GOVERNMENT OF INDIA AGRICULTURE LOK SABHA

STARRED QUESTION NO:654 ANSWERED ON:22.05.2012 GLOBAL WARMING AND AGRICULTURE Adsul Shri Anandrao Vithoba;Singh Shri Bhola

Will the Minister of AGRICULTURE 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 manifested unusual trends such as erratic rainfall, shrinking forest cover. Rising temperature and increasing food insecurity;

(b) if so, the details thereof and the reaction of the Government thereto;

(c) whether the Government has assessed the impact of global warming on different agro-climatic zones in the country;

(d) if so, the details and the outcome thereof; and

(e) the measures taken/being taken by the Government to meet the challenge of global warming and its impact on agricultural production?

Answer

THE MINISTER OF AGRICULTURE (SHRI SHARAD PAWAR)

(a) to (e): A Statement is laid on the Table of the House.

STATEMENT IN RESPECT OF PARTS (a) to (e) OF LOK SABHA STARRED QUESTION NO. 654 TO BE ANSWERED ON 22/05/2012 REGARDING "GLOBAL WARMING AND AGRICULTURE"

(a) & (b): All India summer monsoons (June to September) rainfall does not show any significant trend during the last century. However, three subdivisions viz., Jharkhand, Chattisgarh, Kerala showed significant decreasing trend and eight subdivisions viz., Gangetic West Bengal, West Uttar Pradesh, Jammu and Kashmir, Konkan & Goa, Madhya Maharashtra, Rayalaseema, Coastal Andhra Pradesh and North Interior Karnataka showed significant increasing trends during last century. Significant increasing trend has been observed in the frequency of heavy rainfall events over the West coast. The mean annual surface air temperature over India has risen by 0.56ŰC during 1901-2009. The Government has taken urgent steps to institute Climate Change Divisions in the Ministry of Environment & Forests (the Nodal Ministry for Climate Change in the Country) and in the Ministry of Agriculture to assess and monitor the changes in the climate scenario.

(c) & (d): The Government of India initiated studies related to Climate Change Vulnerability Assessment through an ICAR Network Project on Climate Change (NPCC) consisting of 15 centres in the X Plan and subsequently extended it to 23 centres in the XI Plan across different agro-climatic zones. Analysis of occurrence of extreme weather events during past six decades has indicated an increasing trend in maximum one-day precipitation in the west coast of Maharashtra, south Madhya Pradesh, east Bihar, Assam and parts of Karnataka and eastern Uttar Pradesh. At the same time, frequency of occurrence of warmer days has significantly increased in parts of southern Rajasthan, western Madhya Pradesh, southern Chattisgarh, western Gujarat and in parts of peninsular India. Over all, the NPCC studies indicate that climate change may reduce yield of timely sown irrigated wheat by about 6% by 2020. When late and very late sown wheat is taken into consideration, the projected impact could reduce the yield by 18%, if no adaptation measures are followed. Similarly, this study projects 4-6% reduction in yield of rice and up to 18% in respect of irrigated kharif maize, and 2.5% in rainfed sorghum by the year 2020.

(e) As part of the National Action Plan for Climate Change, 8 national missions have been proposed. One of them being the National Mission for Sustainable Agriculture (NMSA) that has been formulated jointly by Department of Agriculture & Cooperation and Department of Agricultural Research & Education, in active consultation with stakeholders including State Governments, and has been approved in principle by Prime Minister's Council on Climate Change for the XII Plan. A scheme 'National Initiative on Climate Resilient Agriculture (NICRA)' with an outlay of Rs. 350 crores for the period 2010-12 has been implemented by the Indian Council of Agricultural Research. The components of the scheme include: (i) strategic research on natural resources, major food crops, livestock, marine and freshwater fisheries for adaptation and mitigation; (ii) demonstration of available climate resilient practices on farmers' field in 100 most vulnerable districts of the country; (iii) strengthen research infrastructure and capacity building for climate change research; and (iv) sponsored research.