

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

LOK SABHA
UNSTARRED QUESTION NO. 1154
TO BE ANSWERED ON 3RD DECEMBER, 2024

ADVERSE IMPACT OF GLOBAL WARMING ON AGRICULTURE

1154. SHRI RAJEEV RAI:
SHRI ANUP SANJAY DHOTRE:

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

- (a) whether the Government has taken note of the adverse impact of global warming on agriculture in the country which has led to abnormal trends like irregular rainfall and decreasing forest cover;
- (b) if so, the details thereof and the reaction of the Government thereto;
- (c) whether the Government has taken any major steps towards mitigation of adverse impact of global warming and climate change with respect to farmers of northern plains in the country, especially in Uttar Pradesh, during the last five years;
- (d) if so, the details thereof and if not, the reasons therefor; and
- (e) whether the Government has assessed the impact of global warming on various agro climatic zones of the country?

ANSWER

MINISTER OF STATE FOR AGRICULTURE AND FARMERS WELFARE
कृषि और किसान कल्याण राज्य मंत्री (SHRI RAM NATH THAKUR)

(a) & (b): Yes, global warming pose a challenge to sustainability of agriculture. The National Action Plan on Climate Change (NAPCC) was launched in 2008, which provides 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 the ecological sustainability of its development path. It includes eight National Missions, one of which is the National Mission for Sustainable Agriculture (NMSA). NMSA aims to evolve and implement strategies to make Indian agriculture more resilient to the changing climate. The Indian Council of Agricultural Research (ICAR) under Ministry of Agriculture and Farmers Welfare, has launched a flagship network project

namely National Innovations in Climate Resilient Agriculture (NICRA). pThrough this project, various climate change mitigation activities have been under taken to reduce the impact of climate change in the country.

(c) & (d): Considering the impact 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 including Uttar Pradesh. The Government is implementing National Mission for Sustainable Agriculture (NMSA) to mitigate the impact of climate change on agricultural productivity and ensure sustainable practices. Under NMSA, 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. The Soil Health Card (SHC) / Soil Health Management (SHM) scheme is operational through the State Governments under National Project on Management of Soil Health & Fertility. The main objective of the scheme is to assist states in promoting Integrated Nutrient Management (INM) through judicious use of chemical fertilizers including secondary and micro nutrients in conjunction with organic manures & bio-fertilizers for improving soil health and its productivity. In addition, the Government is promoting organic farming in the country since 2015-16 through the schemes of Paramparagat Krishi Vikas Yojana (PKVY). Government is also promoting natural farming since 2019-2020 through a sub-scheme namely Bharatiya Prakritik Krishi Paddhati (BPKP) under Paramparagat Krishi Vikas Yojana (PKVY). The scheme aims to promote traditional indigenous practices and to create awareness of farmers. Mission for Integrated Development of Horticulture (MIDH), Agroforestry & National Bamboo Mission also aim to increase climate resilience in agriculture.

In Uttar Pradesh, one village cluster from 17 districts viz., Baghpat, Bahraich, Banda, Basti, Chitrakoot, Gonda, Gorakhpur, Hamirpur, Jalaun, Jhansi, Kanpur (Dehat), Kaushambi, Kushi Nagar, Maharajganj, Pratapgarh, Sant Ravidas Nagar and Sonbhadra were selected for technology adoption through NICRA program. The climate resilient technologies such as system of rice intensification, aerobic rice, direct seeding of rice, zero till wheat sowing, cultivation of climate resilient varieties tolerant to extreme

weather conditions such as drought and heat; in-situ incorporation of rice residues; micro irrigation systems; laser land levelling; improved shelter for livestock to minimize heat stress; integrated farming systems including poultry have been developed and demonstrated to the farmers in these districts. Capacity building programs to farmers on climate resilient agriculture in these districts were also undertaken.

(e): The Indian Council of Agricultural Research (ICAR) under Ministry of Agriculture and Farmers Welfare, through National Innovations in Climate Resilient Agriculture (NICRA) has conducted studies on the impact of climate change on agriculture including crops, livestock, horticulture, fisheries etc. District-level risk and vulnerability assessment was conducted under NICRA in 651 predominantly agricultural districts falling under different agroclimatic zones of the country as per Intergovernmental Panel on Climate Change (IPCC) protocol. 109 districts has been categorized as very high and 201 districts as highly vulnerable. Impact assessment on global warming is also done in various agro climatic zones of the country under NICRA project. Integrated computer simulation modelling studies showed that in the absence of adoption of adaptation measures, climate change is likely to reduce yield of rainfed as well as irrigated rice, wheat and Kharif maize.
