



**Central Water Commission**  
**Upper Ganga Basin Organisation, Lucknow**  
**Daily Flood Situation Report Cum Advisories**  
**Date: 11 AUGUST, 2020**

**FSR No.50**

**Dated 11-08-20205**

**1. Weather forecast by IMD**

**I. SYNOPTIC SITUATION:**

The Low Pressure Area over northwest Madhya Pradesh & neighbourhood has become less marked. However the associated cyclonic circulation extending upto 1.5 km above mean sea level now lies over Northeast Rajasthan & neighbourhood.

♦ The monsoon trough at mean sea level now passes through Bikaner, Sikar, Gwalior, Sidhi, Dehri, Dhanbad, Kolkata and thence south-eastwards to Northeast Bay of Bengal and extends upto 0.9 km above mean sea level.

♦ The cyclonic circulation over Southeast Pakistan & adjoining Kutch now lies over South Pakistan & adjoining West Rajasthan between 1.5 & 2.1 km above mean sea level.

♦ A trough runs from Southwest Uttar Pradesh to South Chhattisgarh across East Madhya Pradesh between 1.5 km & 2.1 km above mean seal level.

♦ A cyclonic circulation lies over East Assam & neighbourhood at 0.9 km above mean sea level.

**II. a) DETERMINISTIC FORECAST (QPF):**

Sr. No.	BASIN NAME	SUBBASIN CODE/NAME	QPF (mm)		
			Day-1	Day-2	Day-3
1	Alaknanda	Alaknanda	11-25	11-25	11-25
2	Bhagirathi	Bhagirathi	0.1-10	0.1-10	11-25
3	Ganga	Chhatnag to Mirzapur	0.1-10	11-25	11-25
		Narora to Phaphamau	0.1-10	11-25	11-25
		Phaphamau to Ballia	0.1-10	11-25	11-25
		Gomti	0.1-10	11-25	26-50
		Sai	0.1-10	11-25	26-50
		Upper Ganga	11-25	26-50	11-25
4	Ghaghra	Lower Ghaghra	0.1-10	0.1-10	11-25
		Middle Ghaghra	0.1-10	0.1-10	11-25
		Upper Ghaghra	11-25	11-25	11-25
5	Ramganga	Ramganga	11-25	11-25	11-25
6	Rapti	Rapti	26-50	11-25	11-25
7.	Sharda	Sharda	11-25	11-25	26-50

## II (b) DETERMINISTIC FORECAST (DISTRIBUTION)

	BASIN NAME	SUBBASIN CODE/NAME	INTENSITY (I) & SPATIAL DISTRIBUTION (D)					
			Day-1		Day-2		Day-3	
			I	D	I	D	I	D
1	Alaknanda	Alaknanda	M	FWS	M	WS	M	WS
2	Bhagirathi	Bhagirathi	M	FWS	M	WS	M	WS
3	Ganga	Chhatnag to Mirzapur	M	FWS	M	WS	M	WS
		Narora to Phaphamau	M	FWS	M	WS	M	WS
		Phaphamau to Ballia	M	WS	M	WS	M	WS
		Gomti	M	WS	M	WS	M	WS
		Sai	M	WS	M	WS	M	WS
		Upper Ganga	M	WS	M	WS	M	WS
4	Ghaghra	Lower Ghaghra	M	WS	M	WS	M	WS
		Middle Ghaghra	M	WS	M	WS	M	WS
		Upper Ghaghra	M	WS	M	WS	M	WS
5	Ramganga	Ramganga	M	WS	M	WS	M	WS
6	Rapti	Rapti	M	WS	M	WS	M	WS
7.	Sharda	Sharda	M	WS	M	WS	M	WS

<b>QPF in Ranges (mm)</b>	<b>UNLISTED</b>	<b>0</b>	<b>0.1-10</b>	<b>11-25</b>	<b>26-50</b>	<b>51-100</b>	<b>&gt;100</b>
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### III. HEAVY RAINFALL WARNING:

NAME OF BASIN	NAME OF SUB- BASIN	Day-1		Day-2		Day-3	
		I	D	I	D	I	D
Alaknanda	Alaknanda	H	ISOL	H	ISOL	H	ISOL
Bhagirathi	Bhagirathi	H	ISOL	H	ISOL	H	ISOL
Ganga	Chhatnag to Mirzapur			H	ISOL		
	Narora to Phaphamau			H	ISOL	H	ISOL
	Phaphamau to Ballia						
	Gomti					H	ISOL
	Sai					H	ISOL
	Upper Ganga	H	ISOL	H	ISOL	H	ISOL
Ghaghra	Lower Ghaghra			H	ISOL	H	ISOL
	Middle Ghaghra			H	ISOL	H	ISOL
	Upper Ghaghra	H	ISOL	H	ISOL	H	ISOL
Ramganga	Ramganga			H	ISOL	H	ISOL
Rapti	Rapti	H	ISOL				
Sharda	Sharda	H	ISOL	H	ISOL	H	ISOL

Spatial Distribution of Rainfall		
DRY	Dry	No Station reported rainfall
ISOL	One or two Places	25% or less number of stations recorded rainfall 2.5 mm
SCT	At a few Places	26%-50% number of stations recorded rainfall 2.5 mm
FWS	At many Places	51%-75% number of stations recorded rainfall 2.5 mm
WS	At most places	76%-100% number of stations recorded rainfall 2.5 mm

Intensity of Rainfall					
MDry	NIL	0 cm	VL	Very Light Rainfall	Trace
L	Light Rainfall	Upto 1 cm	M	Moderate rainfall	02-06 cm
H	Heavy rainfall	07-11 cm	VH	Very Heavy rainfall	12-20 cm
EH	Extremely Heavy rainfall	21 cm or More			
ExH	Exceptionally Heavy Rainfall	When the amount is a value near about the highest recorded rainfall at or near the station for the month or season. However, this term will be used only when the actual rainfall amount exceeds 12 cm			

#### IV. PROBABILISTIC FORECAST

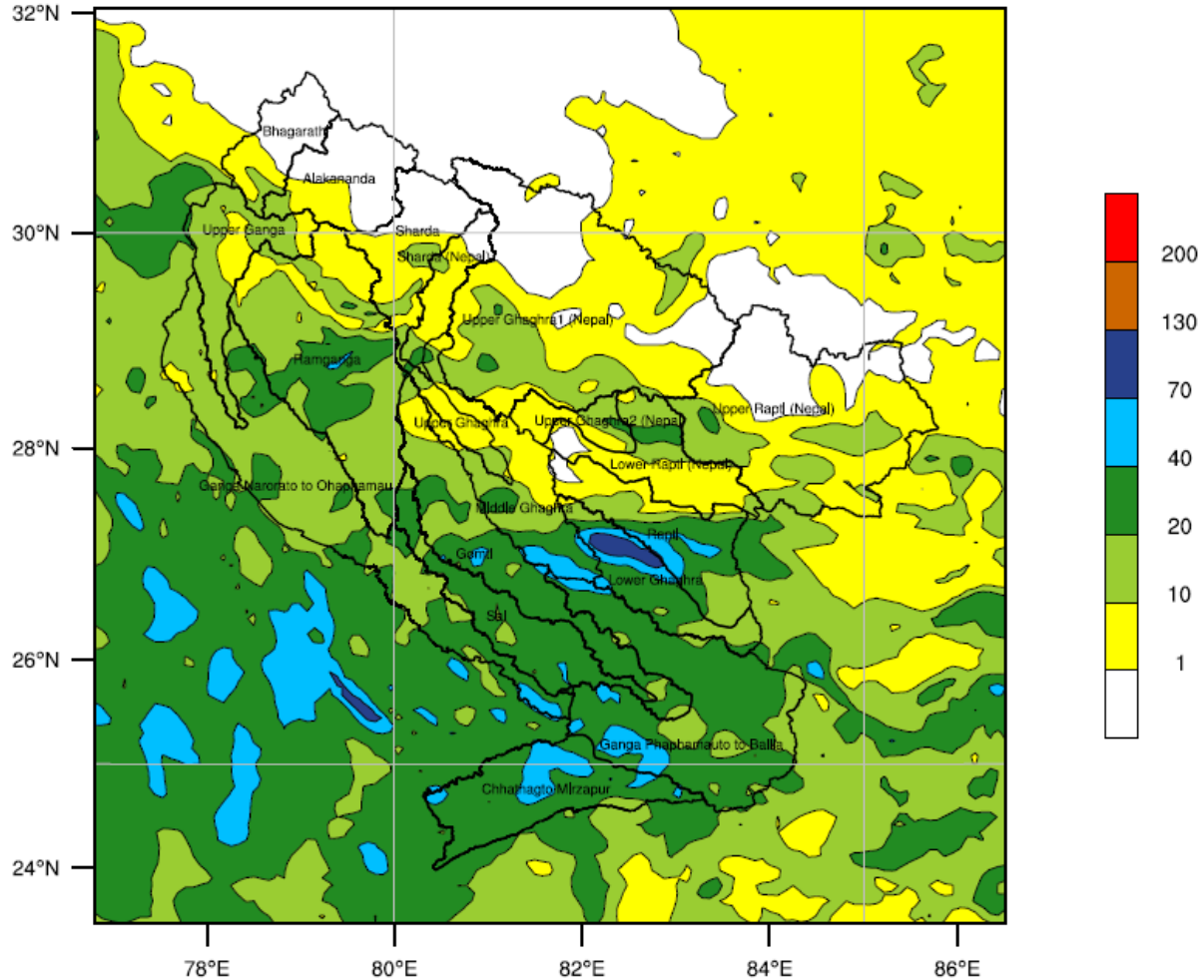
S. No.	BASIN NAME	SUBBASIN CODE/NAME	Day-1						Day-2						Day-3					
			0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm
1	Alaknanda	Alaknanda		25-50	50-75					25-50	50-75					25-50	50-75			
2	Bhagirathi	Bhagirathi		50-75	25-50					50-75	25-50					25-50	50-75			
3	Ganga	Chhatnag to Mirzapur		50-75	25-50					25-50	50-75					25-50	50-75			
		Narora to Phaphamau		50-75	25-50					25-50	50-75					25-50	50-75			
		Phaphamau to Ballia		50-75	25-50					25-50	50-75					25-50	50-75			
		Gomti		50-75	25-50					25-50	50-75						25-50	50-75		
		Sai		50-75	25-50					25-50	50-75						25-50	50-75		
		Upper Ganga		25-50	50-75						25-50	50-75				25-50	50-75			
4	Ghaghra	Lower Ghaghra		50-75	25-50					50-75	25-50					25-50	50-75			
		Middle Ghaghra		50-75	25-50					50-75	25-50					25-50	50-75			
		Upper Ghaghra		25-50	50-75					25-50	50-75					25-50	50-75			
5	Ramganga	Ramganga		25-50	50-75					25-50	50-75					25-50	50-75			
6	Rapti	Rapti			25-50	50-75				25-50	50-75					25-50	50-75			
7.	Sharda	Sharda		25-50	50-75					25-50	50-75						25-50	50-75		

Probability of occurrence (%)	0-5	5-25	25-50	50-75	75-100
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Init: 2020-08-11\_00:00:00  
Valld: 2020-08-12\_03:00:00

## FLOOD MET OFFICE LUCKNOW

### IMD WRF Rainfall (mm) Forecast(24hr)



### Sub basin wise Average Rainfall Estimation

Alaknanda = 2 mm	Rapti = 21 mm
Bhagirathi = 3 mm	Sai = 26 mm
Chhatnagto Mirzapur = 33 mm	Sharda = 6 mm
Ganga Narorato Ophamau = 18 mm	Sharda (Nepal) = 5 mm
Ganga Phaphamauto Balia = 27 mm	Upper Ganga = 13 mm
Gomti = 22 mm	Upper Ghaghra = 5 mm
Lower Ghaghra = 36 mm	Upper Ghaghra1 (Nepal) = 8 mm
Lower Rapti (Nepal) = 9 mm	Upper Ghaghra2 (Nepal) = 7 mm
Middle Ghaghra = 22 mm	Upper Rapti (Nepal) = 6 mm
Ramganga = 16 mm	

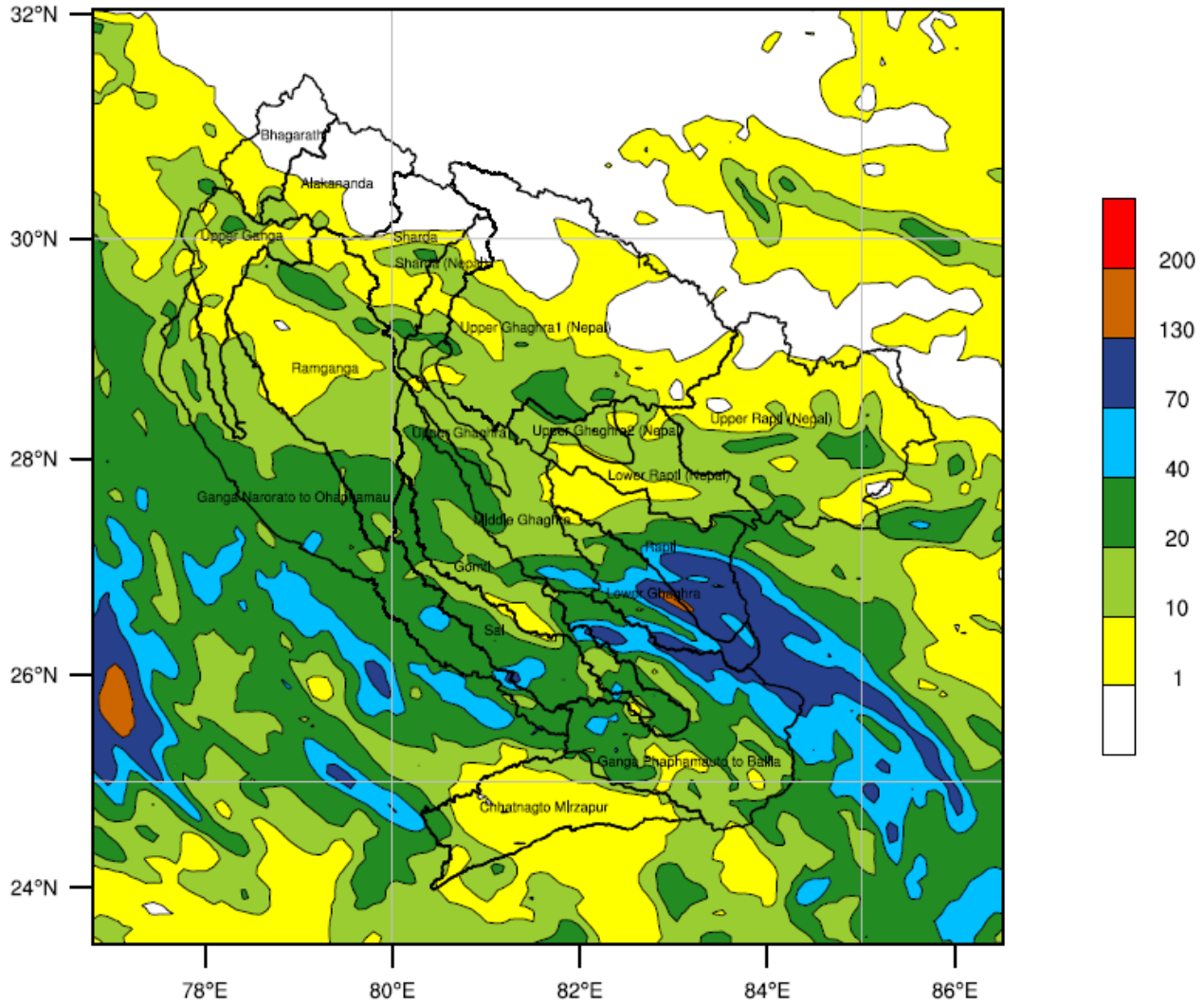
OUTPUT FROM WRF V3.6.1 MODEL

WE = 1001 ; SN = 945 ; Levels = 45 ; Dls = 9km ; Phys Opt = 16 ; PBL Opt = 2 ; Cu Opt = 5

Init: 2020-08-11\_00:00:00  
Vald: 2020-08-13\_03:00:00

## FLOOD MET OFFICE LUCKNOW

### IMD WRF Rainfall (mm) Forecast(48hr)



### Sub basin wise Average Rainfall Estimation

Alaknanda =	2 mm	Rapti =	46 mm
Bhaglrathi =	3 mm	Sai =	25 mm
Chhatnagto Mirzapur =	8 mm	Sharda =	10 mm
Ganga Narorato Ohaphamau =	25 mm	Sharda (Nepal) =	9 mm
Ganga Phaphamauto Balia =	31 mm	Upper Ganga =	11 mm
Gomti =	21 mm	Upper Ghaghra =	7 mm
Lower Ghaghara =	51 mm	Upper Ghaghra1 (Nepal) =	15 mm
Lower Rapti (Nepal) =	12 mm	Upper Ghaghra2 (Nepal) =	16 mm
Middle Ghaghara =	22 mm	Upper Rapti (Nepal) =	10 mm
Ramganga =	13 mm		

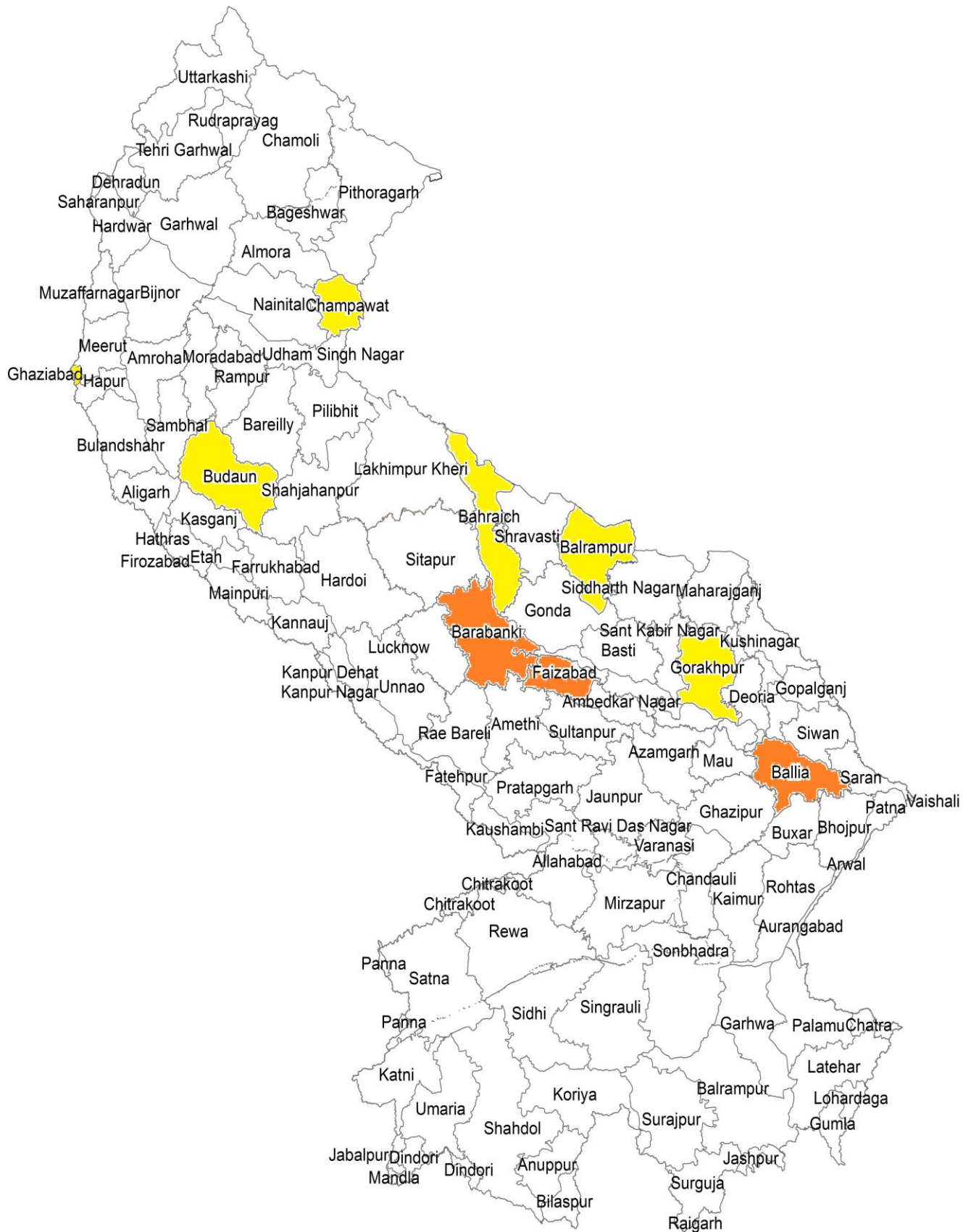
OUTPUT FROM WRF V3.6.1 MODEL

WE = 1001 ; SN = 945 ; Levels = 45 ; Dls = 9km ; Phys Opt = 16 ; PBL Opt = 2 ; Cu Opt = 5



## 2. Summary of flood situation as per CWC flood forecasting network

### Flood Situation on 11 AUGUST, 2020



1. River Sarda at Paliakalan in KHERI district of Uttar Pradesh continues to flow in SEVERE SITUATION at 14:00 hrs today. At 14:00 hrs, it was flowing at a level of 154.81m with rising trend which is 0.71m above its Danger Level of 154.1 m and 0.51m below its previous HFL of 155.32 m (2014-07-21).
2. River Ghagra at Turtipar in BALLIA district of Uttar Pradesh continues to flow in SEVERE SITUATION at 14:00 hrs today. At 14:00 hrs, it was flowing at a level of 64.16m with falling trend which is 0.15 above its Danger Level of 64.01 m and 1.84 m below its previous HFL of 66.0 m (1998-08-28).
3. River Ghagra at Elginbridge in BARABANKI district of Uttar Pradesh continues to flow in SEVERE SITUATION at 14:00 hrs today. At 14:00 hrs, it was flowing at a level of 106.756m with rising trend which is 0.686 m above its Danger Level of 106.07 m and 0.86m below its previous HFL of 107.616 m (2014-08-18).
4. River Ghagra at Ayodhya in FAIZABAD district of Uttar Pradesh continues to flow in SEVERE SITUATION at 14:00 hrs today. At 14:00 hrs, it was flowing at a level of 92.93 m with rising trend which is 0.20 m above its Danger Level of 92.73 m and 1.08 m below its previous HFL of 94.01 m (2009-10-11).



## 2.1 Rainfall Situation

Amount of rainfall recorded at 8:30 hours IST of today ( $\geq 50$  mm or more)

Name of Place (State)	Rainfall (in mm)
Garmukteshwar (U.P)	84.0
Etawah (U.P)	132.0
Bhatpurwa Ghat (U.P)	74.0
B.K.Ghat (U.P)	67.6
Chauguruji (U.P)	69.2
Jauljibi (U.K)	84.0
Bangapani (U.K)	80.0
Thal (U.k)	126.4
Gagrigol (U.K)	90.0

## 2.2 LEVEL FORECAST

LEVEL FORECAST		
S.No.	Flood Situations	No. of Forecasting Sites
A.	<b>Extreme Flood Situation:</b>	
	(Site (s) where the previous Highest Flood Level (HFL) is exceeded or equalized)	0
B.	<b>Severe Flood Situation :</b>	
	(Site(s) where water Level touching or exceeding the Danger Level but below Highest Flood Level(HFL)	3
C.	<b>Above Normal Flood Situation:</b>	
	(Site (s) where water level touching or exceeding the warning Level but below Danger Level)	4
Total Numbers of Sites above Warning Level (A+B+C)		7
INFLOW FORECAST		
Number of Sites for which inflow forecasts issued:		2
(Where inflow are equal or exceed the specified Threshold Limit for a particular reservoir/ barrage)		2

### 2.3 Above Normal (Water Level touching or exceeding the warning Level but below Danger Level)

Name of river	Flood Forecasting Sites	District	State	Danger Level(m)	Warning Level (m)	Previous Highest		Actual Level			Forecast			
						Level (m)	Date	Level (m)	Time	Trend	Level (m)	Date	Time	Trend
Rapti	Balrampur	Balrampur	U.P	104.62	103.62	105.54	2015	103.52	0800	S	103.90	12.08.20	0800	R
Rapti	Birdghat	Gorakhpur	U.P	74.98	73.98	77.54	1998	74.66	0800	F	74.55	12.08.20	0800	F
Ganga	Kachhla bridge	Budaun	U.P	161.00	162.00	162.79	2010	161.71	0800	S	161.88	12.08.20	0800	R
Ganga	Garhmukteshwar	Ghaziabad	U.P	199.33	198.33	199.9	2010	198.50	0800	S	198.58	12.08.20	0800	R

### 2.4 Severe Flood Situation (Water Level touching or exceeding the Danger Level but below Highest Flood Level (HFL))

Name of river	Flood Forecasting Sites	District	State	Danger Level(m)	Warning Level (m)	Previous Highest		Actual Level			Forecast			
						Level(m)	Date	Level(m)	Time	Trend	Level (m)	Date	Time	Trend
Ghaghra	Turtipar	Baliya	U.P	64.01	63.01	66.00	1998	64.19	0800	S	64.40	12.08.20	0800	R
Ghaghra	Elgin Bridge	Barabanki	U.P.	106.07	105.07	107.616	2014	106.626	0800	R	106.95	12.08.20	0800	R
Ghaghra	Ayodhya	Faizabad	U.P	92.73	91.73	94.01	2009	92.81	0800	R	93.30	12.08.20	0800	R

## 2.5 Extreme Flood Situation (Water Level exceeded or equalized Highest Flood Level (HFL))

Name of river	Flood Forecasting Sites	District	State	Danger Level(m)	Warning Level (m)	Previous Highest		Actual Level			Forecast			
						Level(m)	Date	Level(m)	Time	Trend	Level (m)	Date	Time	Trend

Note - No Station is in this situation Dated 11.08.2020

## 2.6 Inflow Forecast

Name of river	Flood Forecasting Sites	District	State	HFL(m)	FRL(m)	Previous Highest		Actual Level			Forecast			
						Discharge (Q)	Date	Discharge (Q)	Time	Trend	D (Q)	Date	Time	Trend
Ghaghra	Katerniaghat Barrage	Bahraich	U.P.		138			6503.445	0800	F	6300.00	12.08.20	0800	F
Sharda	Banbasa Barrage	Champawat	U.K		222.96			2933.654	0800	R	4300.00	12.08.20	0800	F

**Advisory on Hydro Meteorological Situation Expected from 12-08-2020 to 13-08-2020**

As per rainfall pattern given in section II, Alaknanda, Bhagirathi, Ganga rivers are expected to receive moderate to heavy rain at fairly widespread to widespread areas in next 48 hrs. Ghaghra, Ramganga, Sharda & Rapti river basins are expected to receive moderate to heavy rain at widespread areas in next 48 hours. Water level at most of CWC stations are expected to raise in next 48 hours. Level forecast will be issued if the level of river at stations are likely to touch or cross warning level. From the given QPF, Severe flood like situation is expected in Ghaghra, Rapti & Sharda river basins.

अधिशालीअभियंता

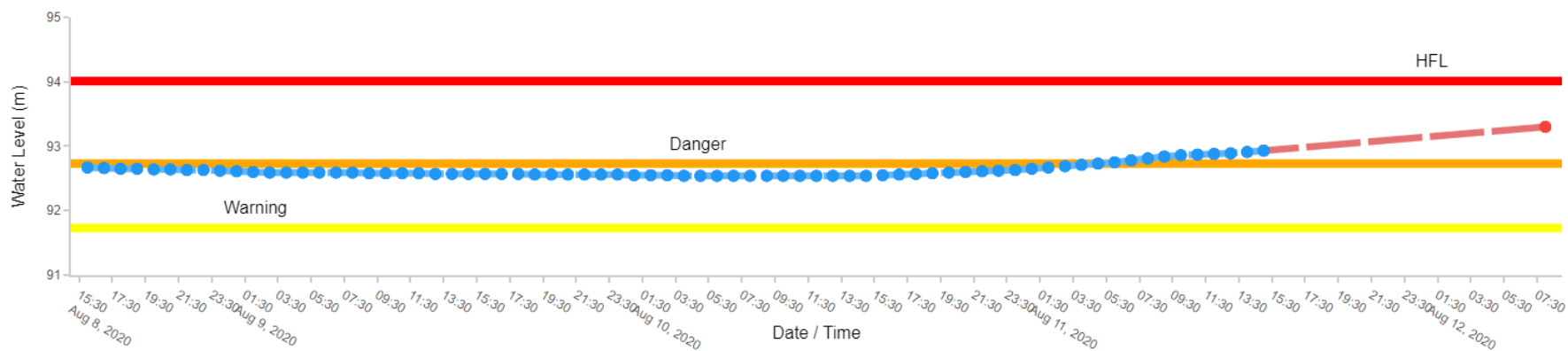
मध्य गंगा मण्डल -1 लखनऊ

# Hydrograph view of - Ayodhya



District	Basin	River	Division
FAIZABAD	Ganga	Ghagra	Middle Ganga Division-I(MGD-I), Lucknow

● Forecasted Water Level
 ● Measured Water Level

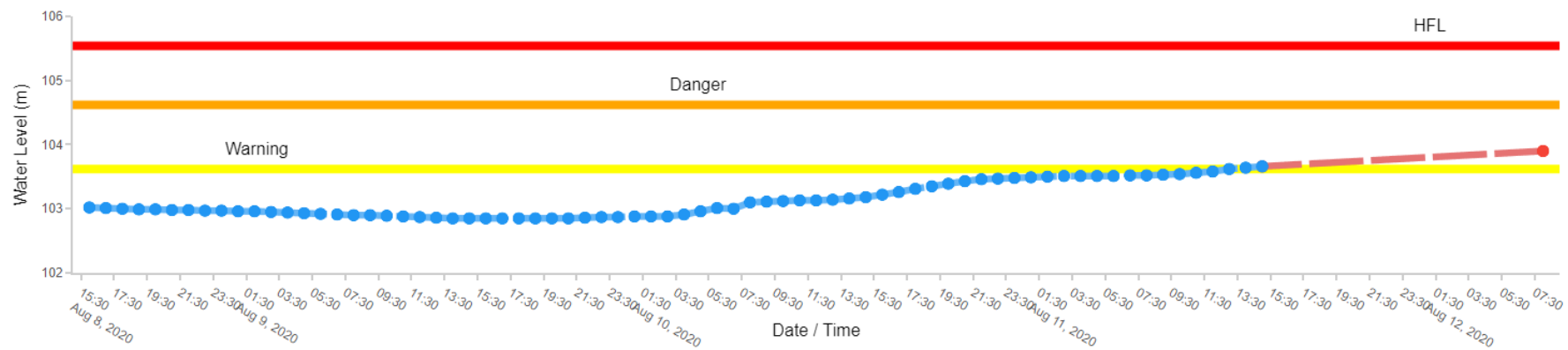


Hydrograph view of - Balrampur



District	Basin	River	Division
BALRAMPUR	Ganga	Rapti	Middle Ganga Division-I(MGD-I), Lucknow

Forecasted Water Level Measured Water Level

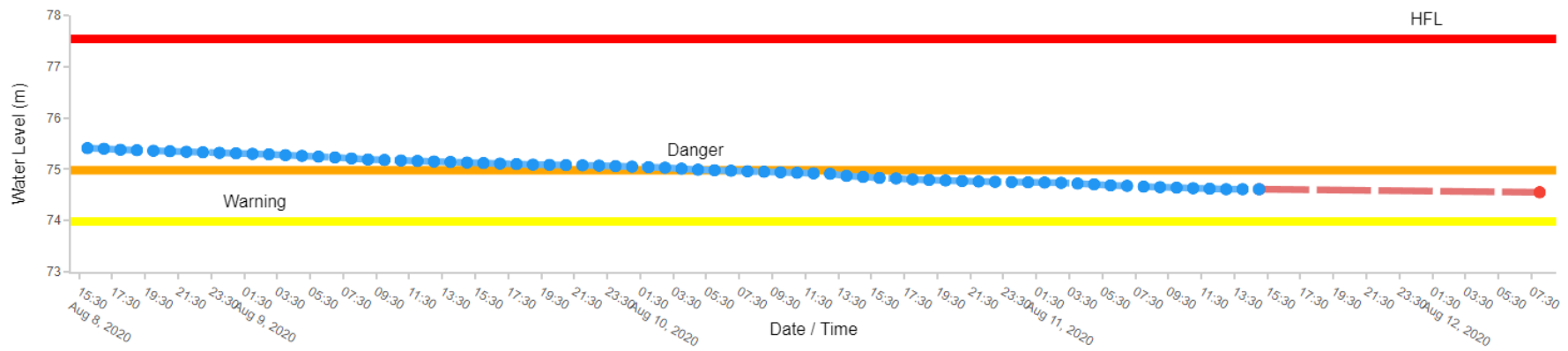


# Hydrograph view of - Birdghat



District	Basin	River	Division
GORAKHPUR	Ganga	Rapti	Middle Ganga Division-I(MGD-I), Lucknow

● Forecasted Water Level
 ● Measured Water Level



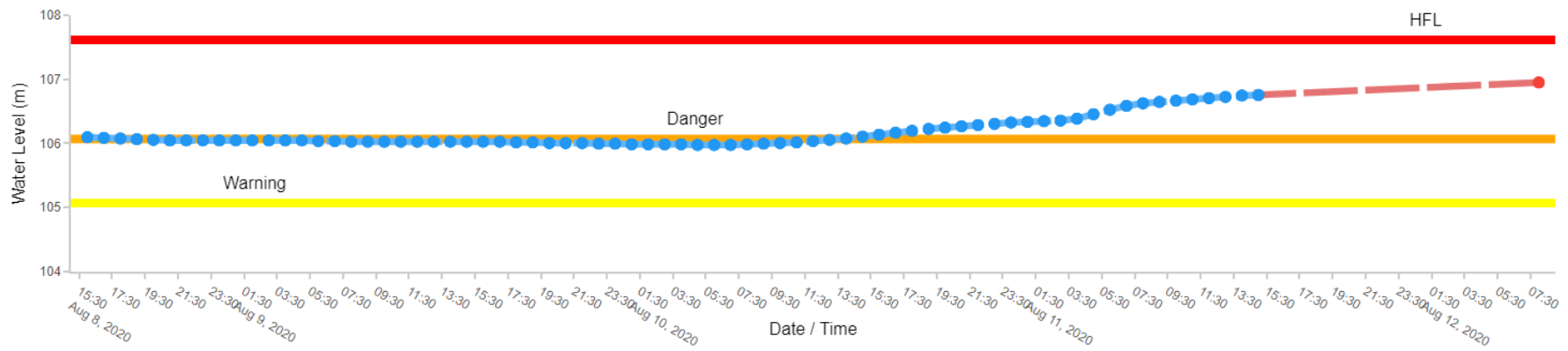


# Hydrograph view of - Elginbridge



District	Basin	River	Division
BARABANKI	Ganga	Ghagra	Middle Ganga Division-I(MGD-I), Lucknow

● Forecasted Water Level
 ● Measured Water Level

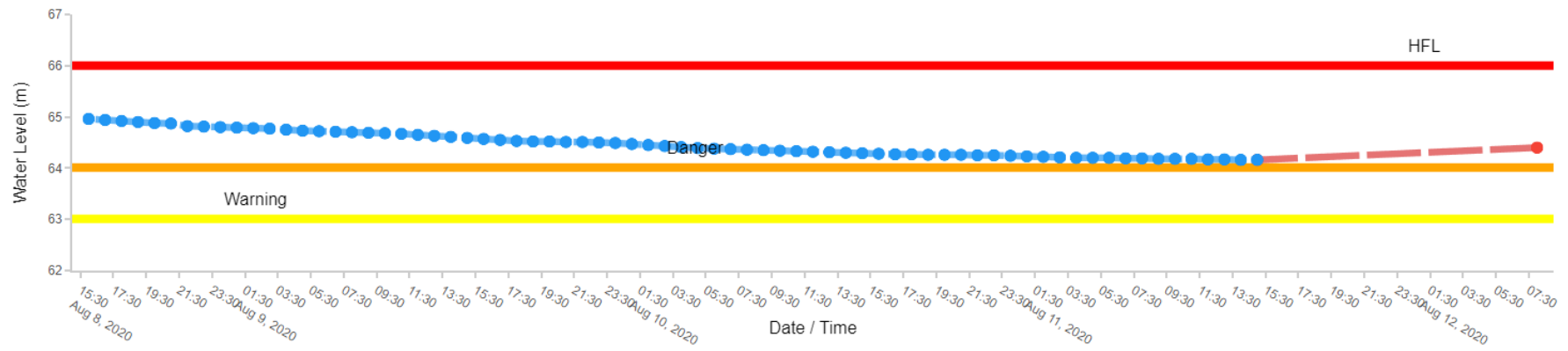


# Hydrograph view of - Turtipar



District	Basin	River	Division
BALLIA	Ganga	Ghagra	Middle Ganga Division-I(MGD-I), Lucknow

—●— Forecasted Water Level
 —●— Measured Water Level

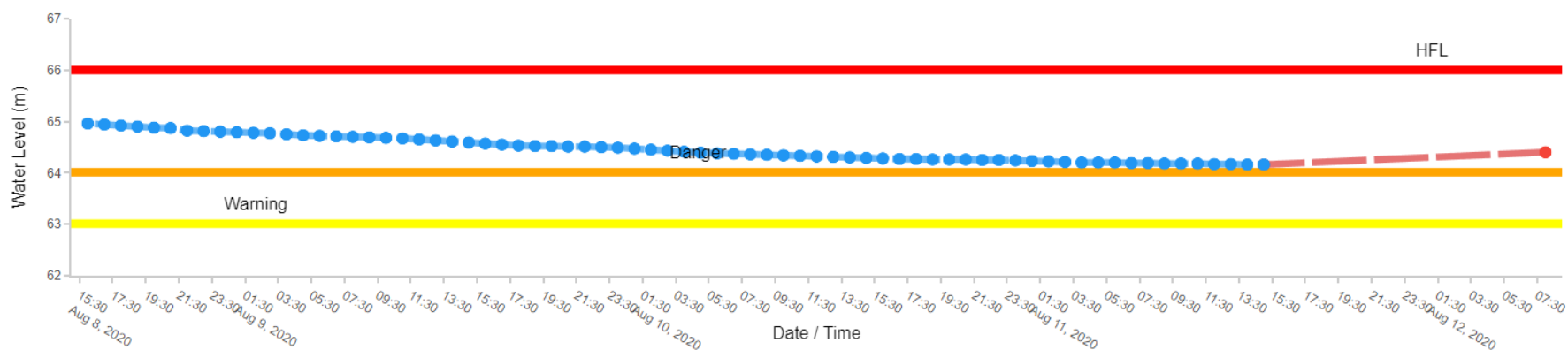


# Hydrograph view of - Turtipar



District	Basin	River	Division
BALLIA	Ganga	Ghagra	Middle Ganga Division-I(MGD-I), Lucknow

—●— Forecasted Water Level
 —●— Measured Water Level

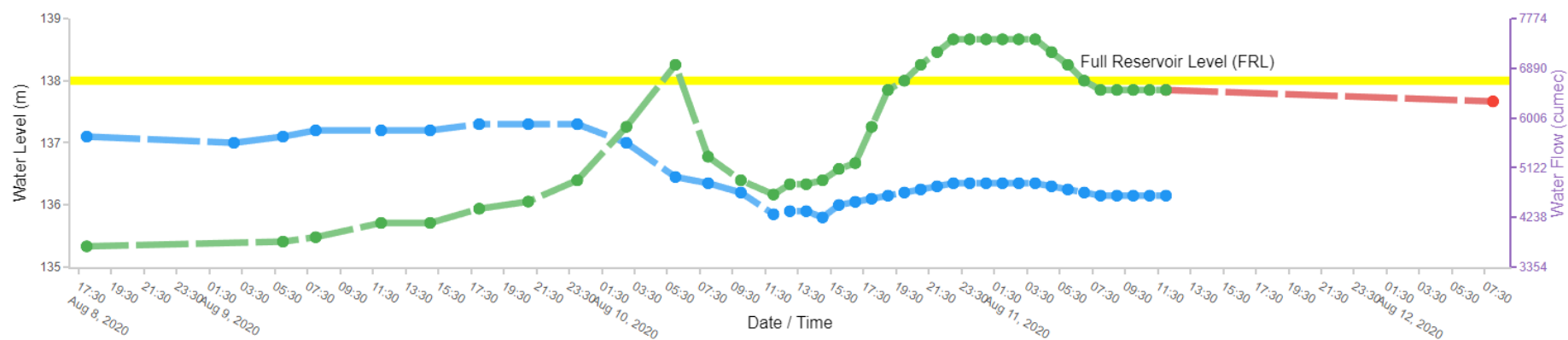


# Hydrograph view of - Katerniaghat Barrage



District	Basin	River	Division
BAHRAICH	Ganga	Ghagra	Middle Ganga Division-I(MGD-I), Lucknow

Measured Water Level
Forecasted Water Flow
Inflow

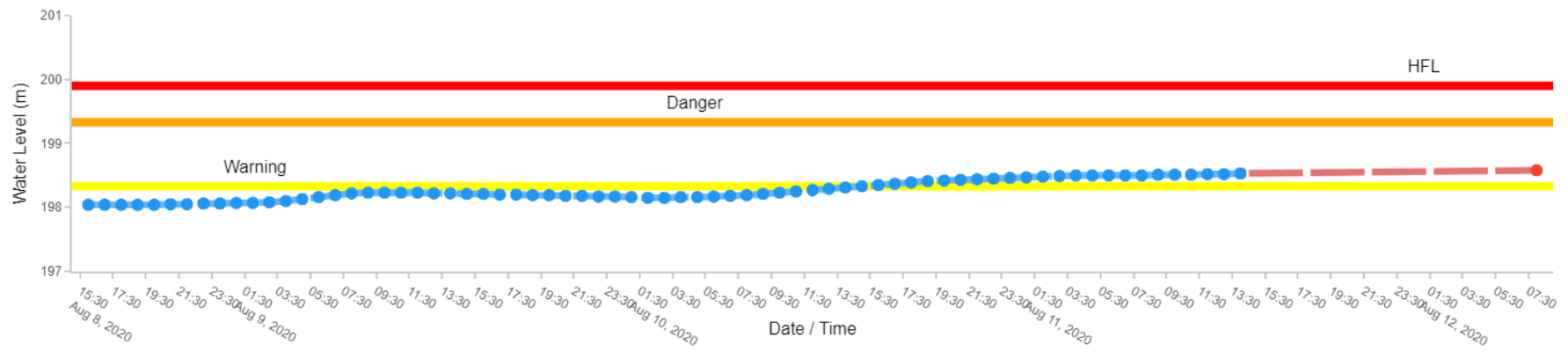


# Hydrograph view of - Garhmukteshwar



District	Basin	River	Division
GHAZIABAD	Ganga	Ganga	Middle Ganga Division-II(MGD-II), Lucknow

—●— Forecasted Water Level
 —●— Measured Water Level



# Hydrograph view of - Kachhlabridge



District	Basin	River	Division
BUDAUN	Ganga	Ganga	Middle Ganga Division-II(MGD-II), Lucknow

● Forecasted Water Level
 ● Measured Water Level

