GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:167
ANSWERED ON:24.02.2016
Irregular Monsoon
Mishra Shri Bhairon Prasad

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether the Government has formulated any scheme or conducted any survey to ascertain the reasons for the drought and irregular monsoon in some of the parts in the country including in Bundelkhand region during the last one decade;

(b) if so, the details thereof; and

(c) the action plan likely to be implemented for the prevention of said reasons?

Answer

THE MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)

(a)-(b) Yes Madam. Seasonal quantum of rainfall in Bundelkhand region heavily depends on the movement of Monsoon Depressions (low pressure systems) over the region after crossing the east coast of India and moving in north west direction. Studies carried out suggest a statiscally significant decreasing trend in the seasonal monsoon depression frequency.

Accordingly for the reasons explained above, the Bundelkhand region by and large continues to receive deficient rainfall. This could be part of the natural variability of the Indian monsoon system and therefore, it could be reversed naturally.

Rainfall situation for the districts in Bundelkhand for the last 11 years (2005-2015) has been presented in Annexure-I.

The monsoon rainfall for the country as a whole over a long period data set has not shown any significant trend. However, Chhattisgarh, Jharkhand and Kerala have witnessed slight decrease in rainfall, and 8 sub divisions namely Gangetic West Bengal, West Uttar Pradesh, Jammu and Kashmir, Konkan and Goa, Madhya Maharashtra, Rayalaseema, Coastal Andhra Pradesh and North Interior Karnataka show increasing trend. Although, the long period average rainfall during Monsoon (June to September) for the India as a whole remained more or less at 890 mm, the actual quantum of seasonal rainfall received during last 11 years is presented below to present interannual variability of monsoon:

Year Monsoon (June to September) rainfall in mm RAINFALL IN % DEPARTURE % of District with Deficiant/Scanty Rainfall
2005 874.4 -1% 28
2006 889.4 0% 40
2007 944.6 6% 27
2008 877.4 -2% 24
2009 698.1 -22% 59
2010 910.6 2% 31
2011 901.2 2% 24
2012 823.6 -7% 41
2013 937.4 6% 28
2014 777.5 -12% 46
2015 760.6 -14 % 39

(c) The Indian council of Agricultural Research (ICAR)-Central Research Institute on Dryland Agriculture (CRIDA) has mapped 572 districts of the country including all districts of Bundelkhand region for their vulnerability to drought and irregular monsoon in climate change perspectives using various indicators to assess sensitivity, exposure and adaptive capacity. Bundelkhand region of Madhya Pradesh state lies in high to medium variability index to climate change and of Uttar Pradesh state in very high to high index. The details of Vulnerability Indices to Climate Change for bundlekhand districts are placed in Annexure-II.

ICAR in association with State Agricultural Universities and concerned state departments has developed district contingency plans including crop advisories to tackle any eventuality due to change in weather pattern affecting the agriculture sector across the country within the cropping season. So far, contingency plans for 600 districts of 25 states have been prepared and uploaded at www.farmer.gov.in, www.crida.in and www.agricoop.nic.in. The contingency plans are also being constantly updated to meet the emerging situations. The National Agricultural Research System comprising ICAR, central agricultural universities and State Agriculture Universities (SAUs) are taking adequate steps in development of high yielding varieties suitable for biotic and abiotic stresses including deficient rainfall/drought. Short duration varieties have also been released to escape or overcome the vagaries of weather condition.

Studies conducted by ICAR-Central Agroforestry Research Institute (CAFRI), Jhansi has successfully demonstrated higher resilience against droughts and enhanced livelihood security through adoption of agro forestry based watershed technologies in drought-prone Bundelkhand region (Garhkundar-Dabar watershed).