



Central Water Commission
Upper Ganga Basin Organisation, Lucknow
Daily Flood Situation Report Cum Advisories
Date: 15 AUGUST, 2020

FSR No.54

Dated 15-08-2020

1. Weather forecast by IMD

I. SYNOPTIC SITUATION:

- ♦ The Well-Marked Low pressure area over north coastal Odisha and adjoining areas of northwest Bay of Bengal and Gangetic west Bengal persists. Associated cyclonic circulation now extends upto 9.5 km above mean sea level tilting southwestwards with height. It is very likely to move west-northwest wards.
- The monsoon trough at mean sea level now passes through Bikaner, Ajmer, Shivpuri, Nowgong, Rewa, Daltonganj, Purulia and thence to the center of Well-Marked Low pressure area over north coastal Odisha and adjoining areas of northwest Bay of Bengal and Gangetic West Bengal and extends upto 0.9 km above mean sea level.
- The cyclonic circulation over south Haryana & neighbourhood persists and extends upto 3.1 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	0.1-10	0.1-10	0.1-10
2	Bhagirathi	Bhagirathi	0.1-10	0.1-10	0.1-10
3	Ganga	Chhatnag to Mirzapur	11-25	11-25	11-25
		Narora to Phaphamau	0.1-10	0.1-10	11-25
		Phaphamau to Ballia	0.1-10	0.1-10	0.1-10
		Gomti	0.1-10	0.1-10	0.1-10
		Sai	0.1-10	0.1-10	11-25
		Upper Ganga	0.1-10	0.1-10	0.1-10
4	Ghaghra	Lower Ghaghra	0.1-10	0.1-10	0.1-10
		Middle Ghaghra	0.1-10	0.1-10	0.1-10
		Upper Ghaghra	0.1-10	0.1-10	0.1-10
5	Ramganga	Ramganga	0.1-10	0.1-10	0.1-10
6	Rapti	Rapti	0.1-10	0.1-10	0.1-10
7.	Sharda	Sharda	0.1-10	0.1-10	0.1-10

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

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					H	ISOL
	Phaphamau to Ballia						
	Gomti	H	ISOL				
	Sai					H	ISOL
	Upper Ganga						
Ghaghra	Lower Ghaghra						
	Middle Ghaghra						
	Upper Ghaghra						
Ramganga	Ramganga						
Rapti	Rapti						
Sharda	Sharda						

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					
M.Dry	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

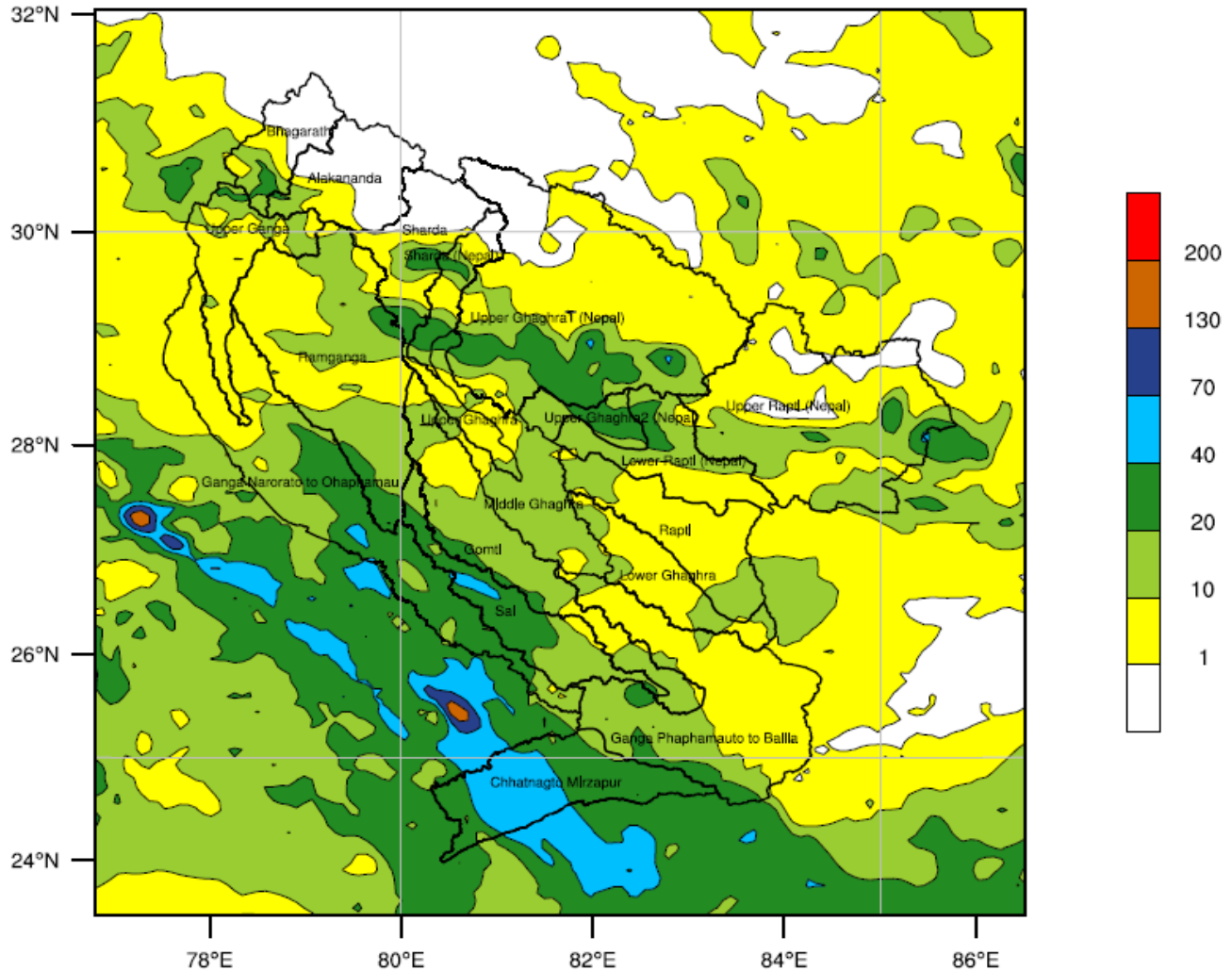
S. No.	BASIN NAME	SUBBASIN CODE/NAME	Day-1						Day-2						Day-3					
			0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm
1	Alaknanda	Alaknanda	5-25	75-100	5-25				5-25	75-100	5-25				5-25	75-100	5-25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

Probability of occurrence (%)	0-5	5-25	25-50	50-75	75-100
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Init: 2020-08-15_00:00:00
Valld: 2020-08-16_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(24hr)



Sub basin wise Average Rainfall Estimation

Alakananda =	2 mm	Rapti =	8 mm
Bhagirathi =	6 mm	Sai =	22 mm
Chhatnagto Mirzapur =	37 mm	Sharda =	11 mm
Ganga Narorato Ohaphamau =	17 mm	Sharda (Nepal) =	8 mm
Ganga Phaphamauto Balia =	11 mm	Upper Ganga =	8 mm
Gomti =	13 mm	Upper Ghaghra =	9 mm
Lower Ghaghara =	9 mm	Upper Ghaghra1 (Nepal) =	20 mm
Lower Rapti (Nepal) =	12 mm	Upper Ghaghra2 (Nepal) =	10 mm
Middle Ghaghara =	12 mm	Upper Rapti (Nepal) =	8 mm
Ramganga =	12 mm		

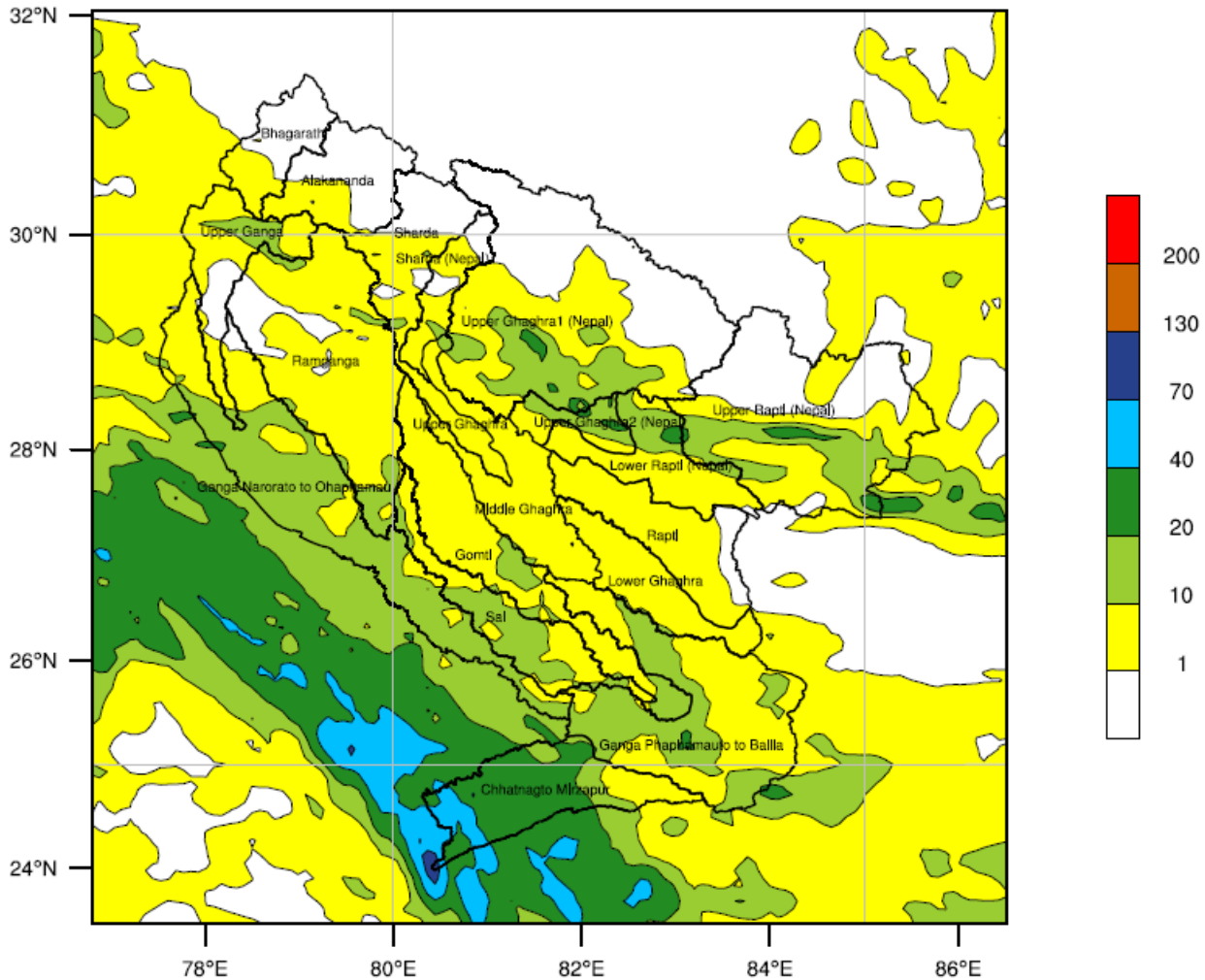
OUTPUT FROM WRF V3.6.1 MODEL

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

Init: 2020-08-15_00:00:00
Valld: 2020-08-17_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(48hr)



Sub basin wise Average Rainfall Estimation

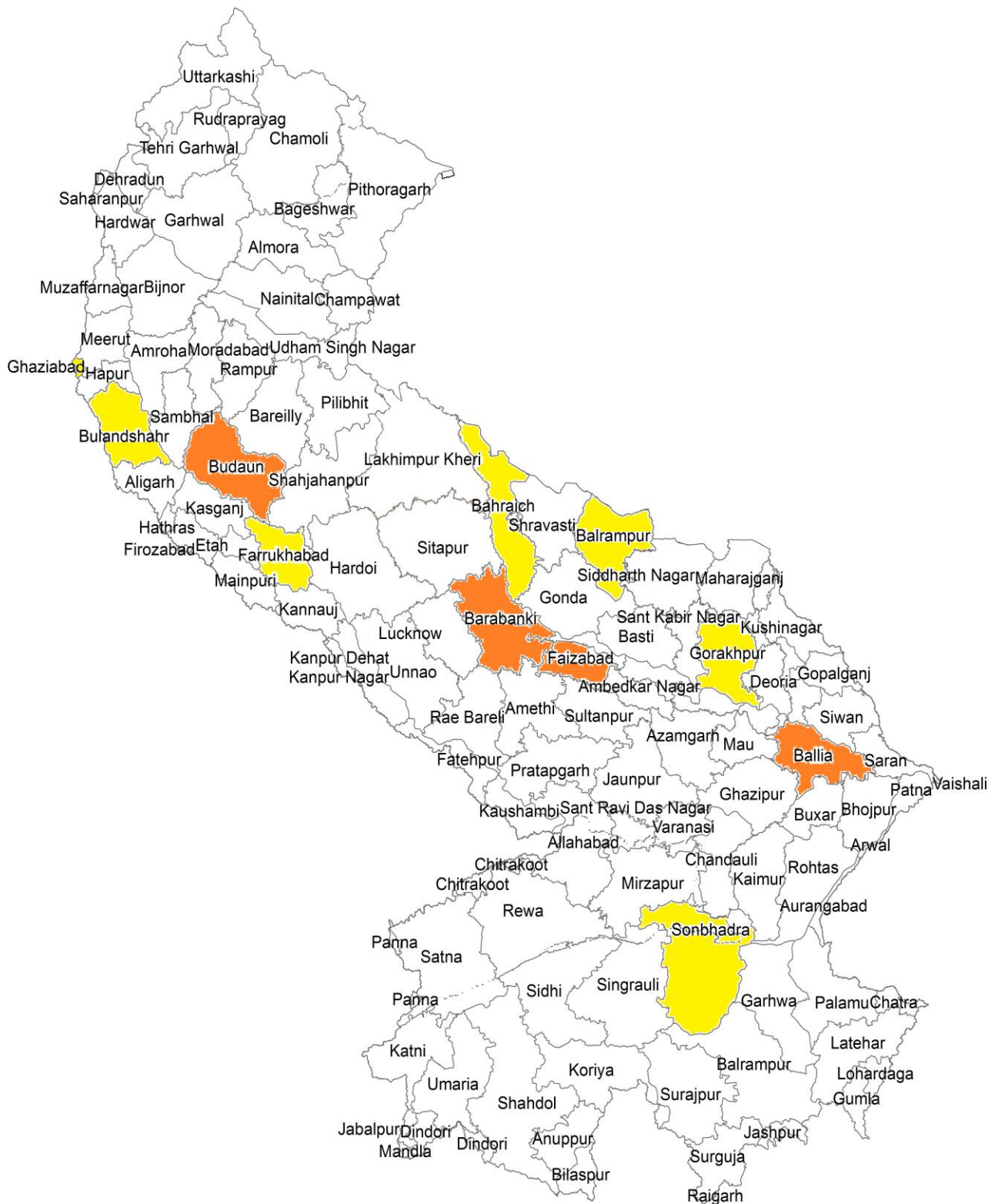
Alaknanda = 1 mm	Rapti = 3 mm
Bhagarathi = 1 mm	Sai = 10 mm
Chhatnagto Mirzapur = 26 mm	Sharda = 3 mm
Ganga Narorato Ohaphamau = 10 mm	Sharda (Nepal) = 4 mm
Ganga Phaphamauto Ballia = 10 mm	Upper Ganga = 5 mm
Gomti = 8 mm	Upper Ghaghra = 5 mm
Lower Ghaghra = 6 mm	Upper Ghaghra1 (Nepal) = 12 mm
Lower Rapti (Nepal) = 7 mm	Upper Ghaghra2 (Nepal) = 7 mm
Middle Ghaghra = 7 mm	Upper Rapti (Nepal) = 6 mm
Ramganga = 5 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 15 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 154.72m with steady trend which is 0.62m above its Danger Level of 154.1 m and 0.60m 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 64.94m with rising trend which is 0.93 above its Danger Level of 64.01 m and 1.06 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 107.046m with steady trend which is 0.976 m above its Danger Level of 106.07 m and 0.57m 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 93.44 m with rising trend which is 0.71 m above its Danger Level of 92.73 m and 0.57 m below its previous HFL of 94.01 m (2009-10-11).
5. River Ganga at Kachhlabridge in BUDAN district of Uttar Pradesh continues to flow in SEVERE SITUATION at 08:00 hrs today. At 08:00 hrs, it was flowing at a level of 162.69 m with rising trend which is 0.69 m above its Danger Level of 162.0 m and 0.10 m below its previous HFL of 162.79 m (2010-09-24).

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)
Lucknow (U.P)	77.4
Neemsar (U.P)	82.6
Bhatpurwa Ghat (U.P)	83.4
New Motipur (U.P)	60.0
Chisapani (Nepal)	74.0

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)	4
C.	Above Normal Flood Situation:	
	(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)		8
INFLOW FORECAST		
Number of Sites for which inflow forecasts issued:		4
(Where inflow are equal or exceed the specified Threshold Limit for a particular reservoir/ barrage)		4

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	103.75	0800	S	103.78	16.08.20	0800	R
Rapti	Birdghat	Gorakhpur	U.P	74.98	73.98	77.54	1998	74.47	0800	S	74.55	16.08.20	0800	R
Ganga	Garhmukteshwar	Ghaziabad	U.P	199.33	198.33	199.9	2010	198.77	0800	S	198.80	16.08.20	0800	R
Ganga	Fatehgarh	Farukhhabad	U.P	137.6	136.60	138.14	2010	137.15	0800	S	137.25	16.08.20	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	64.85	0800	R	65.00	16.08.20	0800	R
Ghaghra	Elgin Bridge	Barabanki	U.P	106.07	105.07	107.616	2014	107.046	0800	F	107.00	16.08.20	0800	F
Ghaghra	Ayodhya	Faizabad	U.P	92.73	91.73	94.01	2009	93.41	0800	S	93.38	16.08.20	0800	F
Ganga	Kachhla bridge	Budaun	U.P	161.00	162.00	162.79	2010	162.69	0800	R	162.75	16.08.20	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 15.08.2020

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			5100.58	0800	S	4600.00	16.08.20	0800	R
Sharda	Narora Barrage	Bulandshahr	U.P.					5599.20	0800	S	5947.20	16.08.20	0800	R
Sone	Bansagar Dam	Harda	M.P.		341.64				0800	F	1425.00	16.08.20	0800	R
Rihand	Rihand Dam	Sonbhadra	U.P.		265.18				0800	R	639.00	16.08.20	0800	R

Advisory on Hydro Meteorological Situation Expected from 16-08-2020 to 17-08-2020

As per rainfall pattern given in section II, Alaknanda, Bhagirathi, Ganga rivers are expected to receive light 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 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.

अधिशसीअभियंता

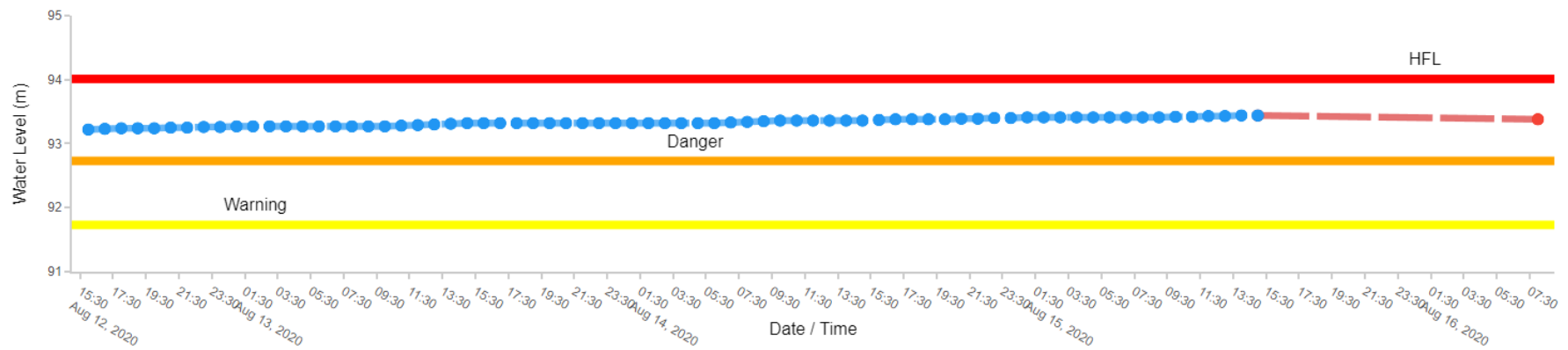
मध्य गंगा मण्डल -1 लखनऊ

Hydrograph view of - Ayodhya



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

● Forecasted Water Level
 ● Measured Water Level

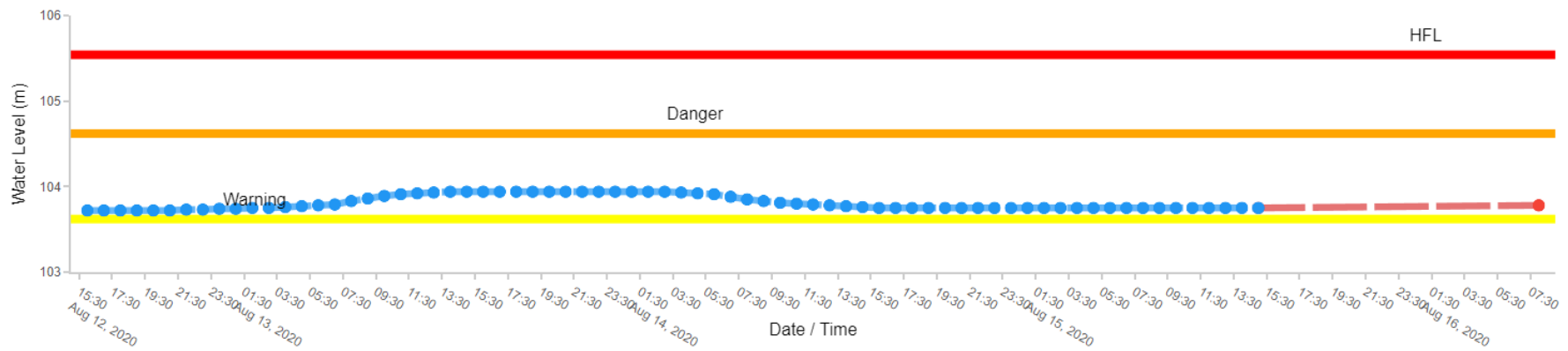


Hydrograph view of - Balrampur



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

● Forecasted Water Level
 ● Measured Water Level

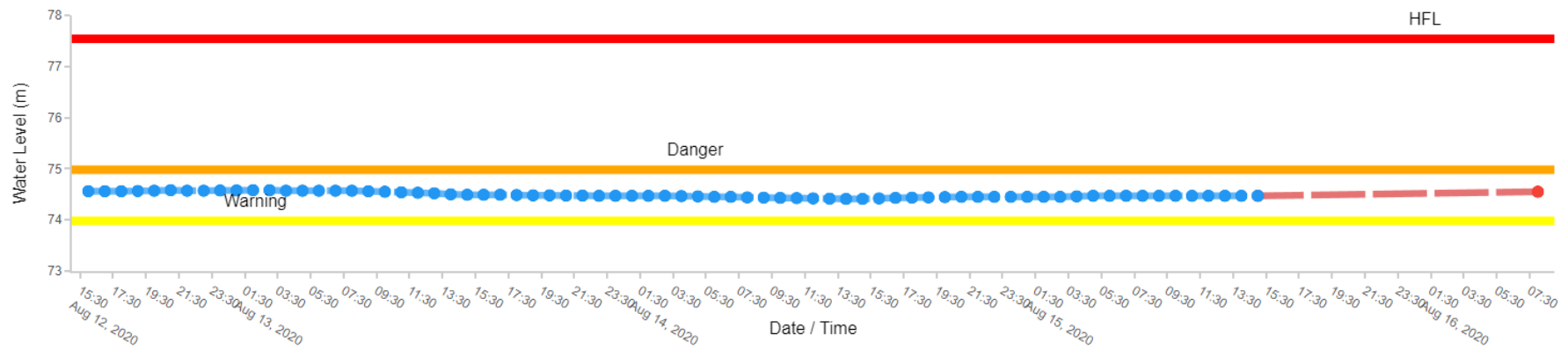


Hydrograph view of - Birdghat



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

● Forecasted Water Level
 ● Measured Water Level

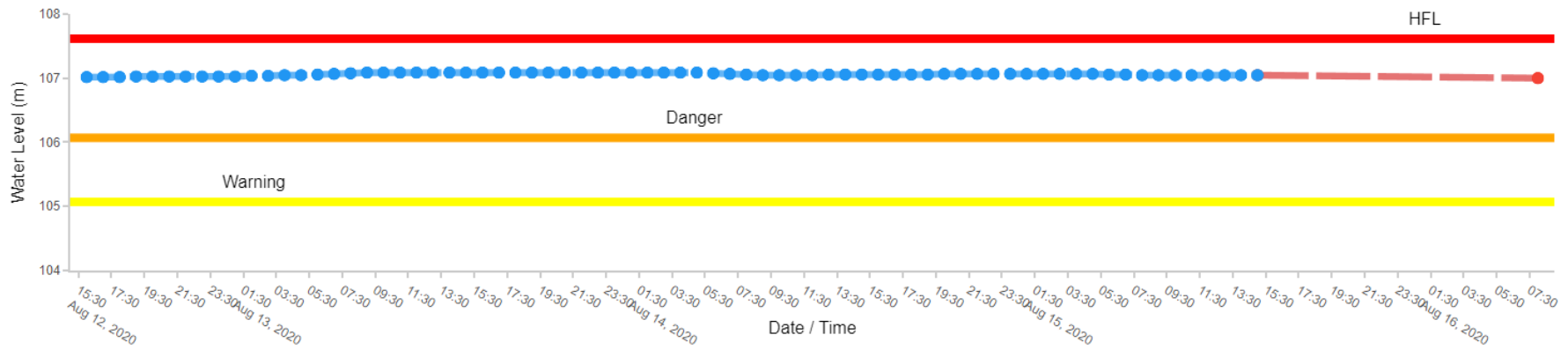


Hydrograph view of - Elginbridge



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

● Forecasted Water Level
 ● Measured Water Level

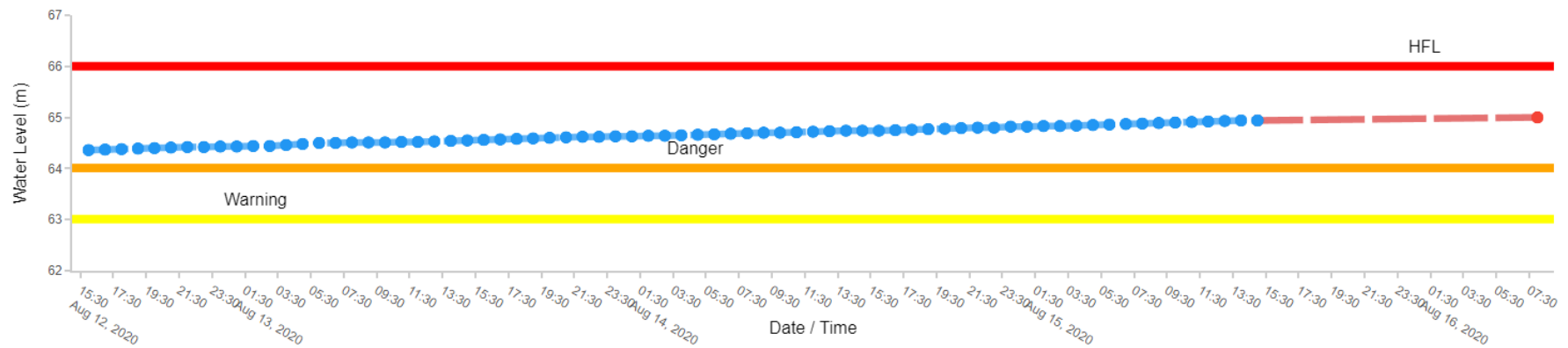


Hydrograph view of - Turtipar



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

Forecasted Water Level Measured Water Level

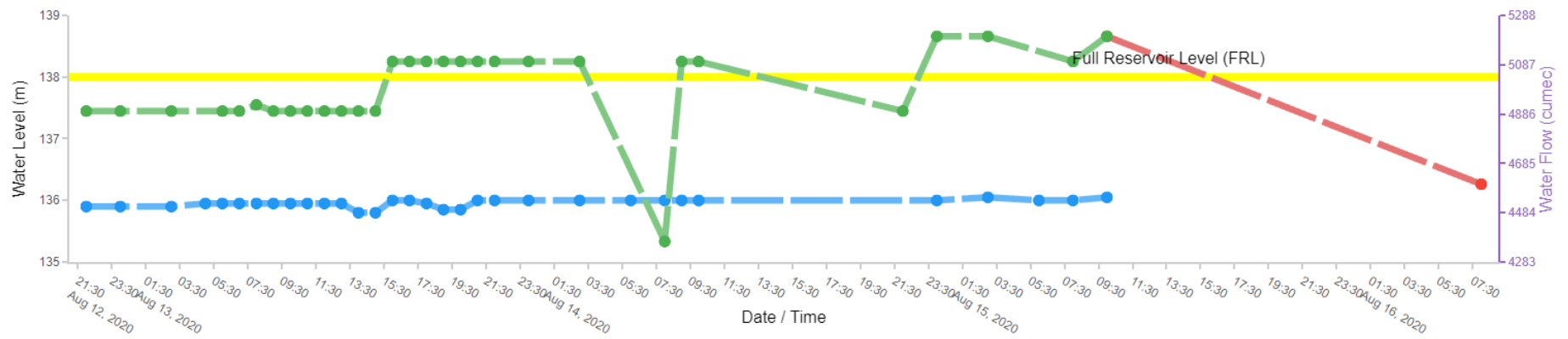


Hydrograph view of - Katerniaghat Barrage



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

Measured Water Level
Forecasted Water Flow
Inflow

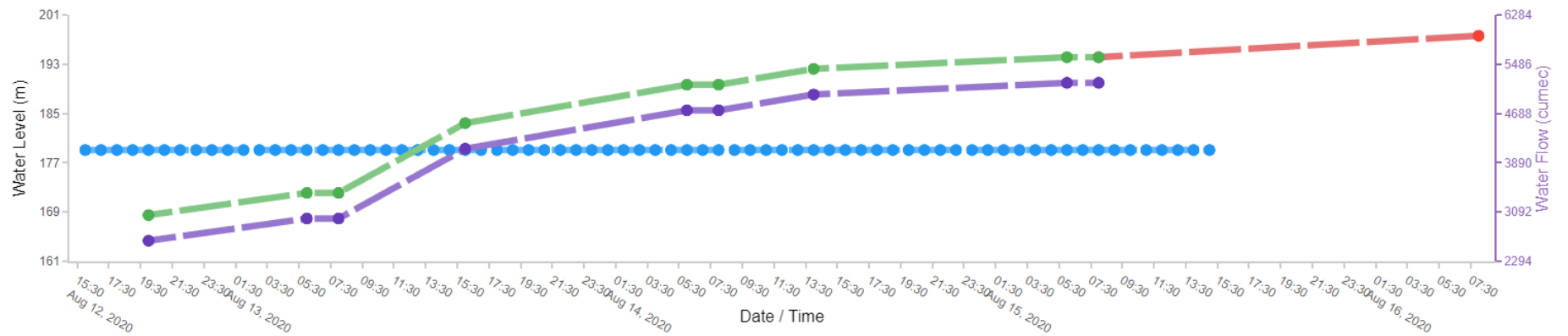


Hydrograph view of - NARORA Barrage



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

Measured Water Level
Forecasted Water Flow
Inflow
Canal Outflow

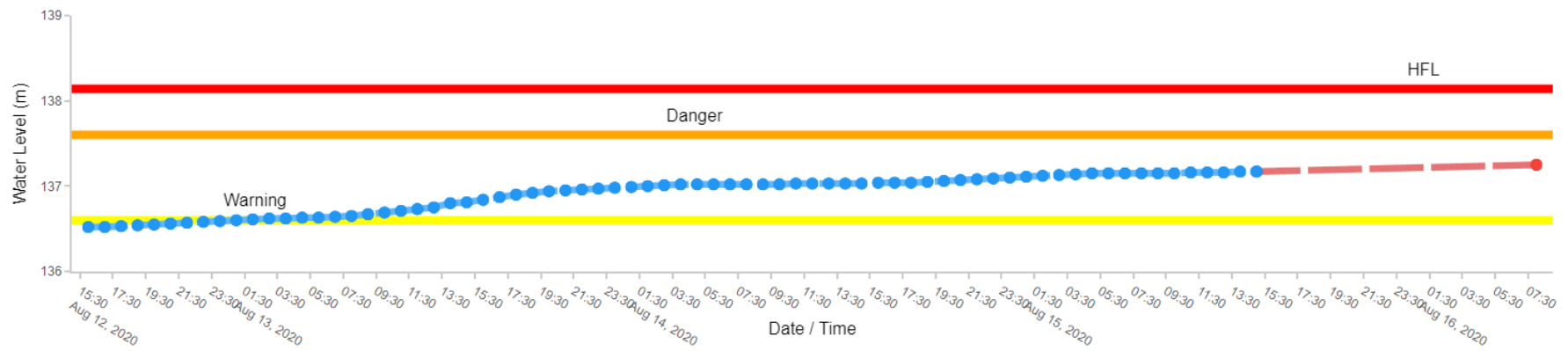


Hydrograph view of - Fatehgarh



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

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

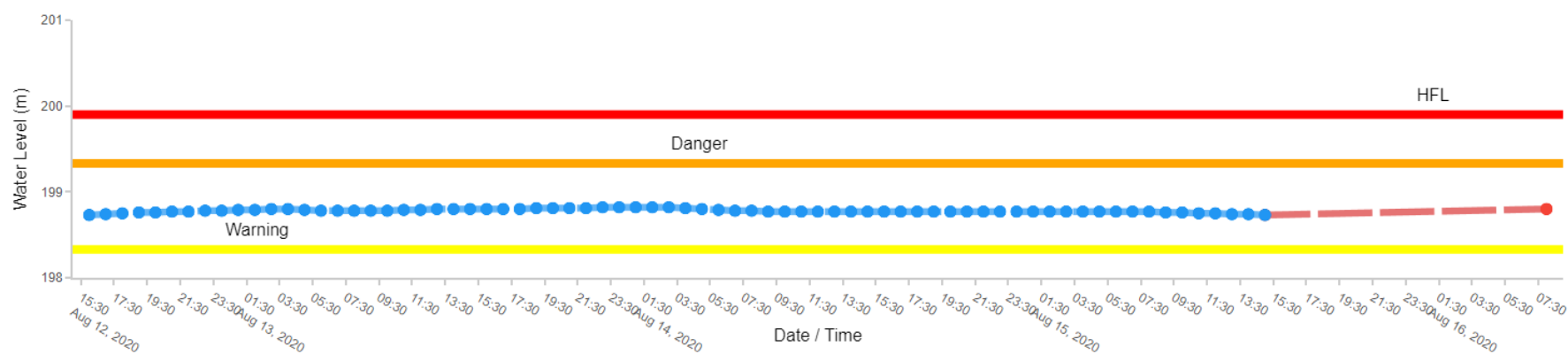


Hydrograph view of - Garhmukteshwar



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

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

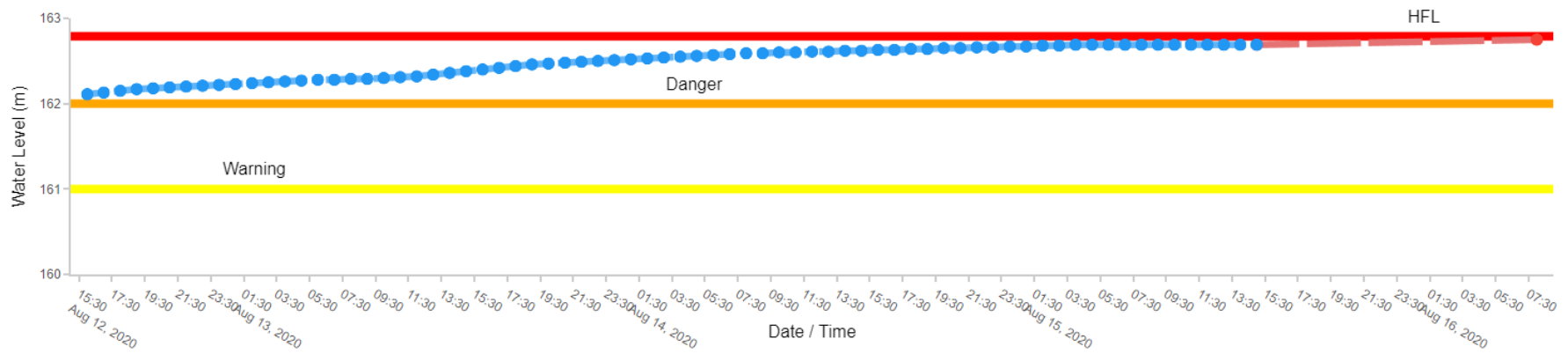


Hydrograph view of - Kachhlabridge



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

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

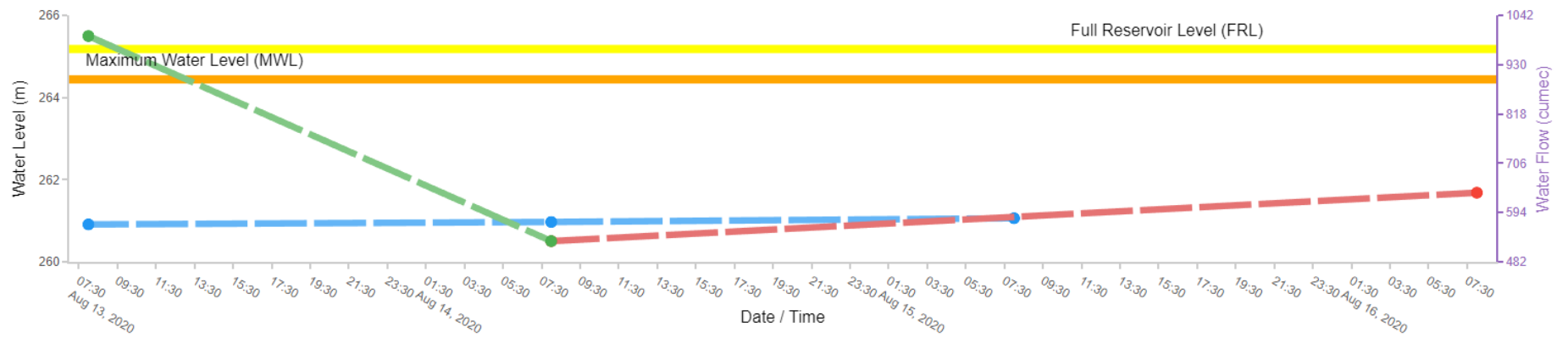


Hydrograph view of - RIHAND DAM



District	Basin	River	Division
VARANASI	Ganga	Rihand	Middle Ganga Division-III(MGD-III), Varanasi

● Measured Water Level
● Forecasted Water Flow
● Inflow



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

