

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION NO. 1319
ANSWERED ON 30/07/2026

**BRAHMAPUTRA FLOOD FORECASTING AND CLIMATE RESILIENCE
MISSION**

1319. SHRI TERASH GOWALLA:

Will the Minister of **EARTH SCIENCES** be pleased to state:

- (a) whether Government proposes a Brahmaputra Flood Forecasting and Climate Resilience Mission for Assam;
- (b) whether Artificial Intelligence-based flood prediction and early warning systems are proposed;
- (c) whether district-level climate monitoring centers would be established; and
- (d) if so, the implementation schedule thereof?

ANSWER
THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)

- (a) The Union Cabinet approved the Central Sector Scheme Mission Mausam in 2024, with the vision of making Bharat a "Weather-ready and Climate-smart" nation, including Assam. The Mission aims to enhance the accuracy and spatial resolution of weather and climate predictions by strengthening the observational network, advancing high-resolution numerical weather prediction models, high-performance computing technologies, and improving the last-mile dissemination of weather and climate, including timely early warnings for different types of extreme weather events. Further, the Central Water Commission (CWC) under the Ministry of Jal Shakti (MoJS) is mandated to issue short-range flood forecasts, with a lead time of up to 24 hours, to concerned State Governments at identified locations, including the Himalayan States such as Assam. CWC maintains 32 flood forecast stations in the Brahmaputra River & its tributaries, and the Barak River & its tributaries in the State of Assam.
- (b) The Ministry has been adopting advanced techniques and technologies over time to strengthen its capabilities for severe weather monitoring, forecasting, and early warning services. India Meteorological Department (IMD), under the Ministry, utilizes an array of numerical weather prediction models, including 6 physical models and 3 artificial intelligence-based models. Further, the decision on weather forecasting is made using a multi-model ensemble technique and the Multi-Hazard Early Warning Decision Support System (MHEW-DSS). At present, CWC has developed Artificial Intelligence/Machine Learning (AI/ML)-based models for 12 Level Forecast stations (for short-range forecasts), of which 8 are in the Brahmaputra basin in Assam.

(c)-(d) State and Union Territory (UT)-level weather services across the country, including Assam, are provided through a network of 8 Regional Meteorological Centres (RMCs) and 25 Meteorological Centres (MCs), under the IMD, Ministry of Earth Sciences. In particular, the RMC Guwahati serves Assam and other NE Regions of the country. In addition, the MC Gangtok is located in Sikkim and serves Assam. These are further supported by an extensive network of meteorological observatories across various States and UTs that continuously record weather and climate data, supporting monitoring, forecasting, and early warning services.
