GOVERNMENT OF INDIA

MINISTRY OF JAL SHAKTI

DEPARTMENT OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION

LOK SABHA

UNSTARRED QUESTION NO. 4741

ANSWERED ON 21.08.2025

C-FLOOD UNIFIED INUNDATION FORECASTING SYSTEM

4741. SHRI BHARTRUHARI MAHTAB:
SHRI PRADEEP KUMAR SINGH:
MS KANGNA RANAUT:
SHRI DILIP SAIKIA:
SMT. KAMLESH JANGDE:
SMT. MAHIMA KUMARI MEWAR:
SHRI KHAGEN MURMU:

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

(a) the objectives and key features of the C-FLOOD Unified Inundation Forecasting System;

(b) whether any steps are being taken to expand the system to additional river basins and improve forecast accuracy through satellite validation and ground-truthing; and

(c) 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 (c) Government has launched/inaugurated a web-based C-Flood platform. It provides two days advance inundation forecasts up to village level in the form of inundation maps and water level predictions. The salient features of C-flood web-based platform are:

- C-Flood integrates flood inundation output information derived from advanced 2D hydrodynamic modelling with extent and depth information.
- It has been designed to serve as a unified inundation information system integrating flood modelling outputs from national and regional agencies for all river basins as per their respective action plans. It covers inundation forecasts for the Godavari, Tapi and Mahanadi River Basins in initial phase.
- The web-portal supports three-language, namely, Hindi, English & Odia in initial phase.
- It includes inundation forecast for the next two days. It shows inundation information up to the village level.
- It indicates three categories of Flood Alerts based on the inundation depth: Yellow Alert indicates inundation below 0.5m, an Orange Alert corresponds to depths below 1.5m, and a Red Alert signifies inundation exceeding 1.5m.
- To improve and access the forecast accuracy, satellite-based datasets and ground based hydrological observations are utilized.

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