAJYA SABHA UNSTARRED QUESTION NO. 1934 DUE FOR ANSWER ON 08.08.2024 REGARDING LOSSES DUE TO FOREST FIRES ASKED BY SMT. JEBI MATHER HISHAM

State/UT-wise number of forest fires detected by Forest Survey of India using SNPP-VIIRS sensors over past 5 years. (This includes large, continuous and repeated forest fires)

Sr. No	State/UTs	SNPP-VIIRS Detections				
		Nov 2019 to Jun 2020	Nov 2020 to Jun 2021	Nov 2021 to Jun 2022	Nov 2022 to Jun 2023	Nov 2023 to Jun 2024
1	Andhra Pradesh	9,996	19,328	14,138	19,367	18,174
2	Arunachal Pradesh	1,786	3,914	3,449	2,447	2,053
3	Assam	8,924	10,718	8,158	9,830	7,639
4	Bihar	614	5,179	3,024	3,793	2,763
5	Chhattisgarh	6,360	38,106	25,792	20,306	18,950
6	Delhi	21	14	3	7	16
7	Goa	47	45	20	147	36
8	Gujarat	2,770	3,803	2,769	2,342	3,182
9	Haryana	68	152	135	82	166
10	Himachal Pradesh	536	4,110	5,280	704	10,136
11	Jharkhand	2,613	21,713	9,419	11,923	7,525
12	Karnataka	4,232	5,784	4,973	13,074	5,500
13	Kerala	864	296	504	1,550	1,110
14	Madhya Pradesh	9,537	47,795	32,728	17,142	15,878
15	Maharashtra	14,018	34,025	22,052	16,119	16,008
16	Manipur	8,800	10,457	5,544	10,127	4,498
17	Meghalaya	6,762	7,658	6,322	6,604	4,319
18	Mizoram	7,361	12,846	8,734	5,798	6,627
19	Nagaland	2,905	4,975	3,471	3,882	2,609
20	Odisha	10,602	51,968	22,014	33,461	20,973
21	Punjab	153	635	428	119	605
22	Rajasthan	3,461	3,402	2,703	2,059	4,352
23	Sikkim	47	63	26	49	101
24	Tamil Nadu	1,368	1,220	1,035	1,998	3,380
25	Telangana	12,132	18,237	13,737	13,117	13,479
26	Tripura	4,369	5,015	2,609	4,332	2,089
27	Uttar Pradesh	1,548	8,608	5,428	3,235	4,424
28	Uttarakhand	759	21,487	12,985	5,351	21,033
29	West Bengal	1,320	3,287	1,520	3,096	2,020
30	Andaman & Nicobar Islands	39	16	33	20	21
31	Chandigarh	2	0	0	1	1
32	Dadra & Nagar Haveli and Daman & Diu	21	34	18	16	16
33	Jammu & Kashmir	438	1,098	4,255	131	3,829
34	Ladakh*			27	20	32
35	Lakshadweep	0	0	0	0	0
36	Puducherry	0	1	0	0	0
Total		124,473	3,45,989	2,23,333	2,12,249	2,03,544

* The number of forest fire detections in Ladakh are combined with the number of forest fire detections in Jammu & Kashmir for the fire season Nov 2019 to Jun 2020, Nov.2020 - June 2021.

ANNEXURE REFERRED TO IN THE REPLY TO PART (d) OF THE RAJYA SABHA UNSTARRED QUESTION NO. 1934 DUE FOR ANSWER ON 08.08.2024 REGARDING LOSSES DUE TO FOREST FIRES ASKED BY SMT. JEBI MATHER HISHAM

State/UT-wise forest cover area under different fire prone classes

(Area in square kilometre)

S.No.	State/ UT	Extremely Fire Prone	Very Highly Fire Prone	Highly Fire Prone	Moderately Fire Prone	Less Fire Prone
		Forest cover	Forest cover	Forest cover	Forest cover	Forest cover
1.	Andhra Pradesh	1,150.13	3,832.50	4,915.11	4,153.69	15,732.57
2.	Arunachal Pradesh	35.16	959.78	2,744.51	4,459.73	58,231.82
3.	Assam	3,166.11	4,871.05	3,400.46	2,653.93	14,220.45
4.	Bihar	24.38	471.89	984.48	1,173.58	4,726.67
5.	Chhattisgarh	1,935.04	3,655.58	8,159.70	11,275.57	30,691.11
6.	Delhi	0.00	0.00	0.00	0.00	195.00
7.	Goa	0.00	0.00	0.00	0.00	2,244.00
8.	Gujarat	8.08	384.42	523.32	975.10	13,035.08
9.	Haryana	0.00	20.40	66.81	154.50	1,361.29
10.	Himachal Pradesh	0.00	6.81	305.56	999.03	14,131.60
11.	Jammu & Kashmir	0.00	17.90	321.68	857.95	20,189.47
12.	Jharkhand	47.36	480.45	2,159.16	4,227.02	16,807.01
13.	Karnataka	71.58	930.93	2,506.25	2,989.30	32,231.94
14.	Kerala	0.00	54.79	461.06	1,266.42	19,470.73
15.	Madhya Pradesh	336.52	4,730.92	10,889.70	15,231.85	46,304.01
16.	Maharashtra	470.68	3,585.37	8,540.70	9,377.92	28,823.33
17.	Manipur	1,636.46	6,167.06	5,423.48	2,096.16	1,274.84
18.	Meghalaya	1,588.24	3,505.49	3,716.73	2,900.24	5,335.30
19.	Mizoram	4,683.50	8,862.58	3,369.82	543.28	360.82
20.	Nagaland	352.24	3,129.20	4,849.90	2,477.96	1,441.70
21.	Odisha	1,226.66	3,930.36	7,634.76	10,086.77	29,277.45
22.	Punjab	0.00	53.86	254.95	375.30	1,162.89
23.	Rajasthan	0.00	197.33	366.57	705.56	15,385.54
24.	Sikkim	0.00	0.00	0.00	25.30	3,315.70
25.	Tamil Nadu	0.00	38.78	470.00	1,910.94	23,999.28
26.	Telangana	571.87	2,970.26	3,920.18	3,522.07	10,229.62
27.	Tripura	2,491.90	1,249.76	812.80	641.61	2,525.93
28.	Uttar Pradesh	209.30	1,043.54	1,555.38	2,070.29	9,939.49
29.	Uttarakhand	49.21	757.92	4,070.09	5,887.70	13,540.08
30.	West Bengal	20.05	120.03	425.63	1,050.42	15,215.87
31.	Andaman & Nicobar Islands	0.00	20.39	51.38	37.49	6,634.74
32.	Chandigarh	0.00	0.00	0.00	0.00	22.88
33.	Dadra & Nagar Haveli and Daman & Diu	0.00	0.00	0.00	0.00	227.75
34.	Ladakh	0.00	0.00	0.00	0.00	2,272.00
35.	Lakshadweep	0.00	0.00	0.00	0.00	27.10
36.	Puducherry	0.00	0.00	0.00	0.00	53.30
Total		20,074.47	56,049.35	82,900.17	94,126.68	460,638.36