

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**LOK SABHA**  
**UNSTARRED QUESTION NO. 3226**  
TO BE ANSWERED ON 13.03.2020

**Impact of Climate Change**

3226. SHRI ANNASAHEB SHANKAR JOLLE:  
SHRI RAJU BISTA:

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

- (a) whether the Government has undertaken any research to evaluate the impact of climate change on India and if so, the details thereof;
- (b) whether the Government is on the path to achieve the goals set up during the Paris Agreement on climate change and if so, the details thereof;
- (c) the present position of India as compared to other countries in fighting pollution and carbon emissions;
- (d) whether the Government has undertaken any audit to identify the percentage of land which is carbon negative in the country and if so, the details thereof; and
- (e) the action plan prepared by the Government to face the challenges posed by the climate change

**ANSWER**

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

(a) India is a Party to the United Nations Framework Convention on Climate Change (UNFCCC). India submitted Initial National Communication (INC) in 2004 and Second National Communication (SNC) in 2012 to the UNFCCC. As part of the National Communications, the Ministry conducted studies on the impact of climate change in India which are summarized in the 'Vulnerability Assessment and Adaptation' chapter. For the SNC, climate change scenarios were analysed using high-resolution regional climate model for the years the 2020s, 2050s and 2080s which indicate all-round warming of the Indian subcontinent. Impact of climate change and climate variability on the water resources are likely to affect irrigated agriculture, installed power capacity, environmental flows in the dry season and wet season. The report projects variable impacts in terms of the composition of forests and net primary productivity.

Indian Council of Agricultural Research (ICAR) has conducted studies under the National Innovations on Climate Resilient Agriculture (NICRA) project, which indicate variable impacts of climate change on production of crops like rice, wheat, maize etc in different regions of India.

Government of India has also published a report titled "Climate Change and India: A 4 x 4 Assessment - A Sectoral and Regional Analysis for the 2030". This report provides

projections on impacts of climate change on four key sectors of Indian economy namely, Agriculture, Water, Natural Ecosystems and Biodiversity, and Health in four climate-sensitive regions of India namely the Himalayan region, the Western Ghats, the Coastal Areas and the North-East Region.

(b) and (c) India is committed to multilateral action to combat climate change and is Party to the UNFCCC, its Kyoto Protocol and Paris Agreement. India is meeting all its commitments and obligations under these instruments, and independent studies rate India's efforts highly. India is one of the few countries which is compliant to 2°C goal of the Paris Agreement as per some independent studies.

Under the Paris Agreement, India has submitted its Nationally Determined Contribution (NDC) outlining eight (8) targets for 2021-2030, including (i) to reduce the emissions intensity of its GDP by 33 to 35 per cent by 2030 from 2005 level, (ii) to achieve about 40 per cent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030 with the help of the transfer of technology and low-cost international finance, (iii) to create an additional carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub> equivalent through additional forest and tree cover by 2030.

Ministry of Environment, Forest and Climate Change has launched National Clean Air Programme on 10 January 2019 as a national-level strategy for Pan-India implementation to reduce air pollution levels across the country through strategies for local, city, regional and transboundary levels.

(d) As per India State of Forest Report (ISFR) 2019, the total forest and tree cover of the country is 80.73 million hectare which is 24.56 per cent of the geographical area of the country in 2019 which acts as a carbon sink. Further, as per India's second biennial update report (BUR-2) to the UNFCCC submitted in 2018, about 12 per cent of India's GHG emissions were offset by the Land Use, Land-Use Change and Forestry (LULUCF) sector in 2014.

(e) The Government of India also stands committed to combating climate change through several of its programs and schemes. This includes inter-alia implementation of National Action Plan on Climate Change (NAPCC), which comprises missions in specific areas of solar energy, enhanced energy efficiency, water, sustainable agriculture, sustaining Himalayan ecosystem, sustainable habitat, Green India and strategic knowledge on climate change. Thirty-three states and Union Territories have prepared State Action Plans on Climate Change (SAPCC) consistent with the objectives of NAPCC to address their State-specific actions. These SAPCCs inter-alia outline sector-specific and cross-sectoral priority actions.

\*\*\*\*\*