

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**LOK SABHA**  
**UNSTARRED QUESTION NO. 3761**  
TO BE ANSWERED ON 16.03.2026

**Climate Vulnerability Assessments**

3761. SHRI VISHALDADA PRAKASHBAPU PATIL:  
MS. PRANITI SUSHILKUMAR SHINDE:  
ADV GOWAAL KAGADA PADAVI:  
DR. BACHHAV SHOBHA DINESH:

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

- (a) whether the Government has conducted region-specific vulnerability assessments since 2014 to design climate-resilient infrastructure and farming practices tailored to distinct agro- climatic zones, including recurrent flood prone yet drought-affected districts of Maharashtra and the details thereof, State/UT-wise including district of Maharashtra;
- (b) the funds allocated and utilised since 2014 for climate-resilient agriculture, watershed management and flood-mitigation infrastructure, State/UT-wise including district of Maharashtra;
- (c) whether independent evaluations have flagged gaps in preparedness, delayed implementation or inadequate adaptation planning in districts experiencing repeated flood damage despite being officially classified as drought-prone;
- (d) the number of crop losses, infrastructure damages and farmer compensation claims arising from such events during the last five years in Maharashtra, district-wise; and
- (e) the corrective, time-bound measures proposed to prevent recurring losses and strengthen locally adapted climate-resilient systems?

**ANSWER**

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

(a) The Government of India through Indian Council of Agricultural Research (ICAR) flagship network project 'National Innovations in Climate Resilient Agriculture (NICRA)' conducted risk and vulnerability assessment of Indian Agriculture to climate change for 573 predominantly agriculture districts. A total of 109 districts are categorized as very high and 201 districts as highly vulnerable that helps in targeting and prioritization of investments in agriculture.

In Maharashtra, 13 districts *viz.*, Nanded, Beed, Nandurbar, Akola, Washim, Wardha, Chandrapur, Hingoli, Parbhani, Jalna, Ahmednagar, Latur and Osmanabad fall under very and high-risk districts. ICAR along with National Agricultural Research System (NARS) have developed District Agricultural Contingency Plans (DACPs) for 651 districts in the country, including Maharashtra covering various weather aberrations and recommended location specific climate resilient management practices for crops and livestock.

Further, the Government of India has established a framework of disaster management–focused schemes that support risk reduction and enhance preparedness to minimise socio-economic impacts such as the National Disaster Management Plan, National Cyclone Risk Mitigation Project, and National Mission on Sustainable Habitat etc. The institutional and technical aspects are strengthened through multi-level coordination among National Disaster Management Authority (NDMA), State Disaster Management Authorities (SDMAs) and District Disaster Management Authorities (DDMAs), and sectoral Ministries, with technical support from agencies such as National Institute of Disaster Management (NIDM), while financial assistance is provided through mechanisms like the National Disaster Response Fund (NDRF).

The Environment and Climate Change Department, Government of Maharashtra, in its revised Maharashtra State Action Plan on Climate Change (MH SAPCC) has undertaken a comprehensive vulnerability assessment as per the Intergovernmental Panel on Climate Change (IPCC), Assessment Report 4 and 5 frameworks, and highlighted the vulnerability to all three hydro-met disasters, i.e., floods, cyclones, droughts, and their associated events,

(b) The National Adaptation Fund for Climate Change (NAFCC) was established in 2015 as a Central Sector Scheme to support concrete adaptation activities in the States and Union Territories (UTs) of India that are vulnerable to the adverse effects of climate change. Under NAFCC, the 30 projects have been sanctioned to States and UTs including the State of Maharashtra. In the State of Maharashtra, under NAFCC, a project titled “Efficient Water Management and Agriculture Technology Adoption for Climate Adaptive and Resilient Farming System in 51 villages of Nandurbar and Buldhana districts of Maharashtra” was sanctioned with an amount of ₹22.95 crore. Further, Regional Project-2, titled “Restoration of Degraded Landscapes to Natural State of Ecosystem for Climate Resilience and Livelihood Improvement of Vulnerable Communities”, covering the States of Telangana, Rajasthan and Maharashtra, was sanctioned with an amount of ₹126.10 crore. The state-wise details of NAFCC including Maharashtra are provided in *Annexure 1*. The State-wise budget (Rs. in lakhs) under NICRA during the last five years is also provided in *Annexure-2*.

*Atal Bhujal Yojana*, a community led participatory ground water management scheme, was implemented by Ministry of Jal Shakti as a pilot scheme across 8,203 priority water stressed Gram Panchayats of seven States viz. Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh.

The scheme Watershed Development Component of *Pradhan Mantri Krishi Sinchayee* (WDC-PMKSY) is implemented in all States including Maharashtra to improve productive potential of rainfed / degraded land through integrated watershed management; to strengthen community based local institutions for promotion of livelihoods & watershed sustainability, and to improve the efficiency of watershed projects through cross learning and incentive mechanism. Under WDC-PMKSY 2.0, Department of Land Resources (DoLR) has sanctioned 140 watershed development projects covering an area of 5.26 lakh ha to Maharashtra at a total cost of Rs. 1251.14 crore (Central share: Rs 750.68 crore). So far, Central share of Rs. 476.93 crore has been released to Maharashtra.

The *Nanaji Deshmukh Krishi Sanjivani Prakalp* (NDKSP) Project on Climate Resilient agriculture-PoCRA was implemented from 2018 to 2024 in 5,220 villages across 16 drought prone and climate vulnerable districts of Maharashtra, providing financial assistance to individual farmers, Farmer Producer Companies (FPCs), farmer groups, and SHGs, along with interventions such as soil and

water conservation, farmer field schools, capacity building, and agro climatic advisory services. The total expenditure incurred was Rs.5078.70 cores.

(c) to (e) The NICRA project promotes location-specific climate-resilient technologies and capacity-building activities through Krishi Vigyan Kendras (KVKs) to enhance farmers' resilience and adaptive capacity to climate variability. Location specific promising climate resilient technologies are demonstrated to farmers to address the climatic vulnerabilities in the NICRA villages such as droughts, floods, cyclone, heat wave, cold wave, hailstorms and frost. Promising climate resilient technologies have been documented for 27 States and 3 UTs and shared with the respective State Governments/UTs for further upscaling and convergence with various developmental programs in the States/UTs. Capacity building programs were also undertaken to farmers and other stakeholders on climate resilient agriculture in these districts. So far, around 26000 capacity building programs were conducted benefitting 7.57 lakh farmers and other stakeholders across the country.

In Maharashtra, the evaluation of the PoCRA project showed significant improvements in agricultural productivity and resilience. Productivity of major crops such as soybean, cotton, pigeon pea, chickpea and sorghum increased by 5–16% in project villages. The area under double cropping increased by 14%, while production costs reduced by 10–15% for major crops. Climate-resilient practices such as the broad-bed furrow method increased by 20–25%, helping reduce crop losses due to rainfall variability. Water efficiency improved with 4.88 lakh hectares brought under sprinkler and drip irrigation, and 11,120 farm ponds increased surface water storage by 30,375 thousand cubic metres (TCM). Climate-resilient farming and allied activities increased farmers' net income by about 46%, while storage capacity expanded by 1,80,836 metric tons through warehouses established by farmer producer organizations.

The Government of India has initiated several schemes under National Mission for Sustainable Agriculture (NMSA) to promote sustainable agricultural practices, including:

- (i) Per Drop More Crop (PDMC) scheme increases water use efficiency at the farm level through micro irrigation technologies i.e. drip and sprinkler irrigation.
- (ii) Rainfed Area Development focuses on Integrated Farming System for enhancing productivity and minimizing risks associated with climatic variability.
- (iii) The Soil Health & Fertility scheme promotes integrated nutrient management through judicious use of chemical fertilizers. Other programme include Mission for Integrated Development of Horticulture, Agroforestry & National Bamboo Mission also promote climate resilience in agriculture.

Further, *Pradhan Mantri Fasal Bima Yojana* along with weather index based Restructured Weather Based Crop Insurance Scheme provides a comprehensive insurance cover against crop failure by providing financial support to farmers suffering crop loss/damage arising out of unforeseen natural calamities.

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**Annexure-1**

**Annexure referred to reply in part (b) of Lok Sabha Unstarred Question No. 3761 due for answer on 16.03.2026 regarding Climate Vulnerability Assessments raised by Shri Vishaldada Prakashbapu Patil: Ms. Praniti Sushilkumar Shinde: Adv Gowaal Kagada Padavi: Dr. Bachhav Shobha Dinesh:**

**STATE-WISE DETAILS OF CLIMATE ADAPTATION FUNDS -NATIONAL ADAPTATION FUND FOR CLIMATE CHANGE (NAFCC)**

**(Amount ₹ Lakhs)**

<b>SN</b>	<b>Name of Project</b>	<b>State/UT</b>	<b>Sanctioned Amount</b>
1	Climate resilient interventions in dairy sector in costal and arid areas in Andhra Pradesh	Andhra Pradesh	12,71.36
2	Addressing Climate Change Vulnerability of Papum-Poma River for conservation and recharging of its springs	Arunachal Pradesh	23,91.53
3	Management of Ecosystem of Kaziranga National Park by Creating Climate Resilient Livelihood for Vulnerable Communities through Organic farming and Pond Based Pisciculture in Kaziranga National Park, Assam	Assam	24,56.65
4	Scaling up of climate smart agriculture through mainstreaming climate smart villages in Bihar	Bihar	23,06.62
5	Climate Adaptation Strategies in Wetlands along Mahanadi River Catchment areas in Chhattisgarh	Chhattisgarh	21,47.26
6	Climate Change Adaptation for Natural Resource Dependent Communities in Kachchh, Gujarat: Strengthening Resilience through Water & Livelihood Security and Ecosystem Restoration	Gujarat	21,35.88
7	Scaling up climate smart agriculture through mainstreaming climate smart villages in Haryana	Haryana	22,09.85
8	Sustainable Livelihoods of Agriculture-Dependent Rural Communities in Drought Prone District of HP through Climate Smart Solutions	Himachal Pradesh	20,00.00
9	Climate Resilient Sustainable Agriculture in Rain-Fed Farming (Kandi) Areas of J & K	Jammu & Kashmir	22,51.53
10	Enhancing climate resilience of forests and its dependent communities in two landscapes of Jharkhand	Jharkhand	24,73.20
11	Conservation and Management of indigenous varieties of livestock in Karnataka	Karnataka	24,21.53
12	Promotion of Integrated Farming System of Kaipad and Pokkali in Costal Wet -lands of Kerala	Kerala	25,00.00
13	Enhancing adaptation capacity to climate change through development of climate smart villages in MP	Madhya Pradesh	24,87.81

SN	Name of Project	State/UT	Sanctioned Amount
14	Efficient Water Mgt. and Agriculture Technology Adoption for Climate Adaptive and Resilient Farming System in 51 villages of Nandurbar and Buldhana Districts of Maharashtra State	Maharashtra	22,94.57
15	Model Carbon Positive Eco-Village In Phayeng Of Manipur	Manipur	10,00.00
16	Spring-shed development works for rejuvenation of springs for climate resilient development in the water stressed areas of Meghalaya	Meghalaya	22,91.54
17	Sustainable Agriculture Development through Expansion, Enhancement and Modelling	Mizoram	10,38.09
18	Gene pool conservation of indigenous varieties under traditional integrated rational farming system (Jhum optimization) for promoting livelihood and food security as climate change adaptation strategy in Nagaland	Nagaland	24,66.69
19	Conserve water through the management of run-off in the river basin to improve GW recharge to reduce vulnerability and enhance resilience for traditional livelihood in Nuapada	Odisha	20,00.00
20	Integrated surface water management for climate change adaptation in Puducherry	Puducherry	16,76.00
21	Towards Climate Resilient Livestock Production System In Punjab	Punjab	17,40.00
22	Mukhya Mantri Jal Swavlamban Abhiyaan for Climate Change Adaptation and Water Harvesting in Arthuna, Anandpuri and Sajjangarh blocks of District Banswara	Rajasthan	24,97.75
23	Addressing Climate Change Vulnerability of Water Sector at Gram Panchayat Level in Drought Prone areas of Sikkim	Sikkim	24,66.74
24	Management and rehabilitation of coastal habitats and biodiversity for Climate Change Adaptation and Sustainable Livelihood in Gulf of Mannar, Tamil Nadu, India	Tamil Nadu	24,74.00
25	Climate proofing of rainfed watersheds in Salem and Virudhunagar districts of Tamil Nadu	Tamil Nadu	23,80.26
26	Resilient Agricultural Households through Adaptation to Climate Change in Telangana	Telangana	24,00.34
27	Ecosystem Services based adaptation to climate change in Bundelkhand region of UP	Uttar Pradesh	19,80.46
28	Rain Water Harvesting and Sustainable Water Supply to the Hilly Areas in Darjeeling as an Adaptive Measure to Potential Climate Change Impacts	West Bengal	23,12.10
29	Regional project on climate resilience building in rural areas through crop residue management	Regional Project 1 [Punjab, Haryana, UP, Rajasthan]	120,66.00

SN	Name of Project	State/UT	Sanctioned Amount
30	Restoration of degraded landscapes to natural state of ecosystem for climate resilience and livelihood improvement of vulnerable communities	Regional Project 2 [Telangana, Rajasthan, Maharashtra]	126,10.00
<b>Total</b>			<b>847,47.77</b>

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State-wise Budget (Rs. in lakhs) under NICRA during the last five years

(Rs. In lakhs)

State	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Andaman and Nicobar Island	1.58	5.93	14.36	8.79	9.30	39.96
Andhra Pradesh	65.65	81.67	79.90	47.18	50.39	324.79
Arunachal Pradesh	10.40	15.65	16.96	26.09	35.69	104.79
Assam	55.64	64.83	47.47	53.64	72.45	294.03
Bihar	96.50	73.02	84.76	132.57	138.48	525.33
Chhattisgarh	22.63	36.38	28.81	37.94	43.52	169.28
Goa	0.00	0.00	5.56	22.31	19.03	46.90
Gujarat	39.43	53.43	36.16	39.26	47.27	215.55
Haryana	172.63	181.99	216.73	202.15	263.34	1036.84
Himachal Pradesh	44.56	52.20	50.62	61.08	60.77	269.23
Jammu & Kashmir	93.17	61.50	75.41	74.75	76.23	381.06
Jharkhand	63.14	70.72	49.27	38.31	44.37	265.81
Karnataka	267.31	379.34	382.64	297.88	358.52	1685.69
Kerala	232.75	222.91	204.74	187.83	143.47	991.70
Lakshadweep	0.00	0.00	4.40	8.04	3.20	15.64
Madhya Pradesh	147.00	196.11	187.43	155.80	184.48	870.82
Maharashtra	189.54	234.98	149.70	156.93	210.02	941.17
Manipur	20.72	23.70	17.30	26.51	35.49	123.72
Meghalaya	328.60	268.96	339.42	210.70	297.25	1444.93
Mizoram	15.91	16.10	27.25	37.16	47.92	144.34
Nagaland	25.64	30.03	20.25	27.06	35.71	138.69
New Delhi	417.06	401.47	327.04	227.51	332.68	1705.76
Odisha	140.79	234.71	156.28	207.98	238.12	977.88
Puducherry	0.00	0.00	1.57	9.97	9.79	21.33
Punjab	91.40	111.44	86.08	96.07	95.05	480.04
Rajasthan	92.07	90.28	166.07	157.51	161.06	666.99
Sikkim	8.48	7.45	13.00	18.21	23.66	70.80
Tamil Nadu	162.65	238.32	186.03	153.62	207.95	948.57
Telangana	672.23	779.80	1055.52	786.66	813.56	4107.77
Tripura	14.91	16.20	6.00	10.30	11.83	59.24
Uttar Pradesh	340.55	295.07	322.07	291.50	330.96	1580.15
Uttarakhand	83.15	77.59	54.55	43.43	58.20	316.92
West Bengal	118.36	128.23	175.81	189.31	355.01	966.72
<b>Total</b>	<b>4034.45</b>	<b>4450.01</b>	<b>4589.16</b>	<b>4044.05</b>	<b>4814.77</b>	<b>21932.44</b>

