



सत्यमेव जयते

**Ministry of Jal Shakti**  
**Department of Water Resources,**  
**River Development & Ganga Rejuvenation**  
**Government of India**

## Annual Conference of RC/Secy(DM)/SDRF/Civil Defense, etc. - 2026

# Flood Preparedness of CWC

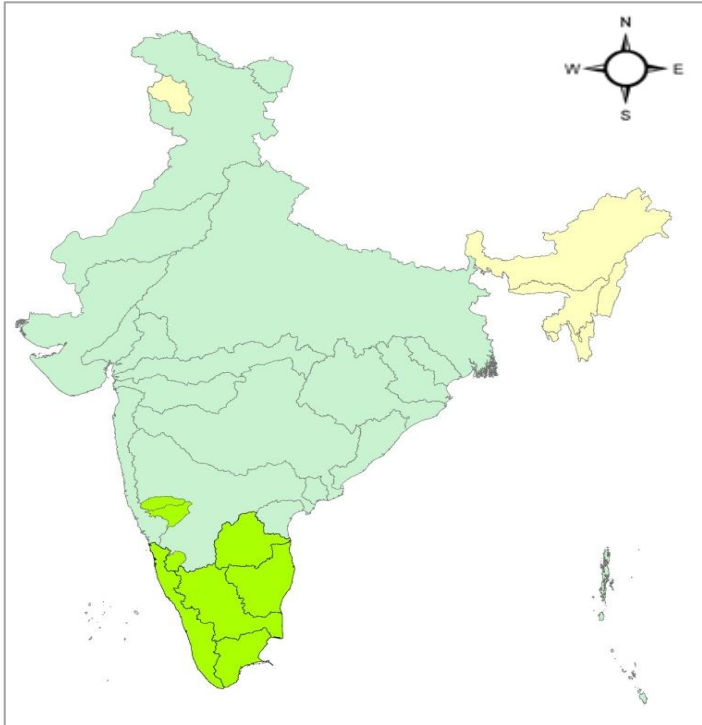


**02.05.2026**



# Flood Preparedness by CWC

## Designated Flood Period and categories



**Predefined Flood Periods are fixed based on regional rainfall distribution and the climatological onset and withdrawal of monsoon**

**1<sup>st</sup> May to 31<sup>st</sup> October** [Brahmaputra & Barak (including Teesta, Rivers flowing in States of Tripura, Manipur, Mizoram, Nagaland, Meghalaya, North Bengal, Sikkim) and Jhelum Sub Basin of Indus.]

**1<sup>st</sup> June to 31<sup>st</sup> October** [All other Basins up to Krishna Basin excluding the sub basins of Krishna such as Ghataprabha, Malaprabha and sub basins of Tungabhadra such as Tunga and Bhadra]

**1<sup>st</sup> June to 31<sup>st</sup> December** [All Basins South of Krishna Basin and the sub basins of Krishna such as Ghataprabha, Malaprabha, and sub basins of Tungabhadra such as Tunga and Bhadra]

### FLOOD CATEGORIES

### ALERT COMMUNICATION PROTOCOLS

Highest Flood Level

**EXTREME**

**Red Stage** 3 hourly or more frequent updates

Danger Level

**SEVERE**

**Orange stage** : 6 hourly updates

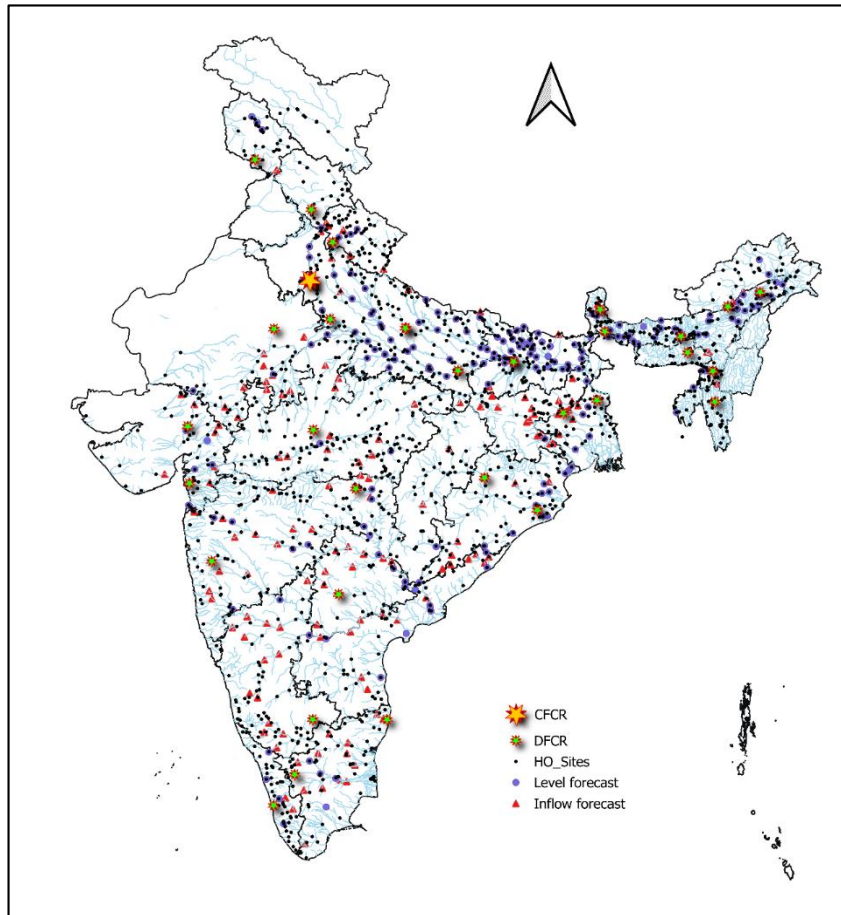
Warning Level

**Above NORMAL**

**Yellow stage** : daily updates

# Flood Forecasting Activities

## Hydrological Station network, Flood Modelling and Forecasting

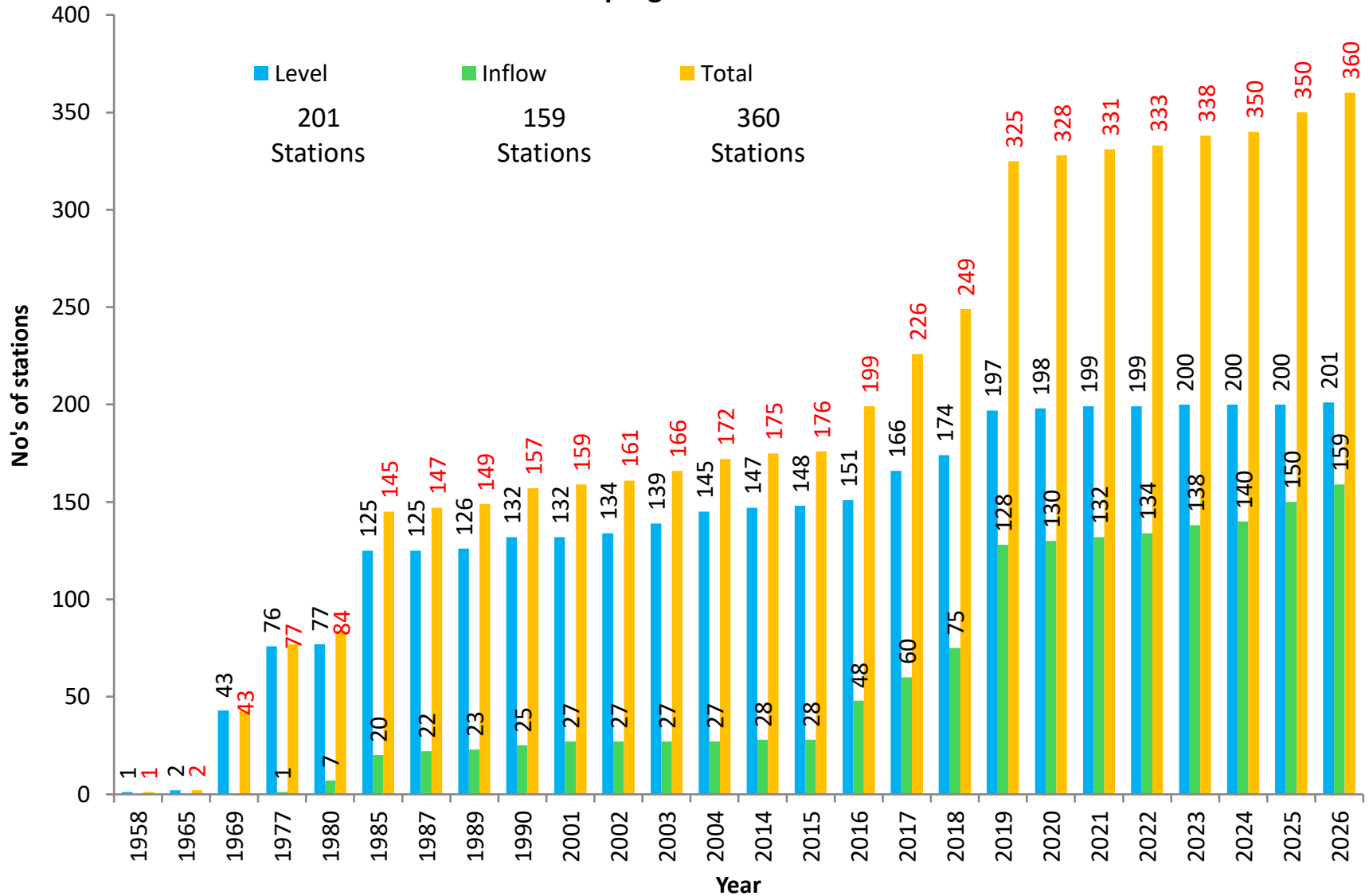


- 1543 Hydrological Observation Stations
- 360 Flood Forecasting Stations  
(201 Level + 159 inflow)
- 3hr/6 hr/12hr/daily/7 days – updates  
/forecast/ advisory
- 1+36 Control Rooms

# Flood Preparedness by CWC

## Expansion of Flood Forecasting Network of CWC

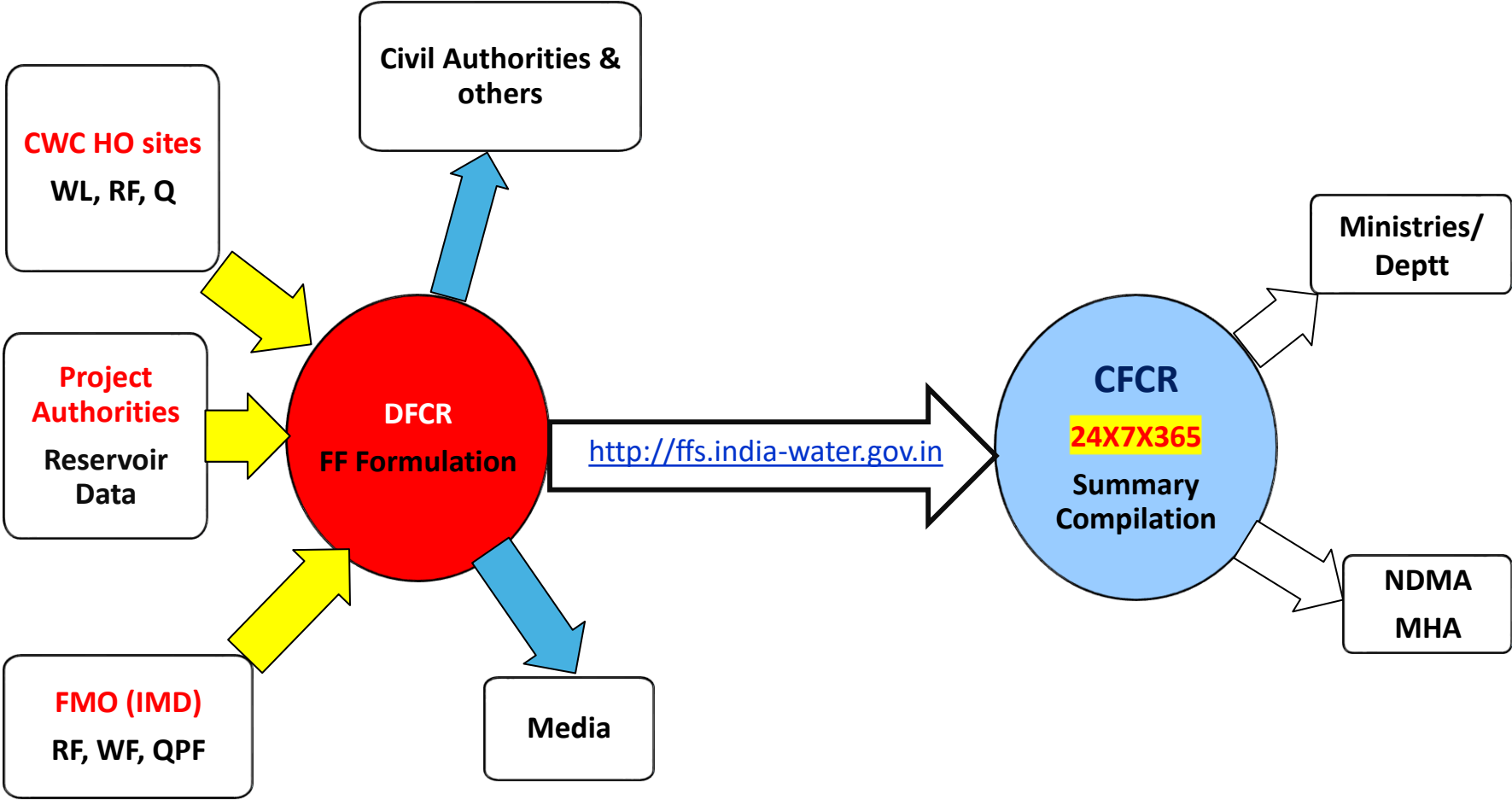
Year-wise progress of FF stations



# Flood Preparedness by CWC

## Flood Forecasting Setup

### 1 Central and 36 Divisional Flood Control Rooms



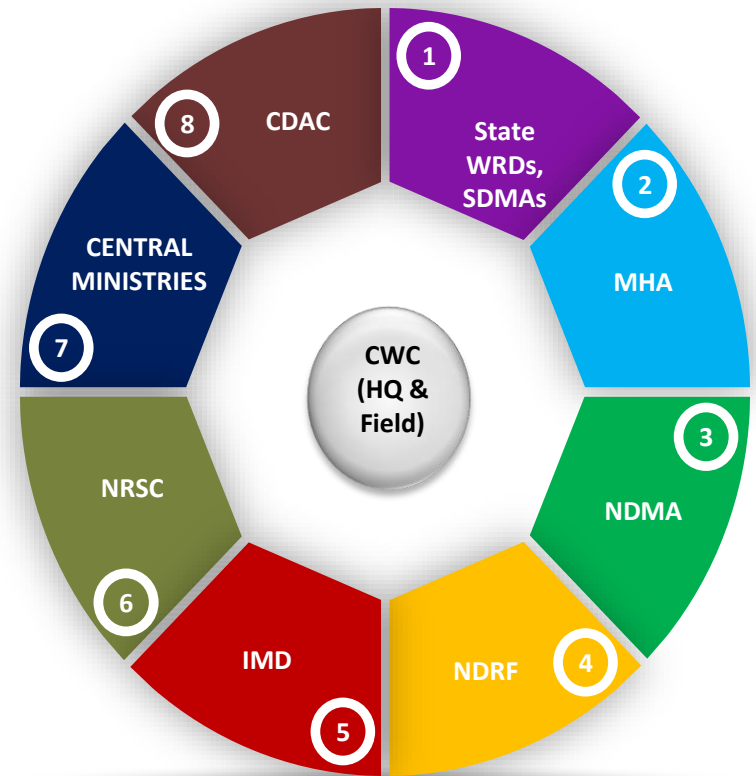
Coordination with other Agencies at Regional Level

24X7 Control Room of DoWR, RD & GR (MoJS)

# Flood Preparedness by CWC

## Institutional Framework

- Flood preparedness meeting with stakeholders including state agencies, SDMA and IMD officers before onset of monsoon
- One-Day Stakeholders' Workshop on CWC's Flood Forecasting Services on 09.02.2026 at CWC(HQ), New Delhi
- Conducting state-wise meeting to Strengthen Coordination and Sharing of Flood Forecasting Information between CWC and States agencies.
- Integration of states flood forecasting activities with C-Flood portal for 10 states.



# Flood Preparedness by CWC

## Flood Forecast Dissemination

- Email, Website, WhatsApp, Social media, Mobile App ,CAP Alert
- Flood Monitoring & Short Range Forecast: <https://ffs.india-water.gov.in/>
- 7-day Advisory Flood Forecast: <https://aff.india-water.gov.in/>
- Inundation Forecast: C-Floods <https://inf.cwc.gov.in/>

- CAP Alert 

- Flood Messages 

- CWCOfficial.FF 

- CWCOfficial\_FF 

- CWC Flood Updates 

- Mobile App FloodWatch India 





Download the "FloodWatch India" App!



केंद्रीय जल आयोग  
Central Water Commission  
जल शक्ति मंत्रालय  
Ministry of Jal Shakti  
भारत सरकार  
Government of India

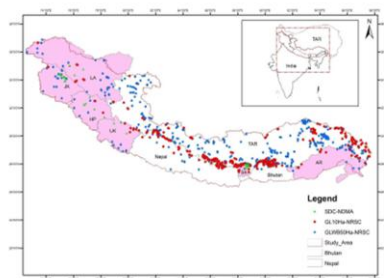
## Flood Preparedness by CWC

### Flood Forecast Dissemination

- ✓ **Monitoring of Floods (<https://ffs.india-water.gov.in/>)**
- ✓ **Monitoring of Hydromet situation (IMD bulletins, various weather related websites, WRD websites)**
- ✓ **Issue of Daily, Red & Orange Flood Bulletins as per MHA SOP**
- ✓ **MHA Advisory (Daily)**
- ✓ **Daily Flood Situation report (Daily till Oct./Nov.) and Special Flood Advisory after SW Monsoon (As and when required)**
- ✓ **Issue of CAP Alerts to SDMA's through NDMA Sachet portal**
- ✓ **Monthly and Annual Flood Situation Report.**
- ✓ **Daily Flood updates through YouTube Channel (CWC Flood updates)**
- ✓ **Meetings with stakeholders on preparedness & updates**

# Preparedness for GLOF

1. **Monitoring of 2843 Glacial Lakes/ Water Bodies** having size greater than 10 ha for period June-October every year using remote sensing technology.
2. **Monthly Monitoring Reports** are prepared and shared with disaster management authorities/State agencies/e-published in CWC website.
3. **Flow path mapping** of 100 Glacial Lakes located in India along with CWC HO stations and projects enroute, completed.
4. Finalization of Remote sensing-based **Criteria for Risk indexing of Glacial Lakes** in IHR. Risk assessment of 100 glacial lakes in India completed. 581 Glacial Lakes in progress.
5. **Guideline for Assessment of GLOF** specific to river valley projects in IHR and **Guideline for Structural measures** to mitigate adverse effect of GLOF on Dam/Barrages published in August 2025.
6. **46 HE Projects** in Himalayas identified vulnerable to GLOF. EWS installed in all projects.



Location on Glacial Lakes Monitored by CWC

Covering 4 states ( Uttarakhand ,HP ,  
Sikkim and Arunachal Pradesh) & 2 UTs  
(JK and Ladakh)

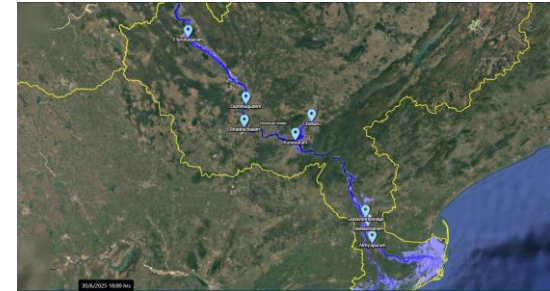
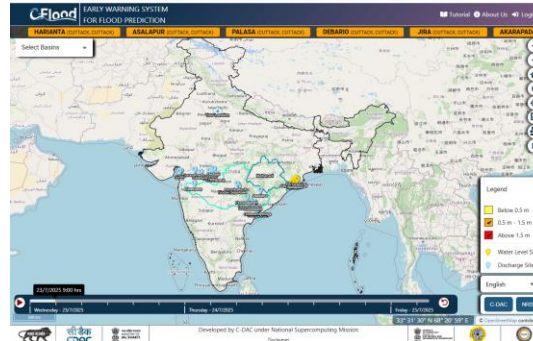
Himalayan Region  
+  
TAR region draining  
to India



# Flood Preparedness by CWC

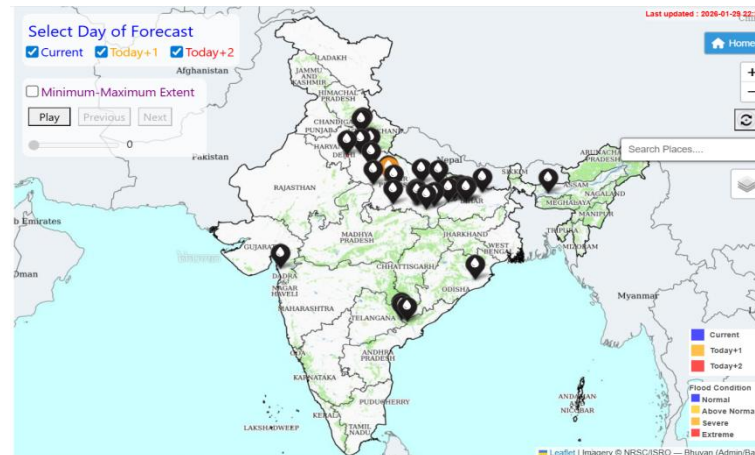
## Inundation Forecasting

- Godavari basin
- Tapi basin
- Mahanadi basin



- Unified Portal Launched by Hon'ble Union Minister, Jal Shakti on 2<sup>nd</sup> July 2025. Planned to **integrated station specific forecast in 2026**
- Libraries based inundation developed for 38 Stations as detailed below

- ✓ Andhra Pradesh: 1
- ✓ Assam: 1
- ✓ Bihar: 9
- ✓ Delhi: 1
- ✓ Gujarat: 1
- ✓ Odisha: 1
- ✓ Telangana: 2
- ✓ Uttar Pradesh: 19
- ✓ Uttarakhand: 2
- ✓ Haryana: 1



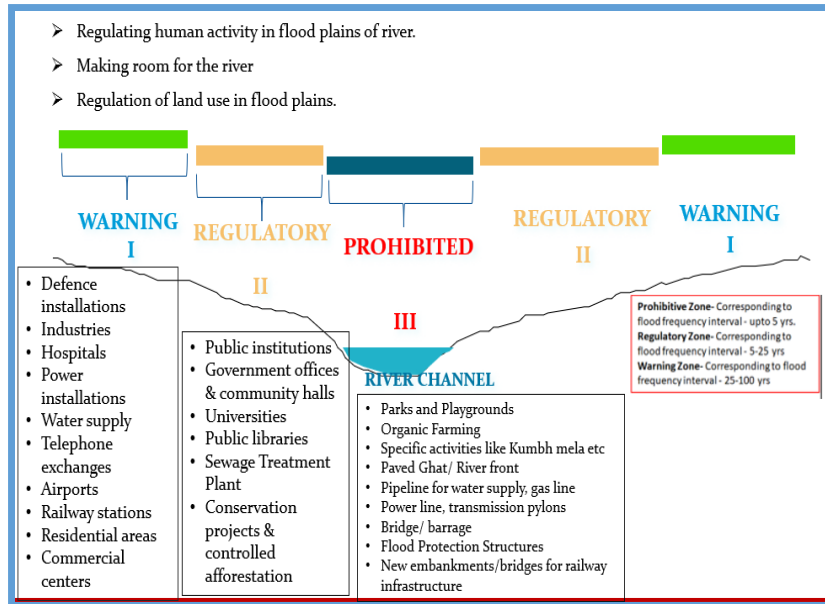
*Planned to cover all the flood forecasting stations by 2027*

# Flood Preparedness by CWC

## Flood Crisis Management Team (FCMT)

- Crisis Management Plan (CMP) 2025
  - 43(from 26) teams for 158 reservoirs (from 74) in 19 basins (from 8)
  - Involved Dam authorities, SDSOs & SDMAs, CWC, BBMB, NCA, DVC, GRMB, KRMB, GFCC
- State level Integrated reservoir operation agreed in Krishna Basin between Andhra Pradesh and Karnataka

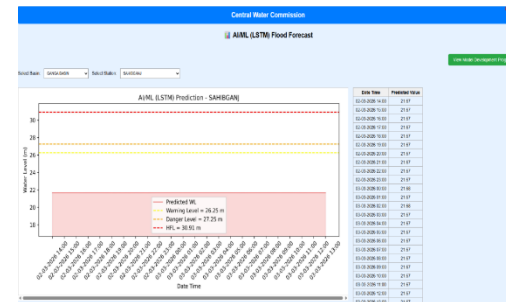
## Flood Plain Zoning



- Technical Guidelines on Model Flood plain Zoning circulated to States for implementation
- 8 states have adopted through Act/Policy

|                    |   |
|--------------------|---|
| <u>Manipur</u>     | <u>Bihar</u>                                |
| <u>Rajasthan</u>   | <u>Arunachal Pradesh</u>                    |
| <u>J&amp;K</u>     | <u>Assam (Bodoland Territorial Council)</u> |
| <u>Uttarakhand</u> | <u>Tamil Nadu</u>                           |

## Implementation of AI/ML





## Co-operation requested from States

- ✓ Sharing of Near Real-time Hydrometeorological data of control structures with CWC through WIMS(NWIC/SWIC)
- ✓ Integrated Reservoir Operation
  - Co-operation through (FCMT ) - Flood Crisis Management Team
  - Utilization of DSS for Ganga Basin
- ✓ Realtime verification of Inundation forecast
- ✓ Implementation of Flood Plain Zoning
- ✓ Sharing of flood damage data for compilation
- ✓ Utilisation of flood Watch App amongst Govt officials & General population
- ✓ Fixation of Danger Level and Warning Level at H.O Sites in their administrative boundaries.
- ✓ URLs and API's of the flood forecasting portals/decision support systems being operated by the State Governments may kindly be shared with CWC. Further, for seamless exchange of real-time hydrological and meteorological data through an API-based mechanism, it is requested that a Nodal Officer from State organizations may kindly be nominated.



**THANK YOU**

# Flood Preparedness by CWC

## Flood Forecasting Portal



<https://ffs.india-water.gov.in/>

**Central Water Commission**    Current Flood Forecast    Site    Hydrograph    Table View    7 Day Advisory Flood Forecast

DHARAMTUL (56.13 m) ↓    KARIMGANJ (15.25 m) ↓    DHUBRI (28.75 m) ↓

Search Stations    Base Stations

| District / Town | Basin       | River       | Division                                    | RL of Zero gauge |
|-----------------|-------------|-------------|---|------------------|
| DHUBRI          | Brahmaputra | Brahmaputra | Middle Brahmaputra Division (MBD), Guwahati | 0                |

| Warning Level (WL) | Danger Level (DL) | Highest Flood Level (HFL) | HFL Attained Date |
|--------------------|-------------------|---------------------------|-------------------|
| 27.62              | 28.62             | 30.37                     | 2019-07-17        |

**Present Water Level**  
(in meters) **28.75** ↓  
Sat, 7, Jun 2025, 9:00 AM

**Cumulative Daily Rainfall**  
(in millimeters) **0**  
Sat, 7, Jun 2025, 8:30 AM

**Level Forecast (10)**  
(in meters) **28.69** ↓  
Sat, 7, Jun 2025, 9:00 PM

**Hydrograph view of - Dhubri**

Water Level (m)

Date / Time

Forecasted Water Level    Measured Water Level

HFL

Danger

Warning

# Flood Preparedness by CWC

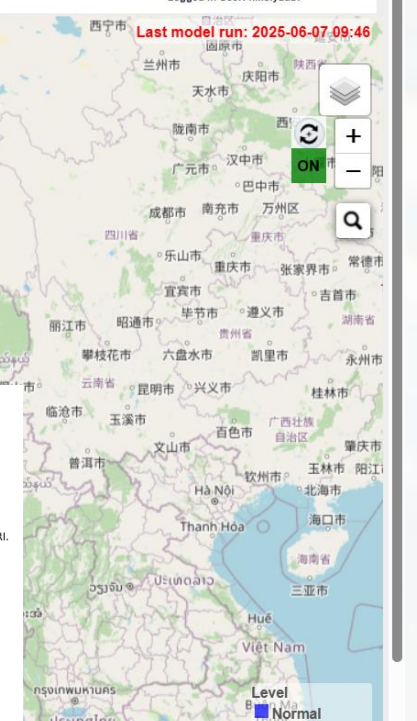
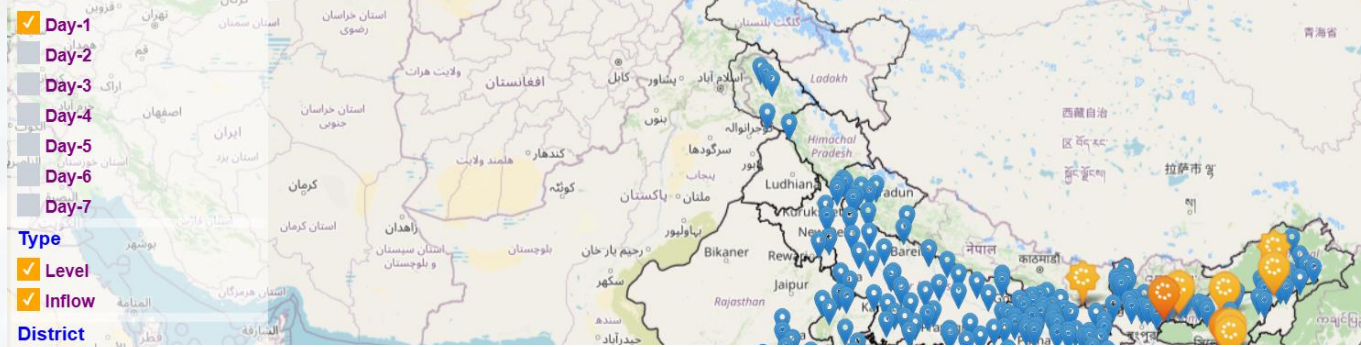
## 7-Day Advisory Forecast



<https://aff.india-water.gov.in/>

**CENTRAL WATER COMMISSION -- ADVISORY FLOOD FORECAST**

Home Inundation Methodology Forecast-Hydrograph Tabular-View Contact Us logout  
**FORECAST FOR 08/06/25 09:00**

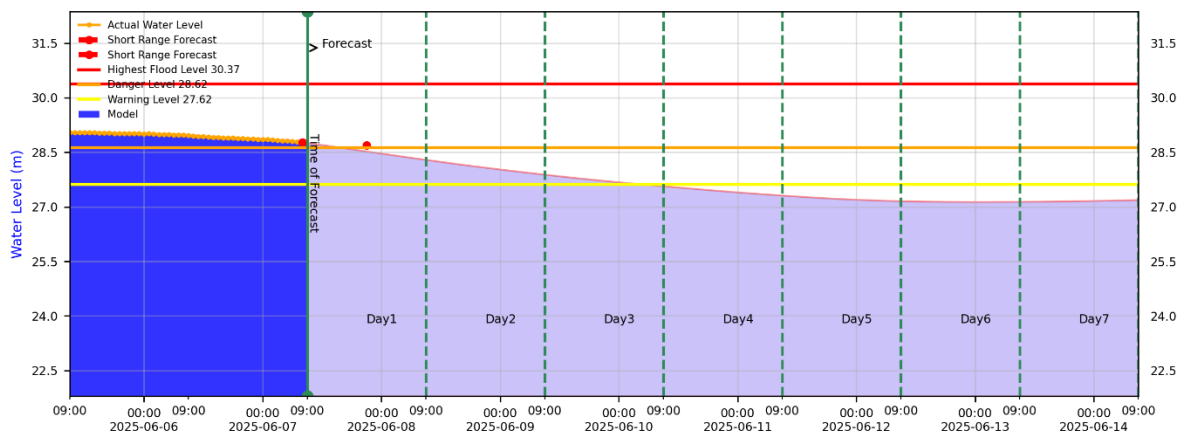
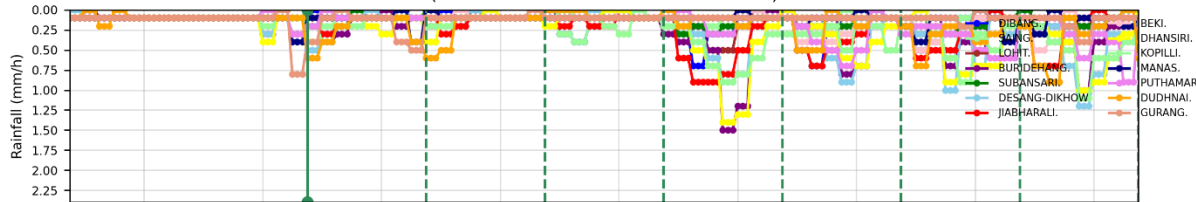


- Day-1
- Day-2
- Day-3
- Day-4
- Day-5
- Day-6
- Day-7
- Type
- Level
- Inflow
- District
- Block

- Realtime-Rainfall**
- RG-3H
  - GPM-3H
  - GSMAP-3H
  - GPM-VC
  - GSMAP-VC
- Rainfall Forecast**
- WRF-VC
  - GFS-VC

### ADVISORY FLOOD FORECAST FOR DHUBRI ON RIVER BRAHMAPUTRA

(07-06-2025 09:00 to 14-06-2025 09:00)



➤ **Advisories wef Monsoon 2016.**  
**Covering**  
**360 FF Stations** (200 Level + 140 Inflow)  
**20 River Basins**

- Integrated with **IMD Rainfall Forecast (GFS/ WRF)**
- Covering **all major flood prone area** of country
- Automatic Generation of Forecast (24 X 7) with update frequency of **3 hrs**
- **GIS Based Forecast Dissemination portal** is operational and running

# Flood Preparedness by CWC

## Combined (CWC, IMD & NDRF) Reporting Format for MHA

Ministry of Home Affairs  
Flood Situation in sub-basins

**Part- I**

| Sl. No. | River/Sub-Basin/Basin     | State | District  | Rainfall Situation |       |       |       |       | Remarks/ Advisories  |
|---------|---------------------------|-------|-----------|--------------------|-------|-------|-------|-------|--|
|         |                           |       |           | Day 1              | Day 2 | Day 3 | Day 4 | Day 5 |  |
| 1       | Gandak/ Gandak/Ganga      | Bihar | Galalganj | Green              | Green | Green | Green | Green | I. First Meeting on the Monsoon Preparedness was conducted by Bihar State Disaster Management, Patna on 10.06.2021.<br>II. 11 teams available in Bihar i.e. Bettiah-2, Mothari-1, Gopalganj-1, Kishanganj-1, Darbhanga-1, Araria-1, Supaul-1 & Didarganj-3.                              |
| 2       | Desang/Desang/Brahmaputra | Assam | Sivasagar | Blue               | Blue  | Blue  | Blue  | Blue  | I. First Meeting on the Monsoon Preparedness was held on 08.05.2021.<br>II. A review meeting on Monsoon Preparedness was held on 21.05.2021.<br>III. 10 teams available in Assam i.e. IWT Guwahati-1, Cachar-1, Barpeta-1, Bongaigaon-1, Jorhat-1, Sonitpur-1, Sivasagar-1 & Dhemajai-3. |

Reservoirs Position

**Part- II**

| # | Reservoir/ Dams  | River/ Sub-Basin / Basin         | State     | US/ DS District   | Rainfall situation |       |       |       |       | Remarks/ Advisories   |
|---|------------------|----------------------------------|-----------|---|--------------------|-------|-------|-------|-------|---|
|   |                  |                                  |           |   | Day 1              | Day 2 | Day 3 | Day 4 | Day 5 |   |
| 1 | Almatti Dam      | Krishna/ Upper Krishna/ Krishna  | Karnataka | Kolhapur (Maharashtra)/ Bagalkote (Karnataka)               | Green              | Green | Green | Green | Green | • 5 teams available in Karnataka i.e. Bengaluru-1, Dakshin Kannada-1, Kodagu-1, Raichur-1 & Belagavi-1.   |
| 2 | Panchet Dam      | Damodar/ Damodar East/ Ganga     | Jharkhand | Dhanbad   | Green              | Green | Blue  | Blue  | Blue  | • 4 teams available in Jharkhand i.e. East Singhbhum (Jamshedpur)-1, Doeghar-1 and Ranchi-2.  |
| 3 | Bhavanisagar Dam | Bhavani/ Middle Cauvery/ Cauvery | Tamilnadu | Palakad (Kerala), Nilgiri (TN), Coimbatore (TN)/ Erode (TN) | Green              | Green | Green | Green | Green | • 1 team available at Chennai (Tamilnadu).  |
| 4 | Kabini           | Kabini/ Kabini/ Cauvery          | Karnataka | Wayanad (Kerala)/ Mysuru (Karnataka)                        | Blue               | Blue  | Blue  | Blue  | Blue  | • Karnataka as mentioned above.<br>• Kerala-<br>i. First Meeting on the Monsoon Preparedness was conducted by State Relief Commissioner, Kerala on 12.05.2021.<br>ii. A review meeting on Monsoon Preparedness was conducted by Chief Secretary, Kerala on 19.05.2021.<br>iii. 09 teams available i.e. Idukki-1, Kollam-1, Pattanamhitta-1, Alappuzha-1, Ernakulam-1, Thrissur-1, Malapuram-1, Kozhikode-1 & Wayanad-1. |

Note: Based on above information, Project Authority may regulate the reservoirs as per standard operating manuals/ rule levels to avoid downstream flooding and upstream submergence.

## Finalized and Operational since July 2021

