

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 1068
TO BE ANSWERED ON 22.11.2019

Climate Change

1068. SHRI UNMESH BHAIYYASAHEB PATIL:

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

- (a) whether the Government has conducted an impact assessment study related to Climate Change in agrarian societies of Maharashtra;
- (b) if so, the details thereof;
- (c) the findings of such study with reference to impact on agriculture based sectors;
- (d) the details of the recommendations made to mitigate the impact of climate change; and
- (e) the steps taken by the Government to ensure the implementation of such recommendations to protect agricultural sectors in the country?

ANSWER

**MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI BABUL SUPRIYO)**

(a) to (c) As per the information received from the Ministry of Agriculture and Farmers Welfare, the Indian Council of Agricultural Research (ICAR) has conducted studies related to climate change under National Innovations in Climate Resilient Agriculture (NICRA) project. Under NICRA, studies are being conducted to develop heat and drought tolerant wheat, flood tolerant rice, drought tolerant pulses, water logging and high temperature tolerant tomato etc. Interventions viz. site specific rainwater harvesting structures in drought affected areas; recycling of harvested water through supplemental irrigation to alleviate moisture stress during mid-season dry spells; improved drainage in flood-prone areas; conservation tillage; artificial groundwater recharge and water saving micro-irrigation methods; drought and flood tolerant varieties; timely planting; community nurseries for delayed monsoon; water saving paddy cultivation methods such as System of Rice Intensification, aerobic and direct seeding; green manuring; advancement of planting dates of rabi crops in areas with terminal heat stress; frost management in horticulture through fumigation; and popularization of location-specific and risk-reducing inter-cropping systems could mitigate the impact of climate change.

Further, The Energy Resource Institute (TERI) has conducted a scientific study entitled “Assessing Climate Change Vulnerability and Adaptation Strategies for Maharashtra: Maharashtra State Adaptation Action Plan on Climate Change (MSAAPC)” regarding impact of climate change and its mitigation measures including sectors like Agriculture, Coastal areas, Forestry, Biodiversity, Health and Water resources.

(d) to (e) The Government of Maharashtra has embodied climate concerns vide Government Resolution number Baithak-2013/C.R.63/T.C.1 dated 25/10/2017.

Three centres of All India Coordinated Research Project on Dryland Agriculture (AICRPDA) in Maharashtra i.e. Akola, Parbhani and Solapur have developed doable rainfed technologies for the domain districts of Akola, Buldana, Washim, Amaravati, Yeotmal, Parbhani, Nanded, Jalna, Aurangabad, Latur, Hingoli, Solapur, Ahmednagar, Eastern part of Pune, Sangli, Satara, Dhule and Nandurbar. Four cooperating centres of AICRPAM located at Solapur, Parbhani, Akola and Dapoli are engaged in research, extension and training activities in the state of Maharashtra.

Extensive farmer participatory demonstrations of location-specific climate resilient technologies were initiated on farmers' fields to address the issues related to heavy rains and floods and to enhance the adaptive capacity of communities, in the districts which are frequently prone to heavy rains and floods as part of Technology Demonstration Component (TDC) of NICRA. The NICRA programme is operational in 8 locations in Maharashtra.

The Government of India is implementing National Action Plan on Climate Change (NAPCC) which comprises eight missions in specific areas including on sustainable agriculture. Thirty three States/Union Territories (UTs) including Maharashtra have prepared their State Action Plan on Climate Change in line with NAPCC taking into account State's/UT's specific issues relating to climate change.

India Meteorological Department (IMD) runs an operational Agrometeorological Advisory Service (AAS) viz., Gramin Krishi Mausam Sewa (GKMS) scheme for the benefit of farming community in the country. Under the scheme, medium range weather forecast at district level is generated and issued and based on the forecast, Agromet Advisories are being prepared and communicated by the 130 Agromet Field Units (AMFUs) located at State Agricultural Universities, institutes of ICAR and IIT etc. to the farmers on every Tuesday and Friday to take decision on day-to-day agricultural operations. AAS rendered by IMD is a step towards weather-based crop and livestock management strategies and operations dedicated to enhancing crop production and food security besides reducing crop damage and loss due to unusual weather.

Agromet Advisories are communicated to the farming community through multichannel dissemination system like print and electronic media, Doordarshan, radio, internet etc. including SMS using mobile phones through Kisan Portal launched by Ministry of Agriculture and Farmers' Welfare and also through private companies under Public Private Partnership (PPP) mode. At present, 42 million farmers in the country receive the Agromet Advisories through SMS directly. A mobile application named 'Meghdoot' has been launched by Ministry of Earth Sciences, Government of India to help the farmers to get the weather information and related agromet advisories specific to their districts. Further, to cope with weather aberrations on real time basis, District Agricultural Contingency Plans have been prepared for 650 districts of the country.
