GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

LOK SABHA

UNSTARRED QUESTION NO. 875

ANSWERED ON 24.07.2025

AI FOR FLOOD FORECASTING AND DAMAGE PREDICTION

875. SHRI DAGGUMALLA PRASADA RAO

Will the Minister of **JAL SHAKTI** be pleased to state:

(a) whether the Government has any plans to integrate Artificial Intelligence (AI) in flood forecasting and damage prediction across the country under the Central Water Commission;

(b) if so, the details thereof and if not, the reasons therefor;

(c) whether the Government proposes to develop AI-based systems capable of identifying and predicting potentially affected areas in advance to minimize loss of life and protect livelihoods;

(d) if so, the details thereof and if not, the reasons therefor;

(e) whether the Government has allocated specific budgetary provisions for the development of AI models and for the procurement or deployment of supercomputers for the said purpose;

(f) if so, the details thereof and if not, the reasons therefor;

(g) whether any mechanism has been established to provide timely alerts to residents of possibly affected areas through early warning systems; and

(h) if so, the details thereof and if not, the reasons therefor?

ANSWER

THE MINISTER OF STATE FOR JAL SHAKTI

(SHRI RAJ BHUSHAN CHOUDHARY**)**

(a) to (d) One of the key initiatives undertaken by Smart Water Resources Modelling Organisation, as the Centre of Excellence (SWRMO-CoE) for Smart Water Resources Management, established under Central Water Commission (CWC) during September 2024, is the in-house development of Artificial Intelligence (AI)/ Machine Learning (ML) based short-range flood forecasting models for Level Flood Forecasting Stations (Time Series Forecasting) of CWC across the country.

(e) & (f) The budgetary provisions for the development of AI models and for the use of computational resources by SWRMO-CoE has been kept under the Development of Water Resources Information System Scheme of Department of Water Resources, River Development and Ganga Rejuvenation.

(g) & (h) CWC issues short-range flood forecasts with a lead time up to 24 hrs to concerned State Governments at identified locations. CWC also issues inflow forecasts to identified reservoirs for proper

reservoir regulation. Presently, flood forecasts are issued by CWC at 350 stations (150 Inflow Forecast Stations + 200 Level Forecast Stations) as per Standard Operating Procedure. The network has been established in consultation with State Govt./ Project Authorities. These forecasts are disseminated through a dedicated website, namely, https://ffs.india-water.gov.in.

In order to provide more lead time to the local authorities to plan evacuation of people & take other remedial measures, CWC has developed basin wise flood forecasting model based on rainfall-runoff mathematical modelling for 7 days advance flood forecast advisory for all the forecasting stations. Its dissemination is through the dedicated website, namely, https://aff.india-water.gov.in. CWC flood forecasting services are also integrated with integrated alert dissemination platform Common Alert Protocol (CAP) issued to the State Disaster Management Authority (SDMA) of the respective States/ UTs. The flood information is also loaded in various social media platforms viz., Facebook, X, Flood Watch India Mobile App, etc.

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