

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**RAJYA SABHA**  
**UNSTARRED QUESTION NO. 384**  
TO BE ANSWERED ON 28.11.2024

**Firefighting technologies to combat wildfire**

384. SMT. JEBI MATHER HISHAM:

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

- (a) the steps have been taken to prevent wildfires over the last five years, State-wise;
- (b) the details of the total expenditure allocated and spent on wildfire prevention efforts over the last five years, State-wise;
- (c) whether there are any gaps between allocation and actual expenditure for wildfire prevention efforts, if so, State-wise details thereof over the last five years;
- (d) the details on the state-of-the-art firefighting systems currently being used to combat wildfires; and
- (e) whether there are any internationally benchmarked firefighting technologies adopted, if so, the States that are utilizing these?

**ANSWER**

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

(a) The Ministry of Environment, Forest and Climate Change has put in place the National Action Plan on Forest Fire-2018, which provides comprehensive measures for preventing forest fires, and improving the resilience of the forests against fire hazards. The State Government/UT Administration also prepares a State Action Plan in tandem with the National Action Plan to undertake State/UT-specific measures towards forest fire prevention and management.

The Ministry through the Forest Survey of India (FSI), Dehradun provides one-week advance alerts based on the Fire Weather Index. In addition, Near Real Time (NRT) forest fire alerts using MODIS sensors are disseminated as SMS alerts to the registered subscribers so that timely action can be taken on the field to combat forest fires besides monitoring it live over the Van Agni Portal [[https://vanagniportal.fsiforestfire.gov.in/fsi\\_fire/fire.html](https://vanagniportal.fsiforestfire.gov.in/fsi_fire/fire.html)], maintained by the FSI, Dehradun.

The Ministry supports the targeted efforts of the States/ UTs in the prevention and control of forest fire through the ongoing Centrally Sponsored Scheme (CSS)- Forest Fire Prevention and Management. The scheme supports various forest fire prevention and mitigation activities including, creation and maintenance of fire lines, water conservation structures inside forest areas, procurement of firefighting equipment, incentivizing villages/communities for protection against forest fire, etc. Further, forest fire prevention and its management is primarily the responsibility of concerned State Governments /UT Administrations. The assistance provided to the States/UTs through their Annual Plan of

Operations(APOs) to carry out various forest fire prevention and mitigation activities under the CSS-FFPM over the last five financial years are given in Annexure I.

The Ministry in coordination with the National Disaster Management Authority (NDMA) and the National Disaster Response Force (NDRF) has trained three battalions of the NDRF, comprising 150 personnel to tackle large forest fires. These battalions are stationed at Guwahati, Vijaywada, and Dehradun and are deployed as per the requirements to control forest fires. They supplement the efforts of the State Forest Departments in tackling Large Forest Fires.

(b)& (c) The details of total expenditure allocated and spent on forest fire prevention and management, along with the gap in expenditure under the CSS-FFPM over the last five years State-wise are given in Annexure-I.

(d) The Forest Research Institute, Dehradun has prepared and published a “Compendium of Best Practices and Indigenous Technical Knowledge with regards to Management of Forest Fire”. Besides the Ministry of Home Affairs, the Government of India has authorized 31 generalized firefighting equipment for use by the three battalions of the National Disaster Response Force (NDRF) trained in forest fire control. In addition, States such as Odisha have installed AI-based cameras on a pilot basis to monitor and alert forest fires and several States have procured drones to monitor various forest fire risks and incidences.

(e) No such benchmarking of firefighting technologies has been adopted for forest fire fighting. However, the existing resources such as trained battalions of NDRF, helicopter based services from Indian Air force (IAF) are harnessed by the State Governments in dousing forest fires as per evolving requirements to control Large Forest Fires. In the last forest fire season such services were utilized by the States of Uttarakhand and Tamil Nadu to control extended Large Forest Fires.

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## ANNEXURE REFERRED TO PART (a), (b) and (c) OF RAJYA SABHA UNSTARRED QUESTION NO. 384 DUE FOR 28.11.2024.

(Rs. In Lakhs)

S. No.	State/UT	FY 2019-20			FY 2020-21			FY 2021-22			FY 2022-23			FY 2023-24		
		Funds released	Funds utilized	Gap in utilization	Funds released	Funds utilized	Gap in utilization	Funds released	Funds utilized	Gap in utilization	Funds released	Funds utilized	Gap in utilization	Funds released	Funds utilized	Gap in utilization
1	Andhra Pradesh	216.13	64.4	151.73	0	110.93	-110.93	0	0	0	0	31.83	-31.83	85.37	95.95	-10.58
2	Bihar	208.16	215.72	-7.56	233.94	70.55	163.39	0	60.3	-60.3	39.62	139.54	-99.92	142.85	0	142.85
3	Chhattisgarh	392.07	249	143.07	0	227.48	-227.48	140.55	122.21	18.34	0	70.91	-70.91	81.9	80.95	0.95
4	Gujarat	183.92	178.79	5.13	185.6	190.77	-5.17	99.8	95.72	4.08	0	12.63	-12.63	70.79	83.37	-12.58
5	Goa	0	15.46	-15.46	0	54.69	-54.69	57.3	5.08	52.22	0	66.64	-66.64	18.05	19.48	-1.43
6	Haryana	49.26	14.68	34.58	0	62.23	-62.23	0	0	0	0	0	0	17.52	0	17.52
7	H.P	199.99	189.34	10.65	203.29	95.44	107.85	116.17	111.18	4.99	113.29	102.92	10.37	180.8	202.87	-22.07
8	Jharkhand	222.02	161.03	60.99	153.46	200.73	-47.27	136.15	103.41	32.74	1.69	29.5	-27.81	47.84	42.47	5.37
9	Karnataka	136.75	136.53	0.22	219.4	219.62	-0.22	157.33	153.67	3.66	87.38	41.86	45.52	52.85	92.75	-39.9
10	Kerala	256.8	199.24	57.56	0	103.4	-103.4	362.88	326.33	36.55	444.31	413.81	30.5	354.03	348.33	5.7
11	M.P	327.29	342.27	-14.98	269.88	161.1	108.78	0	58.1	-58.1	635.48	639.58	-4.1	775.02	775.02	0
12	Maharashtra	428.07	315.62	112.45	455.18	301.1	154.08	0	212.04	-212.04	395.99	85.95	310.04	147.06	263.84	-116.78
13	Odisha	463.84	481.54	-17.7	400.55	398.37	2.18	839.83	239.62	600.21	338.8	151.31	187.49	147.18	449.08	-301.9
14	Punjab	13.56	0	13.56	0	0	0	0	0	0	0	0	0	36.79	24.88	11.91
15	Rajasthan	0	129.91	-129.91	97.15	80.22	16.93	127.21	126.88	0.33	33.47	49.01	-15.54	50.73	45.12	5.61
16	Tamil Nadu	154.82	87.36	67.46	0	60.61	-60.61	238.9	0	238.9	0	242.84	-242.84	289.41	297.39	-7.98
17	Telangana	0	0	0	166.96	12.89	154.07	0	0	0	0	0	0	152.6	144.4	8.2
18	U.P.	97.63	97.89	-0.26	146.96	112.12	34.84	111.79	0	111.79	0	0	0	44.01	24.08	19.93
19	Uttarakhand	480.03	420.73	59.3	0	110.51	-110.51	354.36	179.58	174.78	133.93	177.12	-43.19	337.98	317.64	20.34
20	West Bengal	95.61	82.57	13.04	78.83	78.7	0.13	132.73	0	132.73	0	122.11	-122.11	0	0	0
	<b>Total</b>	<b>3925.95</b>	<b>3382.08</b>		<b>2611.2</b>	<b>2651.46</b>		<b>2875.00</b>	<b>1794.12</b>		<b>2223.96</b>	<b>2377.56</b>		<b>3032.78</b>	<b>3307.62</b>	
	<b>North Eastern States</b>															
21	Assam	0	23.53	-23.53	0	0	0	0	0	0	0	0	0	0	0	0
22	Arunachal Pradesh	0	0	0	0	89.08	-89.08	89.77	89.77	0	198.12	198.12	0	198.12	198.12	0
23	Manipur	55.34	104.15	-48.81	316.61	316.61	0	86.53	86.53	0	106.61	106.61	0	106.61	106.61	0
24	Meghalaya	73.94	73.94	0	73.31	68.07	5.24	0	0	0	38.17	37.01	1.16	46.72	40.99	5.73
25	Mizoram	108.12	106.3	1.82	112.46	114.28	-1.82	87.19	87.19	0	30.87	30.87	0	48.14	36.14	12
26	Nagaland	79.95	96.58	-16.63	87.8	87.8	0	64.52	64.52	0	28.82	28.82	0	288.37	288.37	0
27	Sikkim	293.77	189.58	104.19	0	109.92	-109.92	89.73	90.59	-0.86	47.91	48.21	-0.3	144.62	125.38	19.24
28	Tripura	103.43	108.53	-5.1	45.62	83.48	-37.86	82.26	84.56	-2.3	47.48	24.87	22.61	47.64	47.64	0
	<b>Total</b>	<b>714.55</b>	<b>702.61</b>		<b>635.8</b>	<b>869.24</b>		<b>500</b>	<b>503.16</b>		<b>497.98</b>	<b>474.51</b>		<b>880.22</b>	<b>843.25</b>	
	<b>Union Territories</b>															
29	A & N Islands	0.00	0	0.00	0.00	0	0.00	0.00	8.38	-8.38	60	40.2	19.8	0	3.12	-3.12
30	Chandigarh	0.00	0	0.00	0.00	0	0.00	50.72	50.72	0.00	0	0	0	4.97	4.97	0
31	D&N Haveli	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0	0	0	0	0	0
32	Daman & Diu	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0	0	0	0	0	0
33	J & K	0.00	0	0.00	0.00	38.04	-38.04	0.00	0	0.00	0	0	0	0	75.48	-75.48
34	Lakshadweep	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0	0	0	0	0	0

35	Delhi	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	0	0	0	0	0	0
36	Puducherry	0.00	0	0.00	0.00	0	0.00	0.00	0	0.00	43.4	0	43.4	0	19.00	-19
<b>Total</b>		<b>0.00</b>	<b>0</b>		<b>0.00</b>	<b>38.04</b>		<b>50.72</b>	<b>59.1</b>		<b>103.4</b>	<b>40.2</b>		<b>4.97</b>	<b>102.57</b>	
<b>Grand total</b>		<b>4640.50</b>	<b>4084.69</b>		<b>3247.00</b>	<b>3558.74</b>		<b>3425.72</b>	<b>2356.38</b>		<b>2825.34</b>	<b>2892.27</b>		<b>3917.97</b>	<b>4253.44</b>	

Note: The utilization data are based on the utilization certificate submitted by the State Governments/UT Administration for the relevant financial year. The minus value in the column on "Gap in utilization" signifies utilization of fund including the unspent balance/s of the previous year/s.