



Central Water Commission
Upper Ganga Basin Organisation, Lucknow
Daily Flood Situation Report Cum Advisories
Date: 09 AUGUST, 2020

FSR No.48

Dated 09-08-20205

1. Weather forecast by IMD

I. SYNOPTIC SITUATION:

The low pressure area over northwest and adjoining westcentral Bay of Bengal off Odisha-north Andhra Pradesh coasts now lies over northwest Bay of Bengal off north Odisha-Gangetic West Bengal coasts. The associated cyclonic circulation extends upto 5.8 km above mean sea level tilting southwestwards with height persists.

- ♦ The monsoon trough at mean sea level now passes through Firozpur, Delhi, Fursatganj, Ambikapur and thence south-eastwards to the center of low pressure area over northwest Bay of Bengal off north Odisha-Gangetic West Bengal coasts and extends upto 0.9 km above mean sea level.
- ♦ A trough runs from southeast Rajasthan to cyclonic circulation associated with low pressure over northwest Bay of Bengal off north Odisha Gangetic West Bengal coasts at 3.1 km above mean sea level.
- ♦ A cyclonic circulation lies over southeast Uttar Pradesh and neighbourhood at 1.5 km above mean sea level.
- ♦ The low pressure area over northwest Arabian Sea off Oman Coast persists. The associated cyclonic circulation extending upto 5.8 km above mean sea level persists. It is likely to move westwards.
- ♦ The trough from Northwest Arabian sea off Oman coast to southeast Uttar Pradesh across south Rajasthan & North Madhya Pradesh between 2.1 km & 4.5 km above mean sea level has become less marked.

II. a) DETERMINISTIC FORECAST (QPF):

		SUBBASIN CODE/NAME	QPF (mm)		
			Day-1	Day-2	Day-3
1	Alaknanda	Alaknanda	11-25	11-25	26-50
2	Bhagirathi	Bhagirathi	11-25	11-25	26-50
3	Ganga	Chhatnag to Mirzapur	11-25	11-25	11-25
		Narora to Phaphamau	11-25	11-25	26-50
		Phaphamau to Ballia	0.1-10	0.1-10	11-25
		Gomti	0.1-10	0.1-10	26-50
		Sai	0.1-10	0.1-10	26-50
		Upper Ganga	0.1-10	11-25	26-50
4	Ghaghra	Lower Ghaghra	0.1-10	0.1-10	11-25

		Middle Ghaghra	0.1-10	0.1-10	11-25
		Upper Ghaghra	0.1-10	0.1-10	11-25
5	Ramganga	Ramganga	0.1-10	0.1-10	26-50
6	Rapti	Rapti	0.1-10	0.1-10	26-50
7.	Sharda	Sharda	0.1-10	0.1-10	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	SCT	M	SCT	M	FWS
2	Bhagirathi	Bhagirathi	M	SCT	M	SCT	M	FWS
3	Ganga	Chhatnag to Mirzapur	M	SCT	M	SCT	M	FWS
		Narora to Phaphamau	M	SCT	M	SCT	M	FWS
		Phaphamau to Ballia	L	ISOL	L	ISOL	M	FWS
		Gomti	L	ISOL	L	ISOL	M	FWS
		Sai	L	ISOL	L	ISOL	M	FWS
		Upper Ganga	L	ISOL	M	SCT	M	FWS
4	Ghaghra	Lower Ghaghra	L	ISOL	L	ISOL	M	FWS
		Middle Ghaghra	L	ISOL	L	ISOL	M	FWS
		Upper Ghaghra	L	ISOL	L	ISOL	M	FWS
5	Ramganga	Ramganga	L	ISOL	L	ISOL	M	FWS
6	Rapti	Rapti	L	ISOL	L	ISOL	M	FWS
7.	Sharda	Sharda	L	ISOL	L	ISOL	M	H

QPF in Ranges (mm)	UNLISTED	0	0.1-10	11-25	26-50	51-100	>100
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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						
Bhagirathi	Bhagirathi	H	ISOL				
Ganga	Chhatnag to Mirzapur	H	ISOL			H	ISOL
	Narora to Phaphamau						
	Phaphamau to Ballia						
	Gomti						
	Sai						
	Upper Ganga						
Ghaghra	Lower Ghaghra					H	ISOL
	Middle Ghaghra					H	ISOL
	Upper Ghaghra					H	ISOL
Ramganga	Ramganga						
Rapti	Rapti						
Sharda	Sharda					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

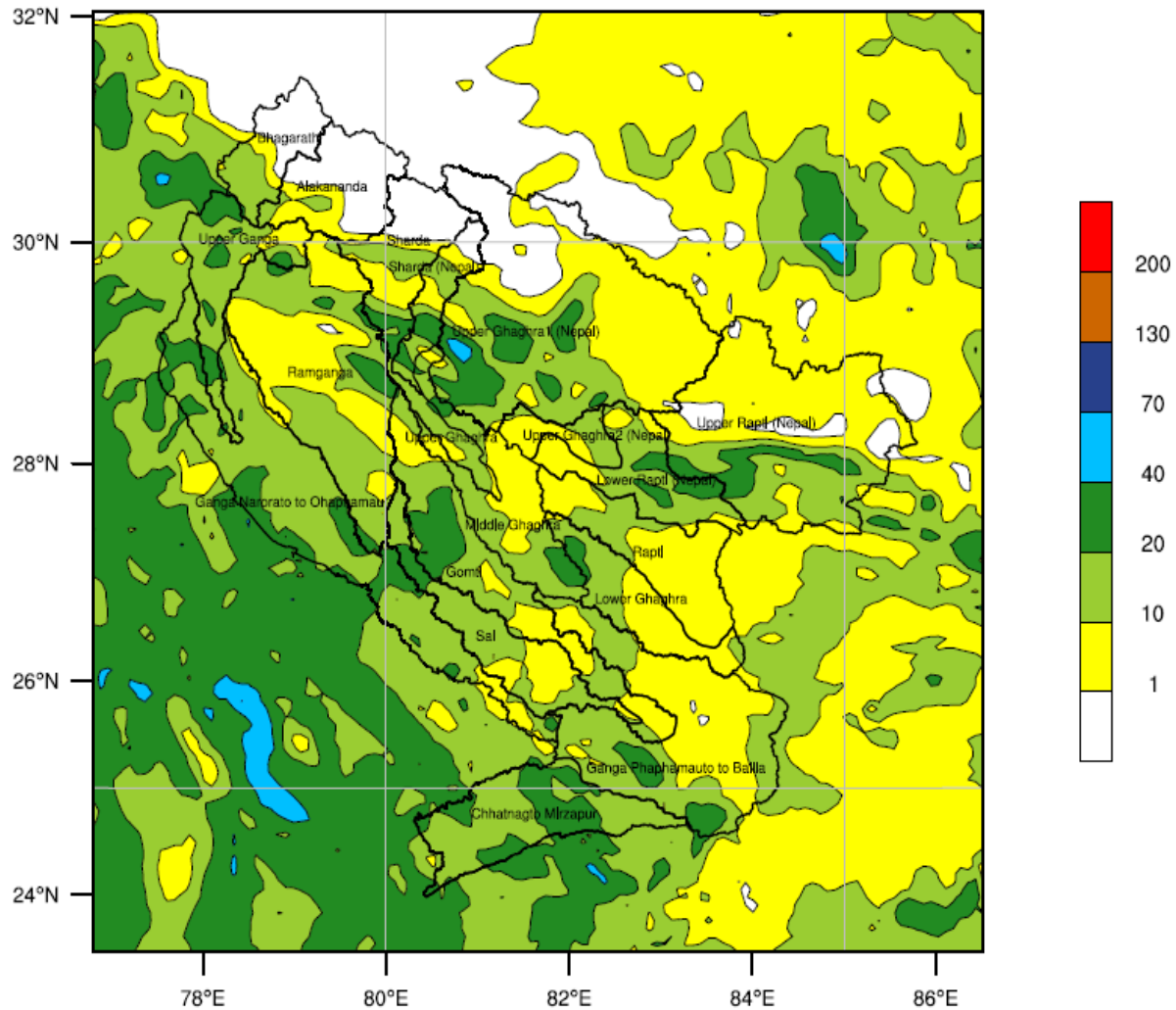
S. No.	BASIN NAME	SUBBASIN CODE/NAME	Day-1						Day-2						Day-3					
			0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm
1	Alaknanda	Alaknanda			50-75						50-75						75-100	75-100		
2	Bhagirathi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

Probability of occurrence (%)	0-5	5-25	25-50	50-75	75-100
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Init: 2020-08-09_00:00:00
Valld: 2020-08-10_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(24hr)



Sub basin wise Average Rainfall Estimation

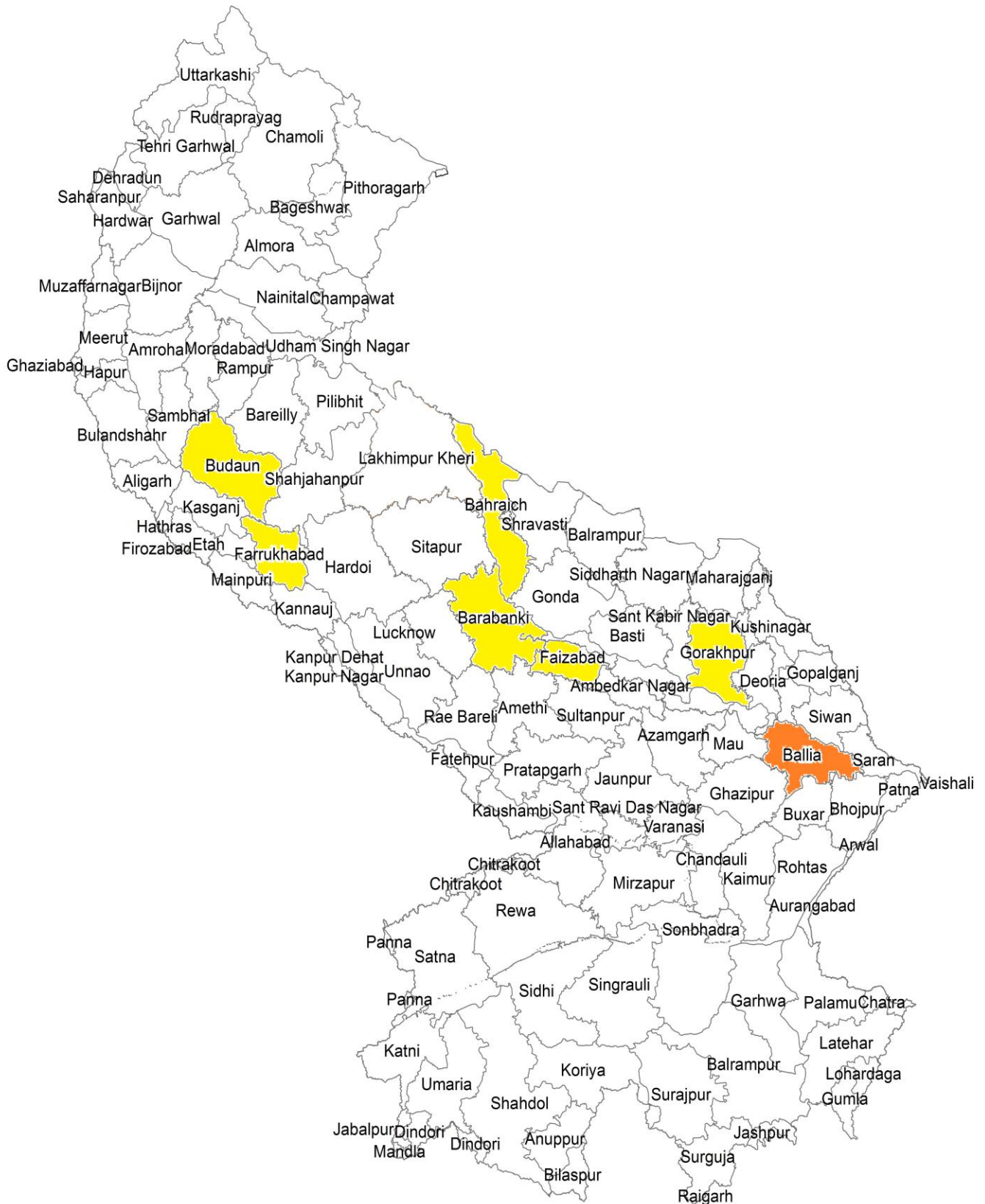
Alaknanda =	2 mm	Rapti =	7 mm
Bhagirathi =	6 mm	Sai =	13 mm
Chhatnagto Mirzapur =	19 mm	Sharda =	12 mm
Ganga Narorato Ohaphamau =	17 mm	Sharda (Nepal) =	9 mm
Ganga Phaphamauto Balia =	11 mm	Upper Ganga =	16 mm
Gomti =	14 mm	Upper Ghaghra =	10 mm
Lower Ghaghara =	11 mm	Upper Ghaghra1 (Nepal) =	10 mm
Lower Rapti (Nepal) =	14 mm	Upper Ghaghra2 (Nepal) =	12 mm
Middle Ghaghara =	13 mm	Upper Rapti (Nepal) =	8 mm
Ramganga =	11 mm		

OUTPUT FROM WRF V3.6.1 MODEL

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

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

Flood Situation on 09 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 154.23 m with falling trend which is 0.13m above its Danger Level of 154.1 m and 1.09m 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 64.61m with falling trend which is 0.60 above its Danger Level of 64.01 m and 1.39 m below its previous HFL of 66.0 m (1998-08-28).
3. River Rapti at Birdghat in GORAKHPUR 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 75.14 m with falling trend which is 0.16 m above its Danger Level of 74.98 m and 2.40m below its previous HFL of 77.54 m (1998-08-23).

2.1 Rainfall Situation

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

Name of Place (State)	Rainfall (in mm)
Haridwar (U.K)	69.9
Kanjyoti (U.K)	48.4
Jauljibi (U.K)	70.0
Thal (U.K)	63.6
Katernia Ghat Barrage (U.P)	57.0
Kabirganj (U.P)	92.6
Dhobahat (U.P)	57.2
Chisapani (Nepal)	107.0

2.2 LEVEL FORECAST

LEVEL FORECAST		
S.No.	Flood Situations	No. of Forecasting Sites
A.	Extreme Flood Situation:	
	(Site (s) where the previous Highest Flood Level (HFL) is exceeded or equalized)	0
B.	Severe Flood Situation :	
	(Site(s) where water Level touching or exceeding the Danger Level but below Highest Flood Level(HFL)	1
C.	Above Normal Flood Situation:	
	(Site (s) where water level touching or exceeding the warning Level but below Danger Level)	5
Total Numbers of Sites above Warning Level (A+B+C)		6
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
Ghaghra	Ayodhya	Faizabad	U.P	92.73	91.73	94.01	2009	92.59	0800	S	92.40	10.08.20	0800	F
Ghaghra	Elgin Bridge	Barabanki	U.P.	106.07	105.07	107.616	2014	106.026	0800	F	105.95	10.08.20	0800	F
Rapti	Birdghat	Gorakhpur	U.P	74.98	73.98	77.54	1998	75.21	0800	F	74.95	10.08.20	0800	F
Ganga	Kachhla bridge	Budaun	U.P	161	162	162.79	2010	161.80	0800	F	161.58	10.08.20	0800	F
Ganga	Fatehgarh	Farukhabad	U.P	137.6	136.60	138.14	2010	136.86	0800	S	136.72	10.08.20	0800	F

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	64.70	0800	F	64.50	10.08.20	0800	F

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 09.08.2020

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			3886.034	0800	R	3600.00	10.08.20	0800	F
Sone	Bansagar Dam	Harda	M.P.		341.64				0800	S	912.00	10.08.20	0800	R

Advisory on Hydro Meteorological Situation Expected from 10-08-2020 to 11-08-2020

As per rainfall pattern given in section II, Alaknanda, Bhagirathi, rivers are expected to receive moderate rain at scattered areas in next 48 hrs. Ganga river is expected to receive light to moderate rain at scattered areas in next 48 hrs. Ghaghra, Ramganga, Sharda & Rapti river basins are expected to receive light rain at scattered areas in next 48 hours. Water level at most of CWC stations are expected to fall 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, Above normal flood like situation is expected in Ganga, Ghaghra, Rapti & Sharda river basins.

अधिशसीअभियंता

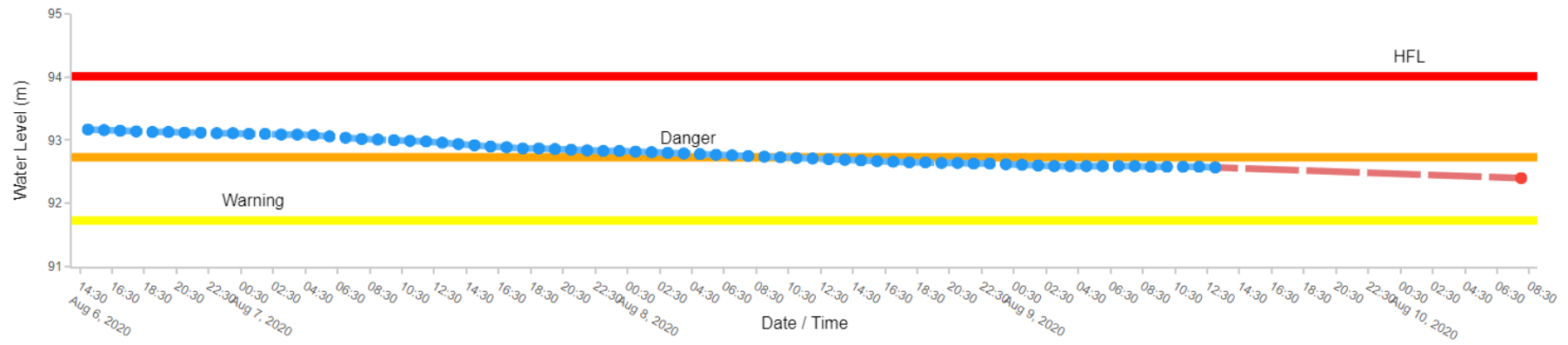
मध्य गंगा मण्डल -1 लखनऊ

Hydrograph view of - Ayodhya



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

● Forecasted Water Level
 ● Measured Water Level

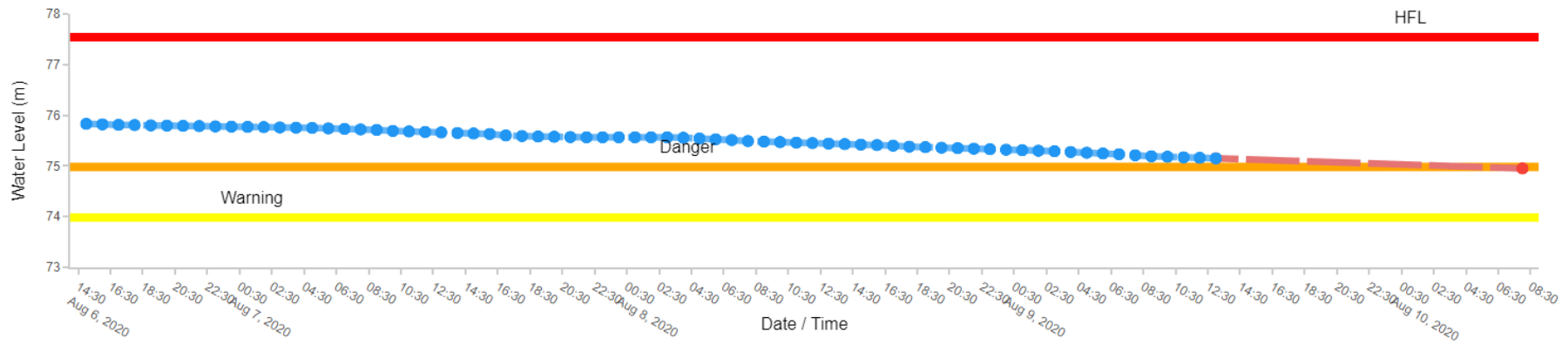


Hydrograph view of - Birdghat



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

● Forecasted Water Level
 ● Measured Water Level

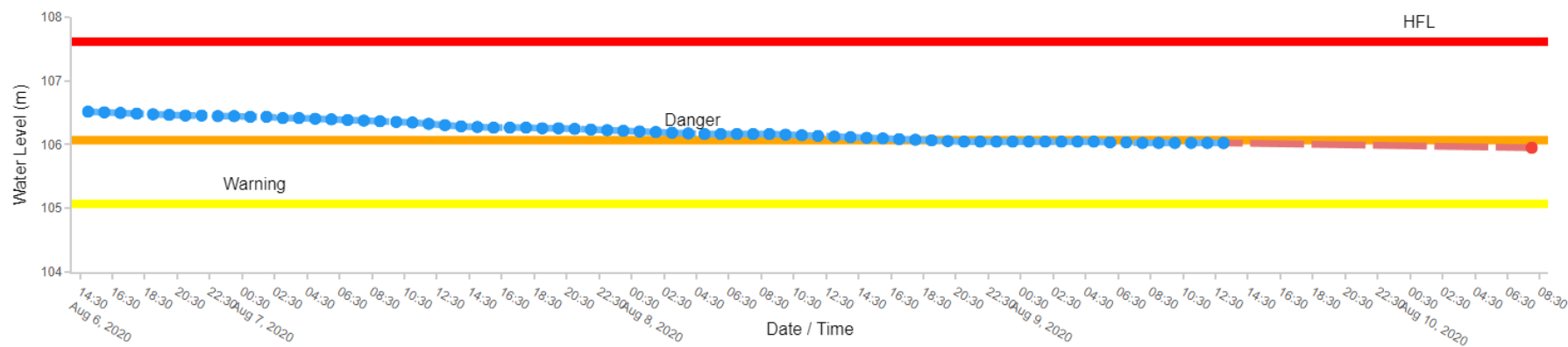


Hydrograph view of - Elginbridge



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

● Forecasted Water Level
 ● Measured Water Level

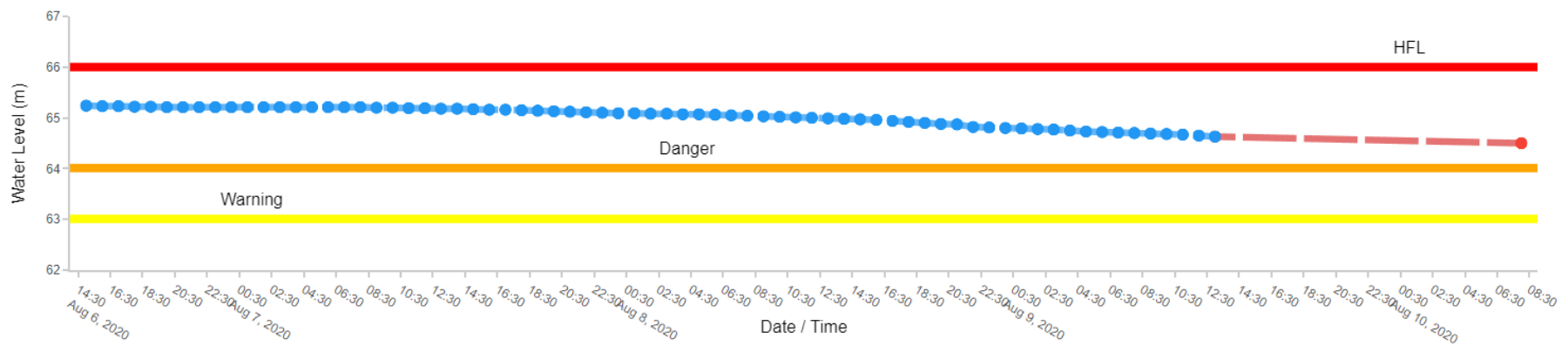


Hydrograph view of - Turtipar



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

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

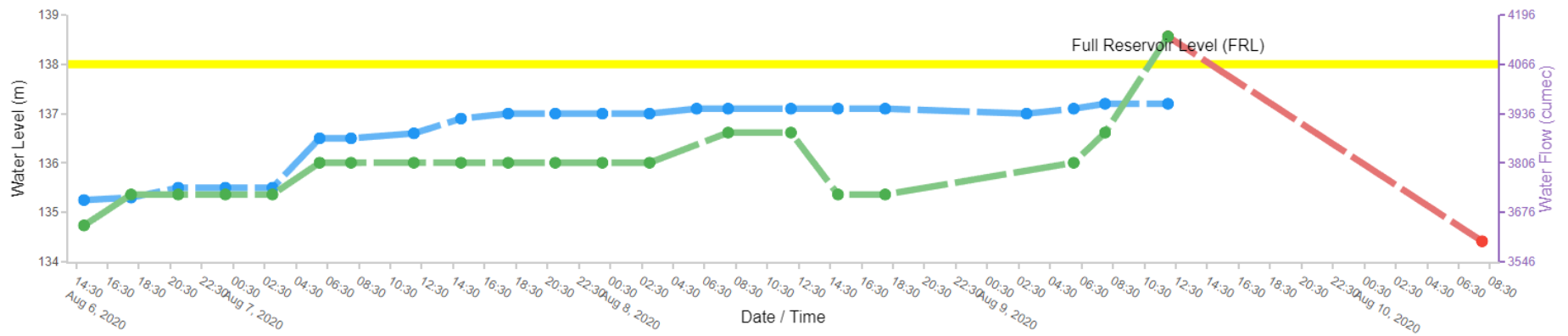


Hydrograph view of - Katerniaghat Barrage



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

● Measured Water Level
● Forecasted Water Flow
● Inflow

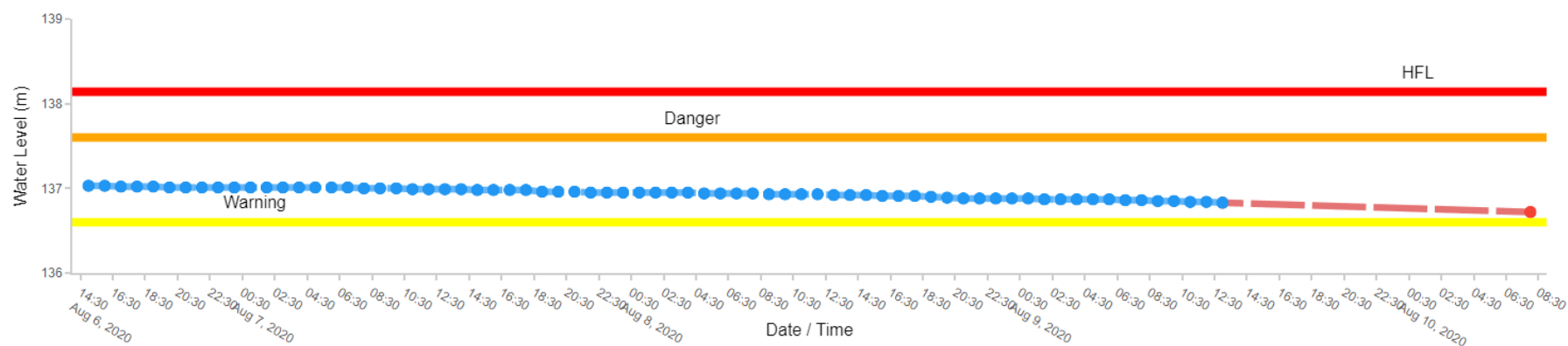


Hydrograph view of - Fatehgarh



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

■ Forecasted Water Level
 ● Measured Water Level

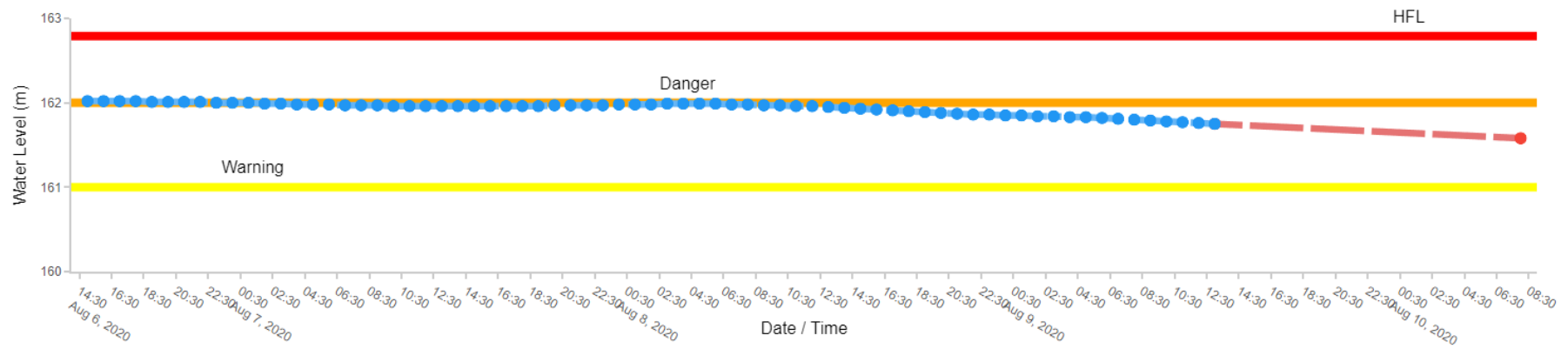


Hydrograph view of - Kachhlabridge



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

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



Hydrograph view of - Bansagar Dam



District	Basin	River	Division
HARDA	Ganga	Sone	Middle Ganga Division-III(MGD-III), Varanasi

Measured Water Level
Forecasted Water Flow
Inflow

