

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

LOK SABHA
UNSTARRED QUESTION NO. 2643
TO BE ANSWERED ON 19th DECEMBER, 2023

SHORTAGE OF WATER FOR IRRIGATION

2643. SHRI DIBYENDU ADHIKARI

Will the Minister of AGRICULTURE AND FARMERS WELFARE कृषि और किसान कल्याण मंत्री be pleased to state:

- (a) whether the Government has any report on climate change and its effect of shortage of water for agriculture irrigation in next 25 years thereof; and
- (b) if so, the action proposed therein and if not, the reasons behind thereof?

ANSWER

MINISTER OF AGRICULTURE AND FARMERS WELFARE
कृषि और किसान कल्याण मंत्री (SHRI ARJUN MUNDA)

(a) to (b): The Centre for Climate Change Research (CCCR) at Indian Institute of Tropical Meteorology, Pune under Ministry of Earth Sciences conducted a Research on Climate Change. In 2020, the Centre has published a climate change assessment report entitled "Assessment of Climate Change over the Indian Region" which covers all the aspects of regional climate change including the climatic extremes across India. This report comprehensively studied the impact of human-induced global climate change on the regional climate and monsoon of the Indian subcontinent, adjoining Indian Ocean and the Himalayan region. As per this report, the summer monsoon precipitation (June to September) over India has declined by around 6% from 1951 to 2015 with notable decreases over the Indo-Gangetic Plains and the Western Ghats. Over central India, the frequency of daily precipitation extremes with rainfall intensities exceeding 150 mm per day increased by about 75% during 1950–2015.

Besides, ICAR also observed that there is an intimate link exists between the hydrological cycle with changes in atmospheric temperature and radiation balance. A

warmer climate may lead to intensification of the hydrological cycle, resulting in higher rates of evaporation and changes in precipitation. These processes, in association with a shifting pattern of crop and cropping system affect the spatial and temporal pattern irrigation demand. It is projected that most irrigated areas in India would require more water around 2025 and global net irrigation requirements would increase relative to the situation without climate change by 4–5% by 2050, and 6–8% by 2075. The effect of climate change on water resources may be mitigated by better water harvesting through creation of micro-storage facilities in watersheds, micro irrigation and proper scheduling of irrigation water for crops. These would not only provide supplemental irrigation but also recharge the groundwater aquifers. ICAR also imparts training to different stakeholder on water resources and efficient management of irrigation water in agriculture.

Department of Agriculture & Farmers Welfare (DA&FW) is implementing Centrally Sponsored Scheme of Per Drop More Crop (PDMC) in the country from 2015-16, which focuses on enhancing water use efficiency at farm level through Micro Irrigation - Drip and Sprinkler Irrigation Systems. The Micro Irrigation helps in saving water and reduction in fertilizer use through fertigation, labour expenses, other input costs and overall income enhancement of farmers. From the year 2015-16 to 2021-22, the PDMC was implemented a component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY). During the year 2022-23, the PDMC is being implemented under the Rashtriya Krishi Vikas Yojana (RKVY).
