



Central Water Commission
Upper Ganga Basin Organisation, Lucknow
Daily Flood Situation Report Cum Advisories
Date: 06 AUGUST, 2020

FSR No.45

Dated 06-08-20205

1. Weather forecast by IMD

I. SYNOPTIC SITUATION:

♦ The low pressure area over central parts of Madhya Pradesh now lies over south-west Madhya Pradesh. The associated cyclonic circulation extends upto 3.6 km above mean sea level.

♦ The monsoon trough at mean sea level now passes through Deesa, centre of low pressure area over West Madhya

Pradesh & neighbourhood, Jabalpur, Korba, Jharsiguda, Chandbali and thence east south-eastwards to Eastcentral Bay of Bengal and extends upto 1.5 km above mean sea level.

♦ The cyclonic circulation over south Gujarat and neighbourhood now lies over north Konkan & Goa and

neighbourhood between 4.5 & 7.6 km above mean sea level tilting southwest wards with height.

♦ The cyclonic circulation over north Pakistan & neighbourhood at 1.5 km above mean sea level has become less marked..

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	11-25	0.1-10
3	Ganga	Chhatnag to Mirzapur	11-25	0.1-10	11-25
		Narora to Phaphamau	0.1-10	0.1-10	0.1-10
		Phaphamau to Ballia	0.1-10	0.1-10	11-25
		Gomti	0.1-10	0.1-10	0.1-10
		Sai	0.1-10	0.1-10	11-25
		Upper Ganga	11-25	11-25	11-25
4	Ghaghra	Lower Ghaghra	0.1-10	0.1-10	11-25

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

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						
Ganga	Chhatnag to Mirzapur	H	ISOL	H	ISOL	H	ISOL
	Narora to Phaphamau						
	Phaphamau to Ballia					H	ISOL
	Gomti						
	Sai					H	ISOL
	Upper Ganga					H	ISOL
Ghaghra	Lower Ghaghra						
	Middle Ghaghra						
	Upper Ghaghra					H	ISOL
Ramganga	Ramganga					H	ISOL
Rapti	Rapti						
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

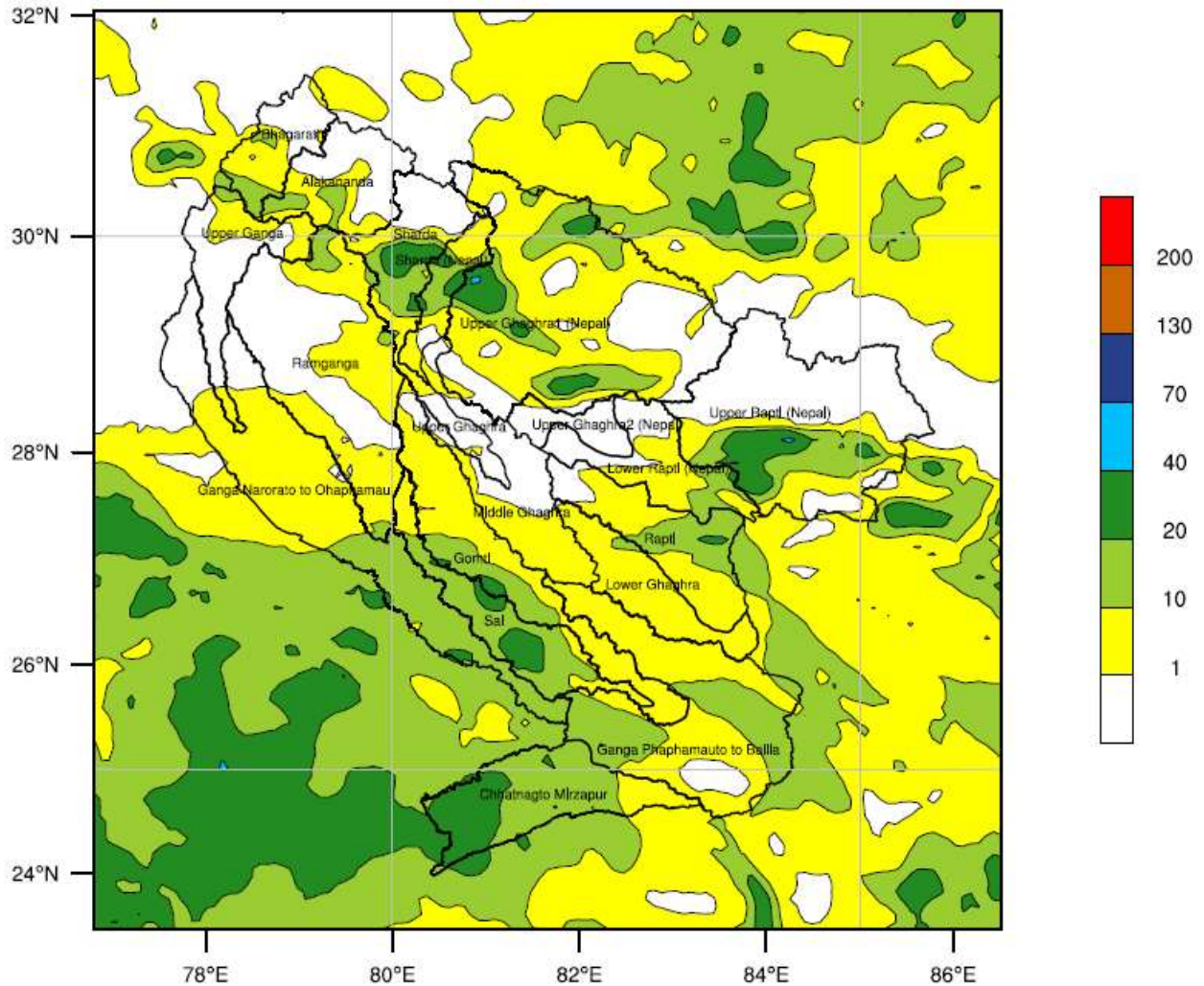
S. No.	BASIN NAME	SUBBASIN CODE/NAME	Day-1						Day-2						Day-3					
			0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm
1	Alaknanda	Alaknanda		25-50	50-75					25-50	50-75					25-50	50-75			
2	Bhagirathi	Bhagirathi		75-100						25-50	50-75					75-100				
3	Ganga	Chhatnag to Mirzapur		25-50	50-75					75-100						25-50	50-75			
		Narora to Phaphamau		75-100						75-100						75-100				
		Phaphamau to Ballia		75-100						75-100						25-50	50-75			
		Gomti		75-100						75-100						75-100				
		Sai		75-100						75-100						75-100				
		Upper Ganga		25-50	50-75					25-50	50-75					25-50	50-75			
4	Ghaghra	Lower Ghaghra		75-100						75-100						75-100				
		Middle Ghaghra		75-100						75-100						75-100				
		Upper Ghaghra		75-100						25-50	50-75					25-50	50-75			
5	Ramganga	Ramganga		75-100						75-100						25-50	50-75			
6	Rapti	Rapti		75-100						75-100						25-50	50-75			
7.	Sharda	Sharda		25-50	50-75	5-25				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: 2020-08-06_00:00:00
Valld: 2020-08-07_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(24hr)



Sub basin wise Average Rainfall Estimation

Alaknanda = 3 mm	Rapti = 8 mm
Bhagirathi = 4 mm	Sai = 15 mm
Chhatnagto Mirzapur = 17 mm	Sharda = 10 mm
Ganga Narorato Ohaphamau = 7 mm	Sharda (Nepal) = 7 mm
Ganga Phaphamauto Ballia = 9 mm	Upper Ganga = 2 mm
Gomti = 7 mm	Upper Ghaghra = 6 mm
Lower Ghaghara = 6 mm	Upper Ghaghra1 (Nepal) = 0 mm
Lower Rapti (Nepal) = 5 mm	Upper Ghaghra2 (Nepal) = 0 mm
Middle Ghaghara = 2 mm	Upper Rapti (Nepal) = 6 mm
Ramganga = 2 mm	

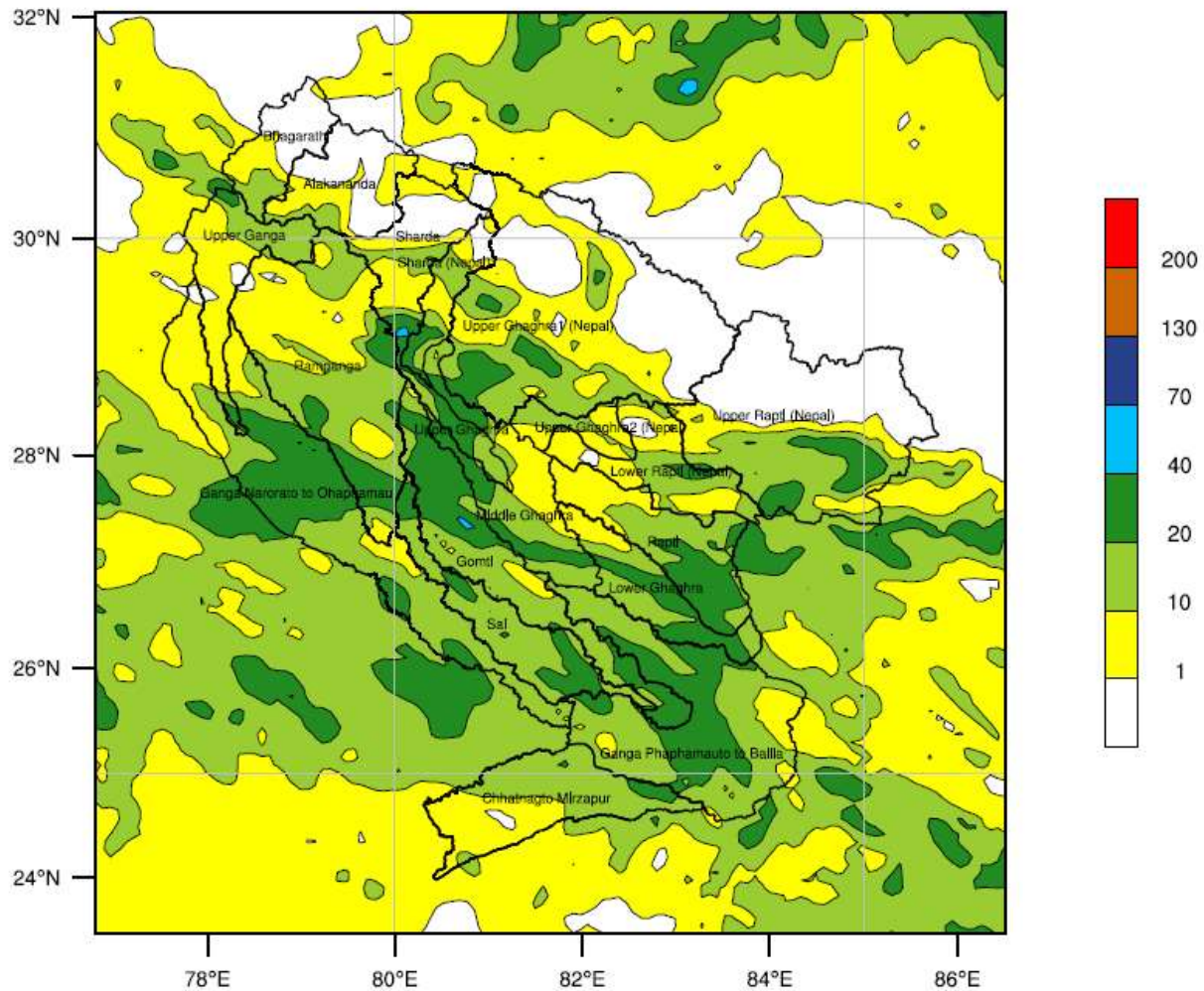
OUTPUT FROM WRF V3.6.1 MODEL

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

Init: 2020-08-06_00:00:00
Valld: 2020-08-08_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(48hr)



Sub basin wise Average Rainfall Estimation

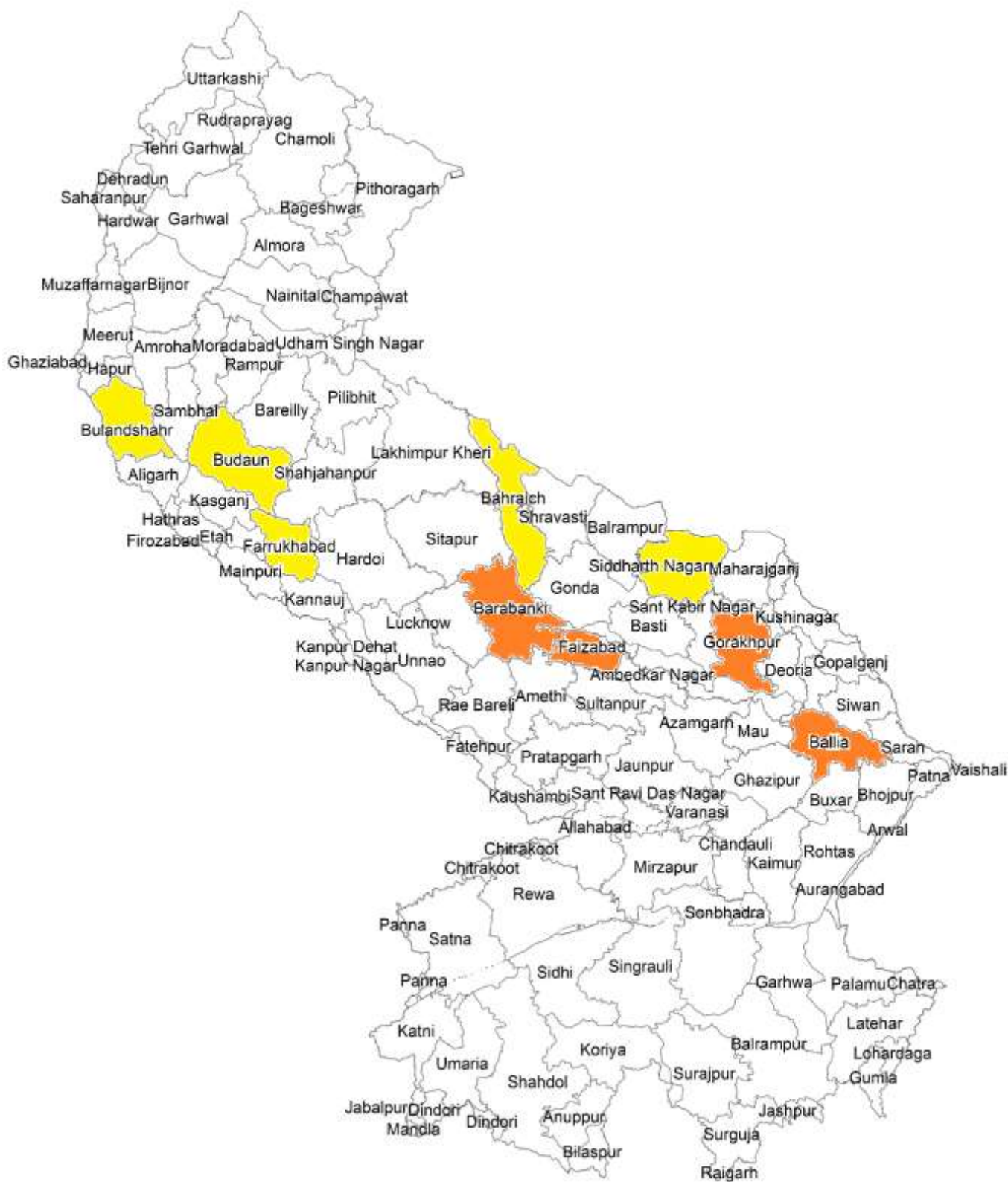
Alaknanda =	3 mm	Rapti =	16 mm
Bhagirathi =	4 mm	Sai =	19 mm
Chhatnagto Mirzapur =	11 mm	Sharda =	11 mm
Ganga Narorato Ohaphamau =	17 mm	Sharda (Nepal) =	10 mm
Ganga Phaphamauto Balia =	18 mm	Upper Ganga =	9 mm
Gomti =	20 mm	Upper Ghaghra =	7 mm
Lower Ghaghara =	17 mm	Upper Ghaghra1 (Nepal) =	9 mm
Lower Rapti (Nepal) =	9 mm	Upper Ghaghra2 (Nepal) =	14 mm
Middle Ghaghara =	16 mm	Upper Rapti (Nepal) =	8 mm
Ramganga =	12 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 06 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 154.38 m with falling trend which is 0.28m above its Danger Level of 154.1 m and 0.94m 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 65.24m with steady trend which is 1.23 above its Danger Level of 64.01 m and 0.76 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 106.526m with falling trend which is 0.456 m above its Danger Level of 106.07 m and 1.09m below its previous HFL of 107.616 m (2014-08-18).
4. 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 75.83 m with steady trend which is 0.85 m above its Danger Level of 74.98 m and 1.71m below its previous HFL of 77.54 m (1998-08-23).
5. 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 93.18 m with falling trend which is 0.45 m above its Danger Level of 92.73 m and 0.83 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 (≥ 50 mm or more)

Name of Place (State)	Rainfall (in mm)

Note - No Station is in this situation Dated 06.08.2020

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)	4
C.	Above Normal Flood Situation:	
	(Site (s) where water level touching or exceeding the warning Level but below Danger Level)	3
Total Numbers of Sites above Warning Level (A+B+C)		7
INFLOW FORECAST		
Number of Sites for which inflow forecasts issued:		3
(Where inflow are equal or exceed the specified Threshold Limit for a particular reservoir/ barrage)		3

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	Bansi	Siddharthnagar	U.P	84.9	83.90	85.88	2017	84.02	0800	F	83.70	07.08.20	0800	F
Ganga	Kachhla bridge	Budaun	U.P	161	162	162.79	2010	162.03	0800	F	161.90	07.08.20	0800	F
Ganga	Fatehgarh	Farukkhabad	U.P	137.6	136.60	138.14	2010	137.04	0800	S	136.92	07.08.20	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
Rapti	Birdghat	Gorakhpur	U.P	74.98	73.98	77.54	1998	75.82	0800	F	75.60	07.08.20	0800	F
Ghaghra	Elgin Bridge	Barabanki	U.P.	106.07	105.07	107.616	2014	106.686	0800	F	106.40	07.08.20	0800	F
Ghaghra	Ayodhya	Faizabad	U.P	92.73	91.73	94.01	2009	93.23	0800	S	93.05	07.08.20	0800	F
Ghaghra	Turtipar	Baliya	U.P	64.01	63.01	66.00	1998	65.25	0800	S	65.10	07.08.20	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 06.08.2020

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			3723.042	0800	R	3450.00	07.08.20	0800	F
Sharda	Narora Barrage	Bulandshahr	U.P.					2000.900	0800	S	1925.80	07.08.20	0800	F
Sone	Bansagar Dam	Harda	M.P.		341.64				0800	R	792.00	07.08.20	0800	R

Advisory on Hydro Meteorological Situation Expected from 07-08-2020 to 08-08-2020

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

अधिशसीअभियंता

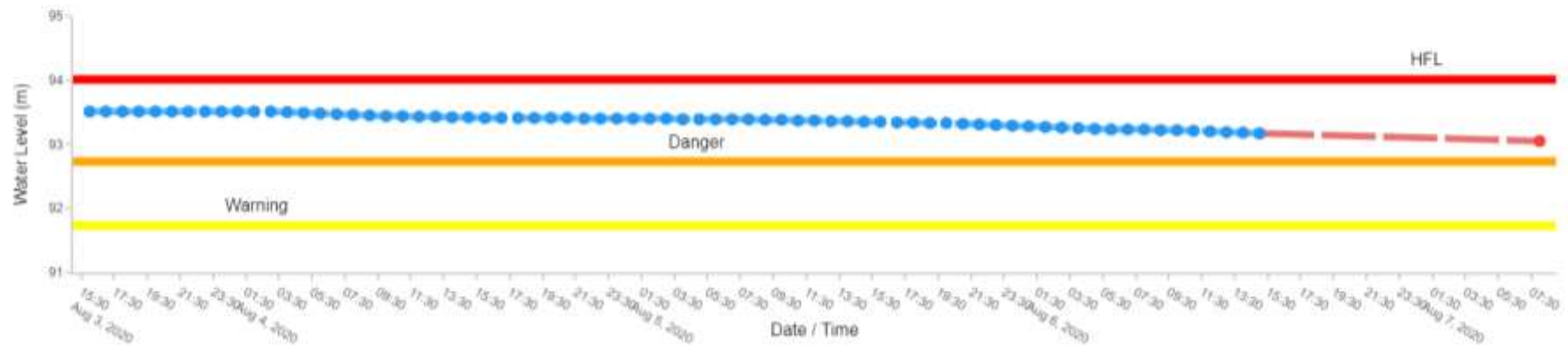
मध्य गंगा मण्डल -1 लखनऊ

Hydrograph view of - Ayodhya



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

● Forecasted Water Level
 ● Measured Water Level

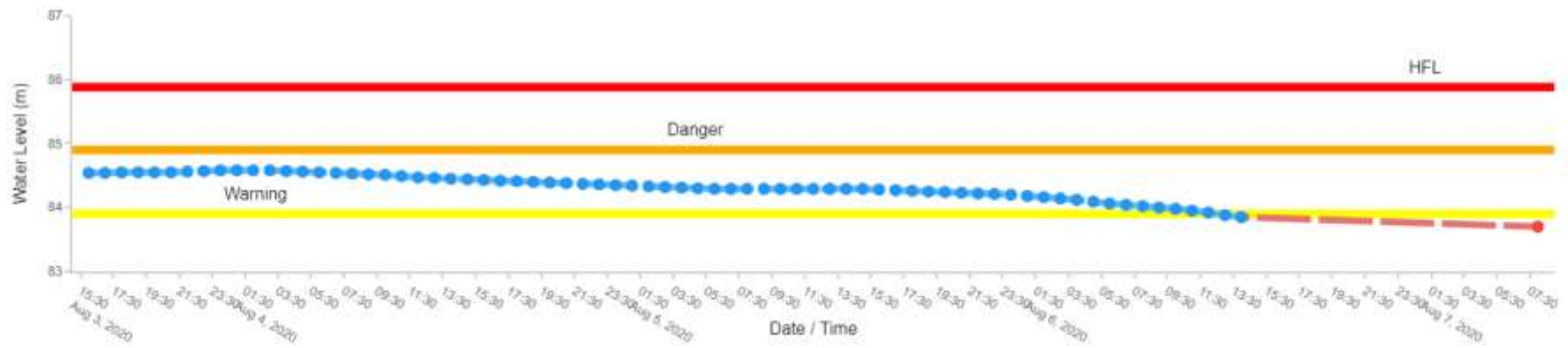


Hydrograph view of - Bansi



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

● Forecasted Water Level
 ● Measured Water Level

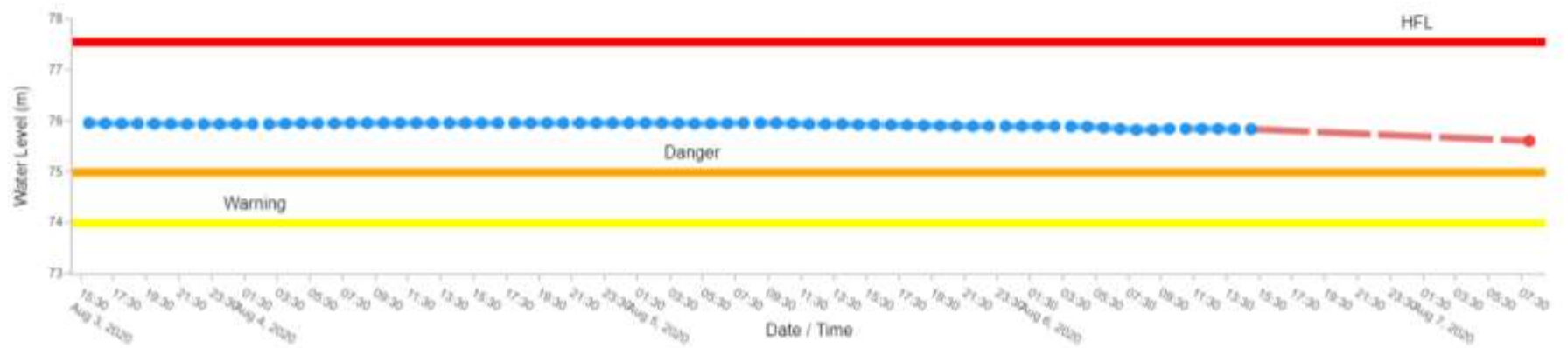


Hydrograph view of - Birdghat



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

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

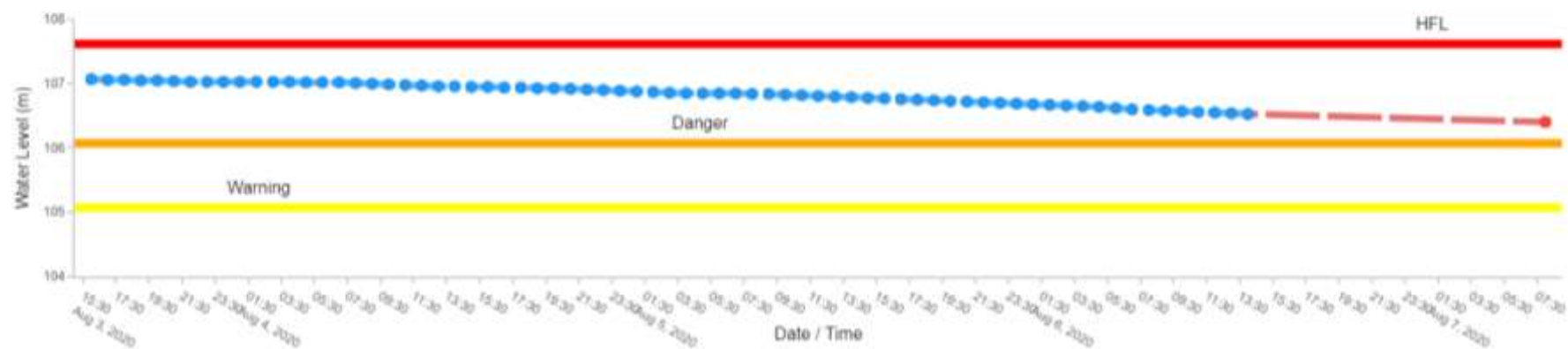


Hydrograph view of - Elginbridge



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

● Forecasted Water Level
 ● Measured Water Level

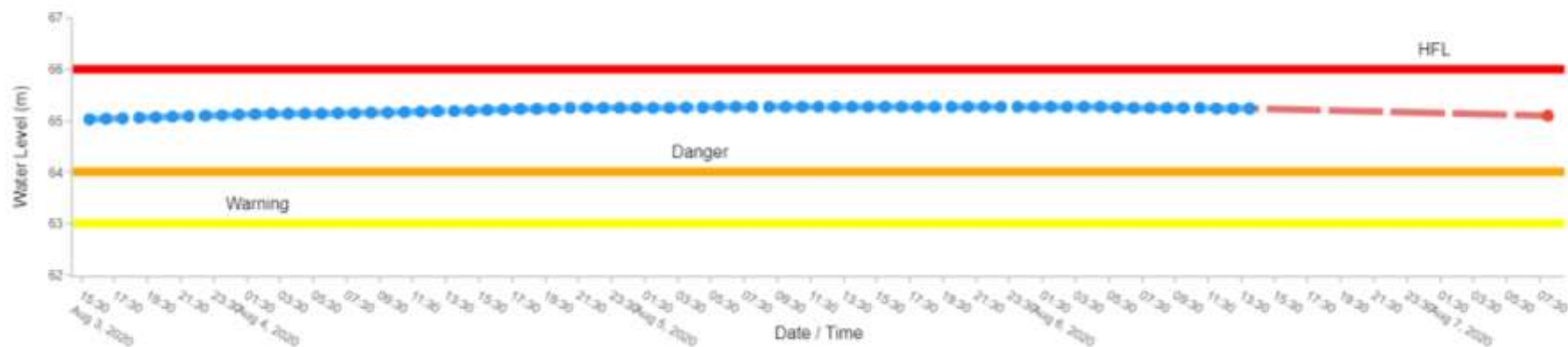


Hydrograph view of - Turtipar



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

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

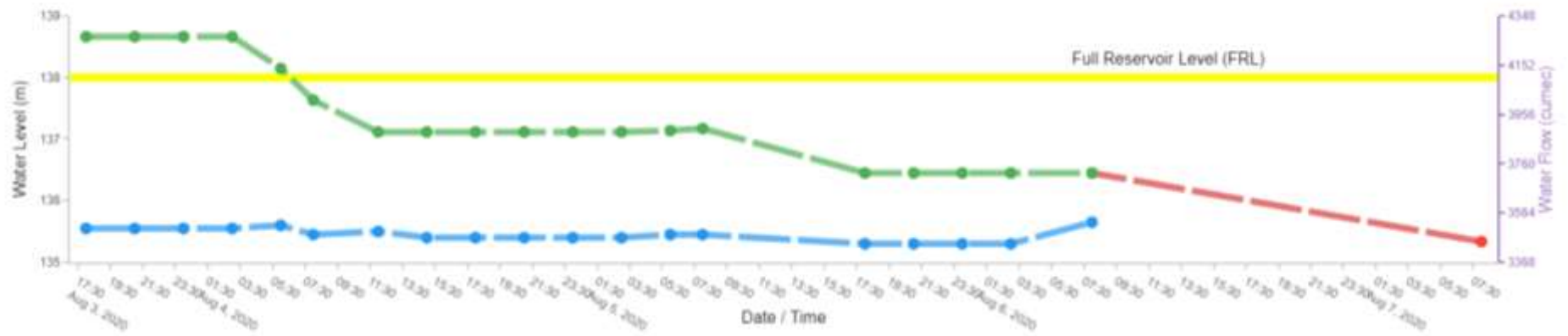


Hydrograph view of - Katarniaghat Barrage



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

Measured Water Level
Forecasted Water Flow
Inflow

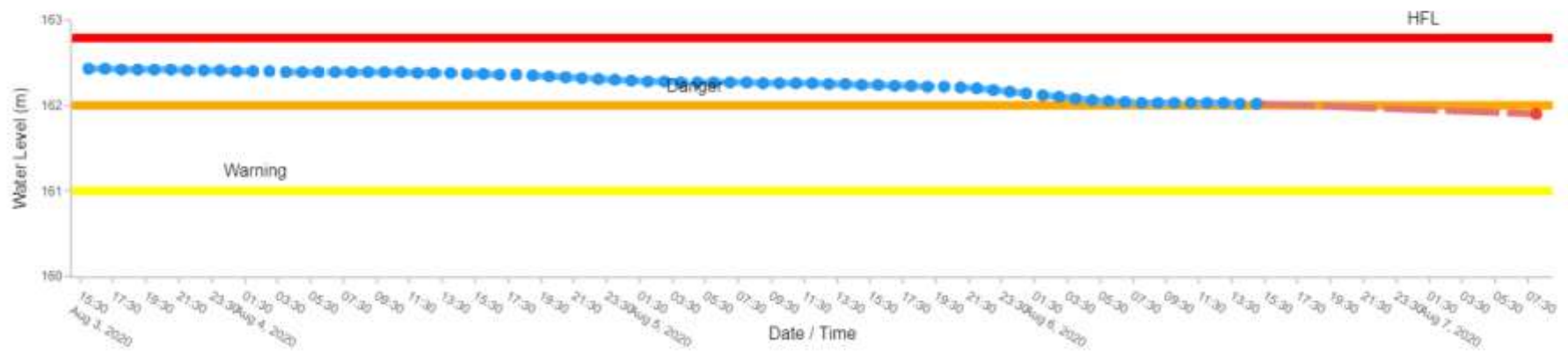


Hydrograph view of - Kachhlabridge



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

● Forecasted Water Level
 ● Measured Water Level

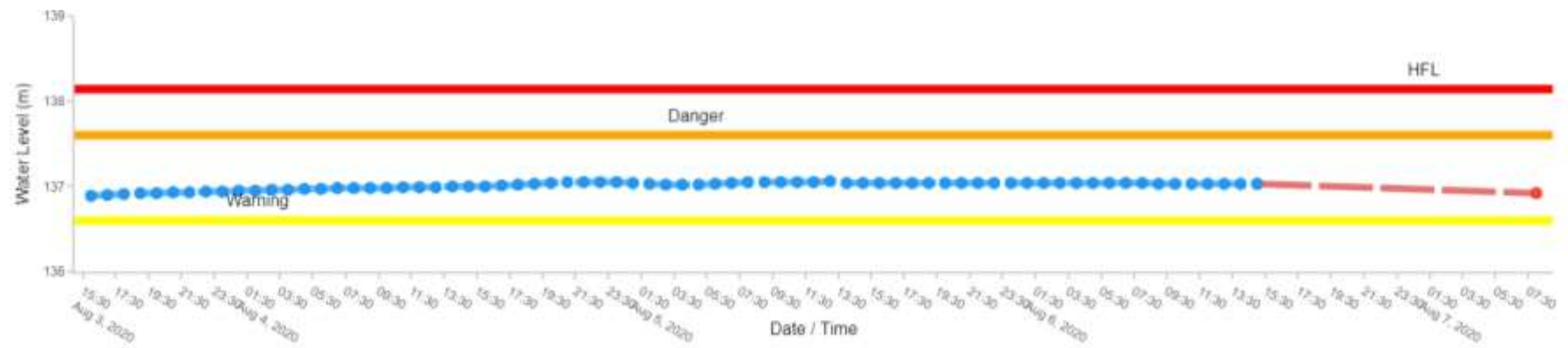


Hydrograph view of - Fatehgarh



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

● Forecasted Water Level
 ● Measured Water Level

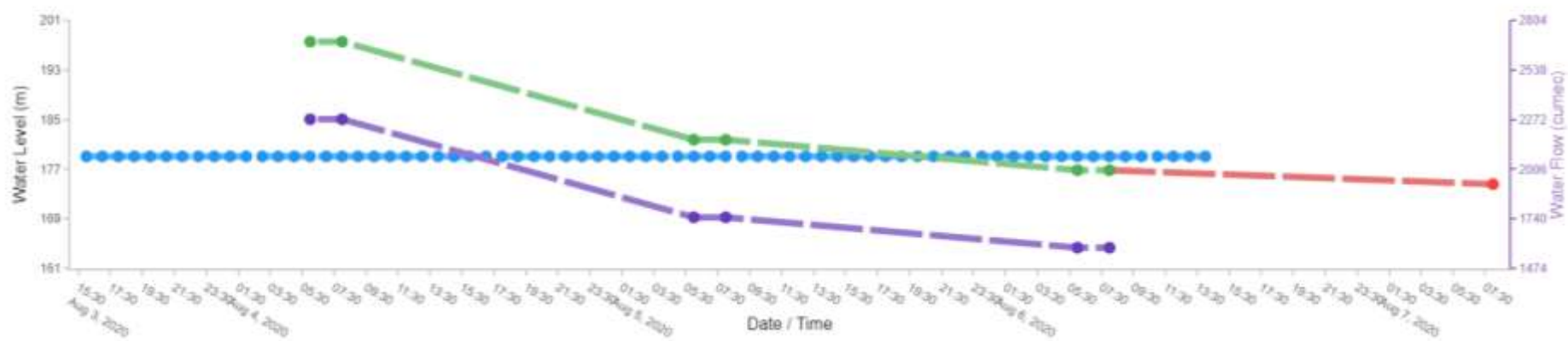


Hydrograph view of - NARORA Barrage



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

Measured Water Level
Forecasted Water Flow
Inflow
Canal Outflow



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

