

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

RAJYA SABHA
UNSTARRED QUESTION NO. 331
TO BE ANSWERED ON 09/12/2022

IMPACT OF GLOBAL CLIMATE CHANGE ON AGRICULTURE

331. SMT. PHULO DEVI NETAM:

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

- (a) the details of negative impacts of global climate change on Indian agriculture;
- (b) the experiments, innovation being carried out by Government regarding climate friendly agriculture, the details thereof along with the achievements; and
- (c) the impact of climate change on forest products and forest yield and details of action plan of Government in this regard?

ANSWER

THE MINISTER OF AGRICULTURE AND FARMERS WELFARE
(SHRI NARENDRA SINGH TOMAR)

- (a) Major negative impacts of global climate change on agriculture includes climate change induced rising temperature which will increase evapotranspiration and as a result crop water demand and irrigation water requirement will increase; change in rainfall pattern, weather hazards, decline in soil and water quality, shifting dynamics of insects, diseases, soil flora and fauna, intrusion of sea water on land and biotic and abiotic stresses arising due to climatic extremes. Horticulture sector is likely to be severely affected due to unseasonal rains and temperature variations. Increasing temperature due to climate change is likely to impact livestock production and health resulting into a decline in productivity in terms of milk, meat, wool and draught power.
- (b) The government is taking steps to deal with climate change through the National Mission for Sustainable Agriculture (NMSA), which is one of the Missions within the

National Action Plan on Climate Change (NAPCC). The mission aims to evolve and implement strategies to make Indian agriculture more resilient to the changing climate. NMSA was approved for three major components *i.e.* Rainfed Area Development (RAD); On Farm Water Management (OFWM); and Soil Health Management (SHM). Subsequently, four new programmes were introduced namely Soil Health Card (SHC), Paramparagat Krishi Vikas Yojana (PKVY), Mission Organic Value Chain Development in North Eastern Region (MOVCDNER) and Sub Mission on Agroforestry (SMAF). During 2015-16, Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) was operationalised wherein the OFWM component of NMSA was subsumed under Per Drop More Crop (PDMC) component of PMKSY. In addition to aforementioned programmes under NMSA, Restructured National Bamboo Mission (NBM) was launched in April 2018. Further in order to address the emerging scenario, ICAR has launched a flagship project namely National Innovations in Climate Resilient Agriculture in 2011 to conduct basic and strategic research besides demonstrating resilient technologies in 151 vulnerable districts. ICAR developed 8 climate resilient varieties and evaluated about 170 crop varieties under extreme weather conditions. Agriculture Contingency Plans have been developed for 650 districts.

(c) As per Ministry of Environment, Forest and Climate Change, the overall forest cover at the national level has increased in the last one decade, however, specific study has not been conducted to monitor the effect of climate change on forest products and forest yields.
