

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

LOK SABHA
UNSTARRED QUESTION NO. 1163
TO BE ANSWERED ON 30TH JULY, 2024

CLIMATE CHANGE INDUCED DROUGHT

1163. DR. K SUDHAKAR:

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

- (a) whether the Government has observed that threat due to climate change is imminent and farmers are most vulnerable to it and if so, the details of the steps taken to prevent the same;
- (b) whether the Government has any study report on the climate change induced drought affecting farmers of Chikkaballapur and if so, the details thereof; and
- (c) the steps taken to ensure that today's agricultural produce is preserved for tomorrow's generation?

ANSWER

MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE
कृषि एवं किसान कल्याण राज्य मंत्री (SHRI RAMNATH THAKUR)

(a) to (c): Indian agriculture is vulnerable to climate change. One or other part of the country is experiencing extreme weather events impacting agriculture. Change in rainfall distribution is influencing agriculture through increased frequency of extreme weather events viz., drought and flood. Considering the imminent threat of climate change, several schemes have been initiated by the Government of India to deal with the adverse climate situations in the agriculture sector across the country. The rainfed area development program under National Mission on Sustainable Agriculture (NMSA) aims to make rainfed agriculture more productive, sustainable, remunerative and climate resilient. The sub-mission on Agroforestry aims to increase tree cover to stabilize farmland ecosystems. The Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) aims to improve on-farm water use efficiency, enhance the adoption of precision irrigation and other water saving technologies (Per Drop More Crop) and enhance recharge of aquifers. The Pradhan Mantri Fasal Bhima Yojana (PMFBY) provides full insured amount on crop losses due to natural calamities. In addition, programs like Paramparagat Krishi Vikas Yojana (PKVY) aims to improvement agriculture biodiversity

as well as soil health. The scheme Bharatiya Prakritik Krishi Paddhati Programme (BPKP) aims to promote traditional indigenous practices and to create awareness of farmers. Mission for Integrated Development of Horticulture, Agroforestry and National Bamboo Mission also aim to increase climate resilience.

The Indian Council of Agricultural Research (ICAR) under Ministry of Agriculture and Farmers Welfare, Government of India has launched a flagship network project namely National Innovations in Climate Resilient Agriculture (NICRA). The project aims to study the impact of climate change on agriculture including crops, livestock, horticulture and fisheries and to develop and promote climate resilient technologies in agriculture which will address vulnerable areas of the country and the outputs of the project help the districts and regions prone to extreme weather conditions like droughts, floods, frost, heat waves, etc. to cope with such extremes. The major achievements of ICAR are as follows:

- During last 10 years (2014-2024), a total of 2593 varieties have been released by ICAR, out of these 2177 varieties have been found tolerant to one or more biotic and/or abiotic stresses.
- Risk and vulnerability assessment of agriculture to climate change is carried out at district-level for 651 predominantly agricultural districts as per Intergovernmental Panel on Climate Change (IPCC) protocols. A total of 109 districts are categorized as 'very high' and 201 districts as 'highly' vulnerable.
- District Agriculture Contingency Plans (DACPs) for these 651 districts have been prepared for weather aberrations like drought, floods, unseasonal rains and extreme weather events such as heat wave, cold wave, frost, hailstorm, cyclone etc. and recommending location specific climate resilient crops and varieties and management practices for use by the State departments of agriculture and farmers.
- Enhancing resilience and adaptive capacity of farmers to climate variability, the Concept of "Climate Resilient Villages" (CRVs) has been initiated under NICRA.
- Location-specific climate resilient technologies demonstrated in 448 CRVs of 151 climatically vulnerable districts for adoption by the farmers.
- ICAR through its NICRA project, creates awareness about impact of climate change in agriculture among farmers. Capacity building programmes are being conducted to educate the farmers on various aspects of climate change for wider adoption of climate resilient technologies. The Climate Resilient Agriculture (CRA) Technology is implemented in 448 CRVs across 151 districts of 28 states/UTs.

As per the report of the State Government, Chikkaballapura district in Karnataka is known to be affected by climate change. As per the study conducted, the pre-monsoon showers (April – May) are increasing and rains during early Kharif is decreasing. The projected rainfall by 2035 in the district is expected to rise by 20-25%, however its distribution both spatially and temporally will be altered. The crop water requirement is increasing for different crops due to increased temperature and declining groundwater in the district.
