GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 215
TO BE ANSWERED ON 29.11.2021

Impact of climate change

215. DR. KALANIDHI VEERASWAMY:
SHRIMATI SAJDA AHMED:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

(a) whether the Government has assessed the impact of climate change on agriculture productivity and elevated health risk during the recent past and if so, the details thereof;
(b) the steps taken/being taken by the Government in this regard
(c) the details of the target set and achievements made so far and whether it is upto the set target and if not, the reasons therefor; and
(d) whether the Government has organized vulnerability mapping of Indian states in line with climate change and if so, the details thereof along with the financial assistance provided in this regard?

ANSWER
MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI ASHWINI KUMAR CHOUBEY)

(a) to (c)The Government is seized of the matter. The impact of climate change on agriculture and human health sectors is being assessed by the relevant ministries. The Indian Council of Agricultural Research (ICAR) has initiated a network project, National Innovations in Climate Resilient Agriculture (NICRA) in 2011 to study and address the impact of climate change on Indian agriculture. As per the studies under NICRA, rainfed rice yields in India are projected to reduce marginally (<2.5%) in 2050 and 2080 and irrigated rice yields by 7% in 2050 and 10% in 2080 scenarios. Wheat yield is projected to reduce by 6-25% in 2100 and maize yield by 18-23%. Climate change is likely to benefit chickpeas with an increase in productivity (23-54%).

The Government has also assessed the impact of climate change on human health and initiated the National Programme on Climate Change and Human Health. The programme aims to reduce morbidity, mortality, injuries, and health vulnerability among the population in the country due to climate variability and extreme weather.

Further, under the National Knowledge Network programme on "Climate Change and Human Health", the Department of Science and Technology has published a report in thematic areas of vector-borne diseases and heat stress & health and same is available on website at the link :https://dst.gov.in/sites/default/files/Report_DST_CC_Health.pdf.

The Government is implementing the National Action Plan on Climate Change (NAPCC) which provides the overarching framework for climate actions, through national missions in specific areas. The National Mission for Sustainable Agriculture, one of the Missions under NAPCC, includes programmatic interventions like Soil Health Card, Paramparagat Krishi Vikas Yojana, Mission Organic Value Chain Development for Northeastern Region, Rainfed Area Development, National Bamboo Mission and Sub-mission on Agro-Forestry.

Several crop varieties with special traits have been developed by ICAR to address the twin challenges of climate change and malnutrition. Besides assessing the risk and vulnerability of Indian agriculture to climate change, 650 district agricultural contingency plans have been developed. Climate-resilient villages have been developed, one in each of 151 climatically vulnerable districts under the NICRA Project and location-specific technologies have been demonstrated in these districts.

Targets for agricultural production and productivity are routinely set by the relevant departments of Central and State Governments. The input of various schemes and programmes are utilized to ensure that these levels of productivity and production are reached, to the extent feasible. Other initiatives are also important such as the dissemination of agro-meteorological information by the Indian Meteorological Department through radio, television, print and smartphones. These enable farmers to develop the ability to cope with adverse climatic and weather conditions.

(d) The Department of Science and Technology in collaboration with Swiss Agency of Development and Cooperation, and research teams from the Indian Institute of Technology Mandi, Indian Institute of Technology Guwahati and Indian Institute of Science Bengaluru, have studied the nation-wide vulnerability assessment with a financial assistance of Rs 80 lakhs. A report titled 'Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework' has been released. Based on all-India assessment, it identifies the most vulnerable States and districts in India with respect to the current climate and the main drivers of vulnerability based on a set of common indicators (biophysical, socioeconomic, and livelihood-based indicators) and common methodology. The States with a relatively high vulnerability, Jharkhand, Mizoram, Orissa, Chhattisgarh, Assam, Bihar, Arunachal Pradesh, and West Bengal are mostly in the eastern part of the country.

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