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

RAJYA SABHA
UNSTARRED QUESTION NO. 1290
TO BE ANSWERED ON 06/12/2024

IMPACT OF CLIMATE CHANGE ON AGRICULTURE

1290. SHRI C. VE. SHANMUGAM:

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

(a) whether it is a fact that climate change is posing a great threat to agricultural community;
(b) if so, the details thereof including the vulnerability of farmers to such a threat;
(c) the steps taken by Government to prevent it; and
(d) the further steps taken by Government in this regard?

ANSWER

THE MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE

(SHRI BHAGIRATH CHOUDHARY)

(a) to (d): Yes, the climate change poses a great challenge to the agricultural community. The Government set up National Action Plan on Climate Change (NAPCC) in 2008, which provide an overarching policy framework for climate action in the country. The NAPCC outlines a national strategy to enable the country to adapt to climate change and enhance ecological sustainability. One of the National Missions under NAPCC is the National Mission for Sustainable Agriculture (NMSA) which evolves and implements strategies to make agriculture more resilient to the changing climate.

The Indian Council of Agricultural Research (ICAR) has launched a flagship network project namely National Innovations in Climate Resilient Agriculture (NICRA). The project conducts studies on the impact of climate change on agriculture including crops, livestock, horticulture and fisheries and also develops and promotes climate resilient technologies in agriculture for vulnerable areas of the country. 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. 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 has been carried out at district-level for 651 predominantly agricultural districts as per Intergovernmental Panel on Climate Change (IPCC) protocols. Out of 310 districts identified as vulnerable, 109 districts have been categorized as ‘very high’ and 201 districts as ‘highly’ vulnerable. District Agriculture Contingency Plans (DACPs) for these 651 districts have also been prepared to address weather aberrations and recommending location specific climate resilient crops and varieties and management practices for use by the State Departments of Agriculture. For enhancing the 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 have been demonstrated in 448 CRVs of 151 climatically vulnerable districts covering 28 states / UTs for adoption by 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.

Considering the challenge pose by climate change in agriculture, several schemes have been initiated under NMSA by the Government to deal with the adverse climate situations in the agriculture sector across the country. Per Drop More Crop (PDMC) scheme was launched during 2015-16 to increase water use efficiency at the farm level through Micro Irrigation technologies i.e. drip and sprinkler irrigation systems. Rainfed Area Development (RAD) scheme is being implemented as a component under National Mission for Sustainable Agriculture (NMSA) from 2014-15 in the country. RAD focuses on Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variability. Mission for Integrated Development of Horticulture (MIDH), Agroforestry & National Bamboo Mission also aim to increase climate resilience in agriculture. Further, Pradhan Mantri Fasal Bima Yojana (PMFBY) along with weather index based Restructured Weather Based Crop Insurance Scheme (RWBCIS) provide a comprehensive insurance cover against failure of the crop by way of providing financial support to farmers suffering crop loss/damage arising out of unforeseen natural calamities, adverse weather incidence and to help stabilize income of farmers and ensure their continuation of farming.

*****