

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**LOK SABHA**  
**UNSTARRED QUESTION NO.1141**  
TO BE ANSWERED ON 18.09.2020

**Climate Change**

1141. SHRI T. R. BAALU:

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

- (a) whether soil erosion adversely impacts environmental sustainability and undermines the ability of the environment to be resilient against Climate change, if so, the details thereof;
- (b) whether the Government is aware of the fact that soil erosion also leads to desertification and it can get much worse unless soil erosion is dealt with, on a priority basis; and
- (c) if so, the preventive steps taken/proposed to be taken by the Government in this regard?

**ANSWER**

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

(a) and (b) Rainfall intensity is a key climatic driver of soil erosion. Soil erosion by water is the most serious form of land degradation in India. The extent of land degradation due to soil erosion/degradation by rainwater is about 82.6 million hectares out of the 121 million hectare total degraded area in India. The impacts of soil erosion by water can be seen in loss in crop productivity, disruption of nutrient cycle, alteration in water and energy balances, pollution of water bodies, deterioration in water quality, reduction of reservoir capacity, loss of biodiversity and disasters like floods and droughts. These have a strong bearing on environmental security. Further, climate change studies indicate that increase in amount and intensity of rainfall will lead to greater rates of erosion resulting in significant increase in water erosion induced land degradation.

As per the Desertification and Land Degradation Atlas of India, prepared by the Space Applications Centre for the period 2011-2013, the most significant process of desertification/land degradation in the country are (i) Water Erosion (10.98% in 2011-13); (ii) Vegetation Degradation (8.91% in 2011-13) and (iii) Wind erosion (5.55 % in 2011-13) which are the major causes leading to soil erosion. The aforesaid processes of land degradation are followed by water logging, salinity, mass movement, frost heaving and frost shattering. All these degradation processes affect the quality and productivity of soil thereby causing soil erosion /soil degradation which ultimately leads to desertification.

(c) The Indian Council of Agricultural Research (ICAR)-Indian Institute of Soil and Water Conservation (IISWC), Dehradun including its eight Research Centres located in different agro-ecological regions of the country have developed various technologies for arable and non-arable lands of rainfed areas of the country for arresting land degradation, preserving soil health and sustaining agricultural productivity through various location specific soil and water conservation measures under climate change scenario.

In addition, the National Afforestation & Eco-Development Board (NAEB) of the Ministry of Environment, Forest and Climate Change (MoEF&CC) is implementing the "National Afforestation Programme (NAP)" for ecological restoration of degraded forest areas under which an area of over 2 million ha has been approved for afforestation. NAP also supports Soil Moisture Conservation activities to improve the soil moisture regime in the area under implementation along with providing livelihood support for the locals. Various other schemes like Green India Mission, funds accumulated under Compensatory Afforestation Fund Management and Planning Authority (CAMPA), Nagar Van Yojana etc, also help in checking degradation and restoration of forest landscape. MOEF&CC also promote trees outside forests primarily through expansion of agroforestry, optimum use of wastelands and vacant lands.

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