GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 4917
TO BE ANSWERED ON 23.03.2026

Climate Vulnerability in Assam

4917. MD. RAKIBUL HUSSAIN:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:
(a) whether the Government has carried out any assessment of flood, erosion and climate vulnerability in Assam, particularly along the Brahmaputra and Barak river systems and if so, the details thereof, district or river-basin-wise;
(b) the major findings of such assessments, including identification of highly vulnerable districts;
(c) whether funds under national and international climate adaptation programmes have been sanctioned, released or delayed for Assam; and
(d) the steps taken to fast-track erosion control, flood mitigation and climate-resilient infrastructure in the State?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI KIRTI VARDHAN SINGH)

(a) to (d) The occurrence of floods can be attributed to various factors, including wide variations in rainfall both in time and space with frequent departures from the normal pattern, inadequate carrying capacities of rivers, river bank erosion and silting of river beds, landslides, poor natural drainage in flood prone areas, snowmelt and glacial lake out-bursts.

Morphological Studies by various Indian Institute of Technology (IIT) and National Institute of Technology (NIT) have been carried out for major rivers including river Brahmaputra. These Studies play an important role in understanding the nature of rivers in a comprehensive manner and provide assessment of decadal bank-line movement, erosion & deposition in different reaches in respect of base year, derivation of reach-wise morphological indices and identification of critical reaches. These studies have been shared with concerned State Governments and other stakeholders etc. for taking informed decision and future planning.

As per the morphological study of Brahmaputra River conducted by Central Water Commission (CWC) through IIT Guwahati, it has been estimated that in the Brahmaputra River a total erosion of 252.6 sq.km and deposition of 118.6 sq.km occurred between 2003-05 and 2008-11.

As per report of CWC on “Assessment of Area Affected Due to Floods in India, 2024” based on satellite imageries data from 1986 to 2022, the total flood affected areas in Assam is assessed as 2.477 Mha covering 33 of 35 districts.

Further, Department of Science and Technology through Assam Climate Change Management Society (ACCMS), Environment, Forest and Climate Change Department, Government of Assam has also supported a study to conduct the vulnerability mapping of Indian States and published the report "Vulnerability Profiles for India: State and District Level using a Common Framework". This assessment covered both the Brahmaputra and Barak River valley. The vulnerability report identifies Assam as the 5th most climate vulnerable State in India.

Flood management and anti-erosion schemes are planned and implemented by the State Government, while the Central Government supplements the efforts through technical guidance and financial assistance under various programmes.

Government of India has adopted integrated approach to flood management that aims at adopting judicious mix of structural and non-structural measures to provide a reasonable degree of protection against flood damages. Central assistance has been provided to Assam under the Flood Management Programme (FMP) and its continuation as the Flood Management and Border Areas Programme (FMBAP) for works such as flood control, anti-erosion measures and drainage improvement.

The State Government also undertakes assessment of damages caused due to natural calamities including floods and provide relief assistance from State Disaster Response Fund (SDRF) already placed at their disposal as per Government of India's approved norms. Additional financial assistance is provided from National Disaster Response Fund (NDRF), as per laid down procedure in case of disaster of 'severe nature' which includes an assessment based on the visit of an Inter-Ministerial Central Team (IMCT).

In addition, non-structural measures such as flood forecasting and early warning services are provided by the CWC. In order to enable States to undertake scientific assessment of flood plains and its zoning as a non-structural measure of flood mitigation, Ministry of *Jal Shakti* in August 2025 has prepared Guideline on Flood Plain Zoning and circulated to States/UTs.

Further, under National Adaptation Fund for Climate Change (NAFCC), a project on "Management of Ecosystem of Kaziranga National Park by creating Climate Resilient Livelihood for Vulnerable Communities through Organic farming and pond based Pisciculture" is implemented in the State of Assam with a project cost of INR 24.56 crores.

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