

GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE AND FARMERS WELFARE
DEPARTMENT OF AGRICULTURE AND FARMERS WELFARE

RAJYA SABHA

UNSTARRED QUESTION NO. 3845

TO BE ANSWERED ON THE 27/03/2026

IMPACT OF CLIMATE CHANGE ON IRRIGATION IN UTTARAKHAND

3845. SHRI MAHENDRA BHATT:

Will the Minister of AGRICULTURE AND FARMERS WELFARE be pleased to state:

- (a) whether any study has been conducted in Uttarakhand regarding the impact of climate change on irrigation; and
- (b) the alternative measures being adopted to reduce dependence of farmers on rainfall, the details thereof?

ANSWER

MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE
(SHRI RAMNATH THAKUR)

(a) & (b): Indian Council of Agricultural Research (ICAR) under project National Innovations in Climate Resilient Agriculture (NICRA) Project conducted risk and vulnerability assessment of Indian agriculture to climate change, including Uttarakhand using Intergovernmental Panel on Climate Change (IPCC) protocol. A total of 109 districts are categorized as very high and 201 districts as highly vulnerable. In Uttarakhand, Uttarkashi, Rudraprayag, Tehri Garwal, Pithoragarh, Bageshwar, Almora, and Champawat districts fall under very high-risk category, while Chamoli and Pauri Garhwal fall under high-risk category and are vulnerable to moisture stress/drought.

The Govt. launched Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) during the year 2015-16, with an aim to enhance physical access of water on farm and expand cultivable areas under assured irrigation, improve on-farm water use efficiency, introduce sustainable water conservation practices, etc. Under Accelerated Irrigation Benefits Program (AIBP) component of PMKSY, Jamrani Dam Multipurpose Project and Lakhwar Multipurpose National Project are being implemented having targeted irrigation potential of 57.07 thousand ha and 33.78 thousand ha, respectively, benefits Uttarakhand State and facilitate storage of water during monsoon and its

regulated utilization during lean periods, thereby reducing dependence on rainfall. Under PMKSY–Har Khet Ko Pani (HKKP), so far, about 29.92 thousand hectare irrigation potential has been created under Surface Minor Irrigation (SMI) Scheme in Uttarakhand.

Further, Watershed Development Component of PMKSY (WDC-PMKSY) is being implemented by Department of Land Resources. The activities undertaken in the scheme, inter alia, include ridge area treatment, drainage line treatment, soil and moisture conservation, rainwater harvesting, nursery raising, pasture development, production systems support including micro-irrigation support, livelihoods for asset-less persons etc.. In Uttarakhand, 62 watershed development projects have been completed during 2015-16 to 2021-22 and 15 watershed development projects sanctioned under WDC-PMKSY-2.0 during 2021-26.

Department of Agriculture and Farmers Welfare is implementing Per Drop More Crop (PDMC) scheme since 2015-16 in the country. The scheme focuses on enhancing water use efficiency at farm level through micro irrigation systems such as drip and sprinkler irrigation. An area of 35647 ha is covered under micro irrigation since inception in Uttarakhand.
