GOVERNMENT OF INDIA
MINISTRY OF HOME AFFAIRS

LOK SABHA
UNSTARRED QUESTION NO. 5100

TO BE ANSWERED ON THE 24TH MARCH, 2026/ CHAITRA 3, 1948 (SAKA)

USE OF AI IN DISASTER MANAGEMENT

5100. SHRI MAGUNTA SREENIVASULU REDDY:

Will the Minister of HOME AFFAIRS be pleased to state:

(a) whether the Government has undertaken any steps to incorporate emerging technologies such as Artificial intelligence (AI) into disaster mitigation and management in the country during the last five years;

(b) if so, the details regarding the list of schemes/initiatives for disaster management/mitigation that use AI at present;

(c) the details regarding the total amount of funding allocated/released and utilised for increasing the use of AI in disaster management/mitigation practices across India, State-wise and to Andhra Pradesh during the last five years; and

(d) whether the Government has undertaken any awareness/training programs for officers and volunteers across India, especially in disaster prone areas, to help them use AI for disaster mitigation, management and response, if so, the details thereof and if not, the reasons therefor?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF HOME AFFAIRS
(SHRI NITYANAND RAI)

(a) to (d): The Central Government has adopted a holistic approach to disaster risk reduction to address whole range of issues in the entire disaster management cycle, ranging from preparedness, response, capacity building, recovery & reconstruction and mitigation by use of innovative methods,

technology and international cooperation. During the last decade, India has made significant progress in disaster risk reduction.

The Disaster Management (Amendment) Act, 2025, mandates the creation of a National Disaster Database, which includes risk assessments, mitigation plans, and real-time data on disasters. Alert agencies such as India Meteorological Department (IMD) have integrated Artificial Intelligence (AI)/ Machine Learning (ML) models into weather forecasting systems for seven-day advance predictions. This includes AI driven simulations for flood forecasting (up to seven days ahead) and cyclone tracking, as part of Mission Mausam.

National Disaster Management Authority (NDMA) has developed a web-based Dynamic Composite Risk Atlas and Decision Support System (Web-DCRA & DSS tool) for cyclone risk mitigation and response planning. The tool has been successfully used in recent cyclones, such as Biparjoy and Michaung.

Flood Hazard Atlas have been developed by National Remote Sensing Centre (NRSC) for flood prone states of West Bengal, Andhra Pradesh, Bihar, Odisha, Assam and Uttar Pradesh and for comparatively less flood affected states such as Jammu & Kashmir, Tamil Nadu, Kerala, Gujarat, Arunachal Pradesh, Karnataka and Maharashtra.

Central Water Commission (CWC) has taken initiatives on AI based flood forecasting in the year 2025 on pilot basis, as an in-house endeavour towards development of AI/ML based Short-Range level flood forecasting models for Level Flood Forecasting Stations of CWC, on rivers across the country. CWC has delved into usage of AI/ML techniques in flood forecasting as a replacement for existing conventional techniques used by CWC for short range forecasting. Further CWC is currently providing seven-day advisory flood forecast on its web portal https://aff.india-water.gov.in/ through pan India rainfall-based mathematical modelling for major river basins of the country, including Himalayan States.

Defence Research and Development Organisation (DRDO) is working in the development of technologies for avalanche hazard forecasting, control structures and geo-intelligence to provide safe mobility to armed forces in Indian Himalayan region. DRDO is using AI/ML techniques in the field of Avalanche Forecasting and Monitoring & detection of avalanches using Remote Sensing data.

Further, DRDO is also conducting a pilot study under DRDO project for development of AI based Autonomous Avalanche Forecasting System.

The information regarding the total amount of funding allocated/released and utilized for increasing the use of AI in disaster management/mitigation practices across India, state-wise, is not maintained centrally by this Ministry.

The details of awareness/training programs for officers and volunteers across India, especially in disaster prone areas, to help them use AI for disaster mitigation, management and response is at Annexure.

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ANNEXURE

L.S.US.Q.NO. 5100 FOR 24.03.2026

Details of Awareness/Training programs

S. No.	Name of program	Organizer	Duration	No. of Participants
1.	Program on "Artificial Intelligence, Machine Learning, Deep Learning and Data Driven Decision Making"	National Water Academy (NWA) Pune	11.06.2024 to 13.06.2024	21
2.	Program on "Artificial Intelligence and Machine Learning"	National Water Academy (NWA) Pune	30.06.2025 to 04.07.2025	28
3.	Webinar on “Roll of artificial Intelligence for Disaster Risk Reduction”	National Institute of Disaster Management (NIDM)	05.08.2021 to 05.08.2021	211
4.	Program on “Technologies in Disaster Risk Reduction”	NIDM in collaboration with SRM University, Chennai	28.03.2022 to 30.03.2022	413
5.	Program on ”Advanced Technologies for Effective Emergency Management”	NIDM	19.05.2023 to 19.05.2023	197
