

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
STARRED QUESTION NO. 102
TO BE ANSWERED ON 27.07.2026

Climate Adaptation Plans

* 102 SHRI BRIJENDRA SINGH OLA:
SMT. SANJNA JATAV:

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

- (a) whether the Government has conducted any national level assessment of rising average temperatures, heat wave incidents, changing rainfall patterns, droughts, floods and other extreme weather events in various areas of the country during the last ten years, if so, the findings thereof;
- (b) whether the Government has conducted any study regarding the impact of climate change on agricultural yield, crop productivity, animal husbandry, water resources and rural economy, if so, the details thereof, State/UT-wise;
- (c) whether the Government has prepared any special climate adaptation plans by identifying districts affected with extreme temperature conditions and climatic change;
- (d) if so, the details thereof, State/UT-wise along with the status of Rajasthan including Bharatpur Parliamentary Constituency; and
- (e) whether the Government is implementing any integrated national action plan to protect farmers, rural areas and urban areas against the effects of rising temperatures and climate change and if so, the details thereof?

ANSWER

MINISTER FOR ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI BHUPENDER YADAV)

(a) to (e) : A statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (A) TO (E) OF LOK SABHA STARRED QUESTION NO. 102 DUE FOR REPLY ON 27.07.2026 REGARDING CLIMATE ADAPTATION PLANS ASKED BY SMT. SANJNA JATAV AND SHRI BIJENDRA SINGH OLA.

(a) The Government has undertaken national-level assessments of climate change and extreme weather events, including rising average temperatures, heat waves, changing rainfall patterns, droughts, floods, cyclones and other extreme weather events across the country during the last ten years.

As a Party to the United Nations Framework Convention on Climate Change (UNFCCC), India has been submitting its National Communication to the UNFCCC from time to time regarding the implementation of the Convention and provides information on India's greenhouse gas (GHG) inventories, climate change vulnerabilities, mitigation and adaptation strategies. The Third National Communication (TNC) submitted by the Ministry of Environment, Forest and Climate Change in 2023 has reported that India is experiencing full range of climate change impacts, ranging from floods and droughts to heatwaves and glacier melt. The Ministry of Earth Sciences has published a report in 2020 titled "Assessment of Climate Change over the Indian Region", which provides a comprehensive assessment of observed and projected changes in climate over India. Additionally, the Indian Meteorological Department (IMD) has developed a web-based "Climate Hazard and Vulnerability Atlas of India", which covers 13 major hazardous meteorological events that cause significant human, animal, and economic losses. Further, IMD also studied changing rainfall patterns in the country and extremes in the recent 30 years at different spatial scales (States and Districts).

(b) to (e) The Government of India through Indian Council of Agricultural Research flagship network project "National Innovations in Climate Resilient Agriculture (NICRA)" conducted a district-level risk and vulnerability assessment of agriculture to climate change for 651 predominantly agricultural districts as per Intergovernmental Panel on Climate Change (IPCC) protocols. A total of 109 districts are categorised as 'very high' and 201 districts as 'highly' vulnerable. NICRA also assessed the impact of climate change on crop yields using simulation models in the country. The study indicated that rice yield under rainfed agriculture projected to reduce by 20% in 2050 and 47% in 2080, while irrigated rice yield reduce by 3.5% in 2050 and 5% in 2080. The wheat yield projected to reduce by 19.3% in 2050 and 40% in 2080; maize yield by 18% in 2050 and 23% in 2080. The rising temperature due to climate change is also expected to result in decreasing productivity in milk, meat, wool and draught power. The annual milk yield loss in India due to heat stress in cattle and buffalo is about 1.8-2 million tonnes. Temperature rise is likely to affect fish migration and habitats, increasing stocks in some areas and decreasing them in others. Economic activities sensitive to climatic variability, namely paddy cultivation, medicinal plant cultivation, cotton and tea plantations, and small-scale fishing etc., are crucial for rural economy as they often endure disproportionate impacts from extreme weather events.

The National Action Plan on Climate Change is the overarching framework for India's climate action and comprises nine national missions covering solar energy, enhanced energy efficiency, sustainable habitat, water, sustaining the Himalayan ecosystem, Green India, sustainable agriculture, human health, and strategic knowledge on climate change. These missions are implemented by their respective nodal Ministries and Departments through various schemes and programmes across sectors. Six of the nine missions focus on adaptation to enhance the resilience of vulnerable communities and sectors.

Apart from these, there are various schemes, programmes and initiatives to address the impacts of climate change to strengthen climate resilience and adaptation such as the Per Drop More Crop scheme for micro-irrigation, *Paramparagat Krishi Vikas Yojana* and the National Mission on Natural Farming for sustainable agriculture, the *Jal Jeevan* Mission for water security, the Compensatory Afforestation Fund Management and Planning Authority programme (CAMPA), and MISHTI (Mangrove Initiative for Shoreline Habitats and Tangible Incomes) support ecosystem restoration and biodiversity conservation and the *Aapda Mitra* Scheme promotes community-based disaster preparedness and response.

Further, 34 States /Union Territories (UTs) have prepared their State Action Plans on Climate Change (SAPCC), taking into account the State-specific issues relating to climate change. These SAPCCs outline sector-specific and cross-sectoral priority actions, including adaptation and resilience. In particular, the Rajasthan State Action Plan on Climate Change (RSAPCC) comprises a comprehensive framework that includes climate risk and vulnerability assessments; analyses of observed climate trends and future climate projections; sector-specific climate actions and strategies covering water resources, agriculture and animal husbandry, human health, forests and biodiversity, energy efficiency and renewable energy, urban governance and sustainable habitats, and climate knowledge management. Rajasthan has also initiated the development of Climate Change Adaptation Plan–2030. Given its status as a flood-prone district, the RSAPCC has included Bharatpur in the proposed climate-resilient interventions, including pilot studies on harvesting and conserving surplus floodwater and using it for groundwater recharge and aquifer rejuvenation.

As per the information provided by Ministry of *Jal Shakti*, the Dynamic Ground Water Resources are assessed every year since 2022 jointly by the Central Ground Water Board and State Governments. As per the 2025 assessment, the total annual ground water recharge is 448.52 Billion Cubic Metres (BCM), the annual extractable ground water resource is 407.75 BCM, and total annual ground water extraction is estimated at 247.22 BCM. Out of 6,762 assessment units in the country, 730 units are categorized as over-exploited, 201 as critical, 758 as semi-critical, 4,946 as safe, and 127 as saline, indicating varying levels of ground water stress across the country. With rising population, per capita water availability is steadily declining, increasing pressure on existing water resources.
