



Central Water Commission
Upper Ganga Basin Organisation, Lucknow
Daily Flood Situation Report Cum Advisories
Date: 22 AUGUST, 2020

FSR No.61

Dated 22-08-2020

1. Weather forecast by IMD

I. SYNOPTIC SITUATION:

- ♦ The Well-Marked Low Pressure Area over central parts of Madhya Pradesh & neighbourhood now lies over northwest Madhya Pradesh & neighbourhood and the associated cyclonic circulation extends upto 7.6 km above mean sea level tilting southwestwards with height. It is very likely to move nearly westwards across Rajasthan during next 2 days.
- ♦ The monsoon trough at mean sea level now passes through Jaisalmer, Bhilwara, centre of Well-Marked Low Pressure area over northwest Madhya Pradesh & neighbourhood, Sidhi, Daltonganj, Kolkata and thence eastwards to North Bay of Bengal and extends upto 1.5 km above mean sea level.
- ♦ A fresh Low Pressure Area is likely to develop over North Bay of Bengal & neighbourhood during next 48 hours.

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

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						
	Narora to Phaphamau						
	Phaphamau to Ballia						
	Gomti						
	Sai						
	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					
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

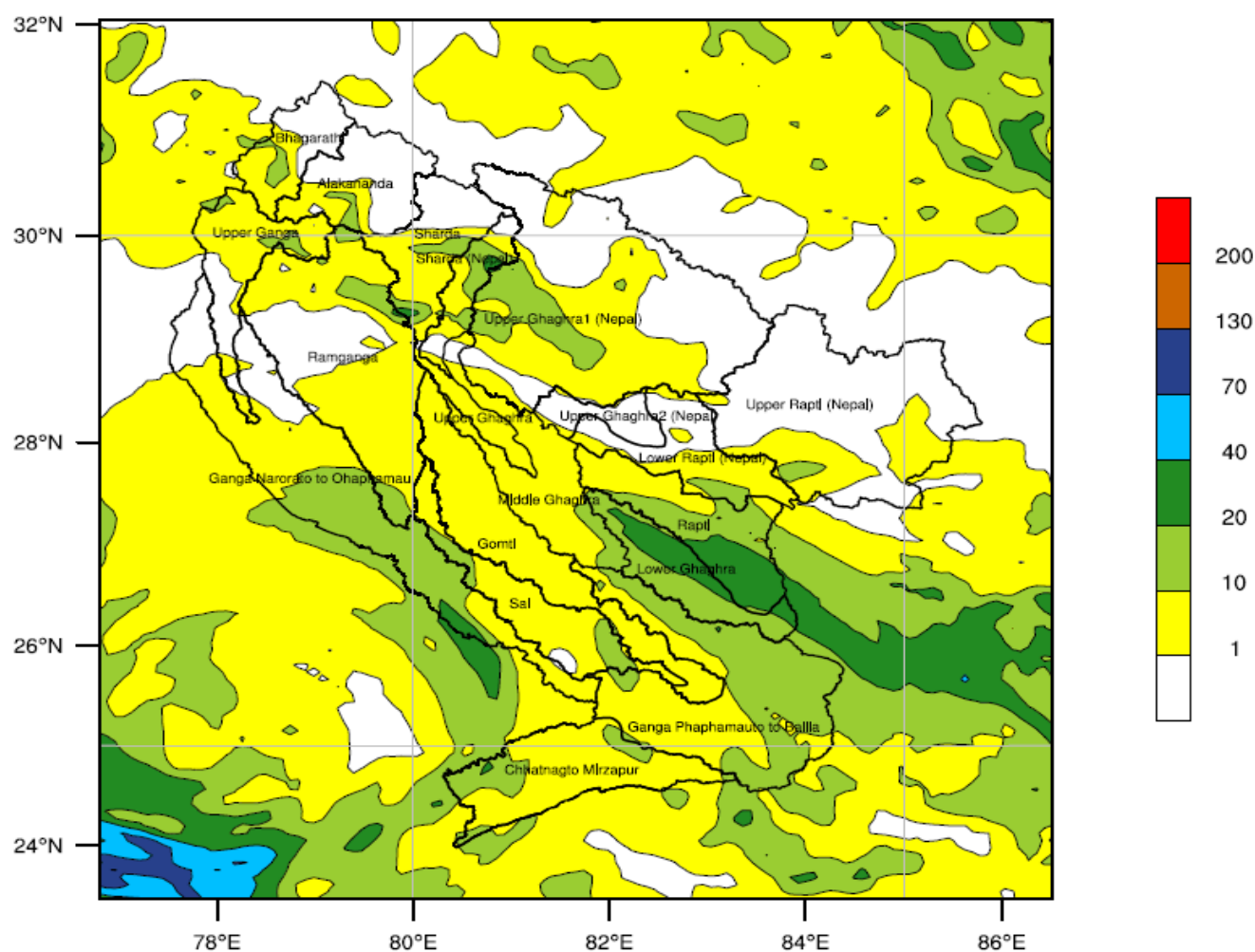
S. No.	BASIN NAME	SUBBASIN CODE/NAME	Day-1						Day-2						Day-3					
			0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm
1	Alaknanda	Alaknanda		75-100	5-25					75-100	5-25					5-25	50-75	5-25		
2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

Probability of occurrence (%)	0-5	5-25	25-50	50-75	75-100
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Init: 2020-08-22_00:00:00
 Valld: 2020-08-23_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(24hr)



Sub basin wise Average Rainfall Estimation

Alaknanda =	2 mm	Rapti =	15 mm
Bhagirathi =	3 mm	Sai =	7 mm
Chhatnagto Mirzapur =	8 mm	Sharda =	8 mm
Ganga Narorato Ohaphamau =	7 mm	Sharda (Nepal) =	5 mm
Ganga Phaphamauto Balia =	10 mm	Upper Ganga =	5 mm
Gomti =	7 mm	Upper Ghaghra =	4 mm
Lower Ghaghara =	19 mm	Upper Ghaghra1 (Nepal) =	0 mm
Lower Rapti (Nepal) =	3 mm	Upper Ghaghra2 (Nepal) =	5 mm
Middle Ghaghara =	7 mm	Upper Rapti (Nepal) =	1 mm
Ramganga =	4 mm		

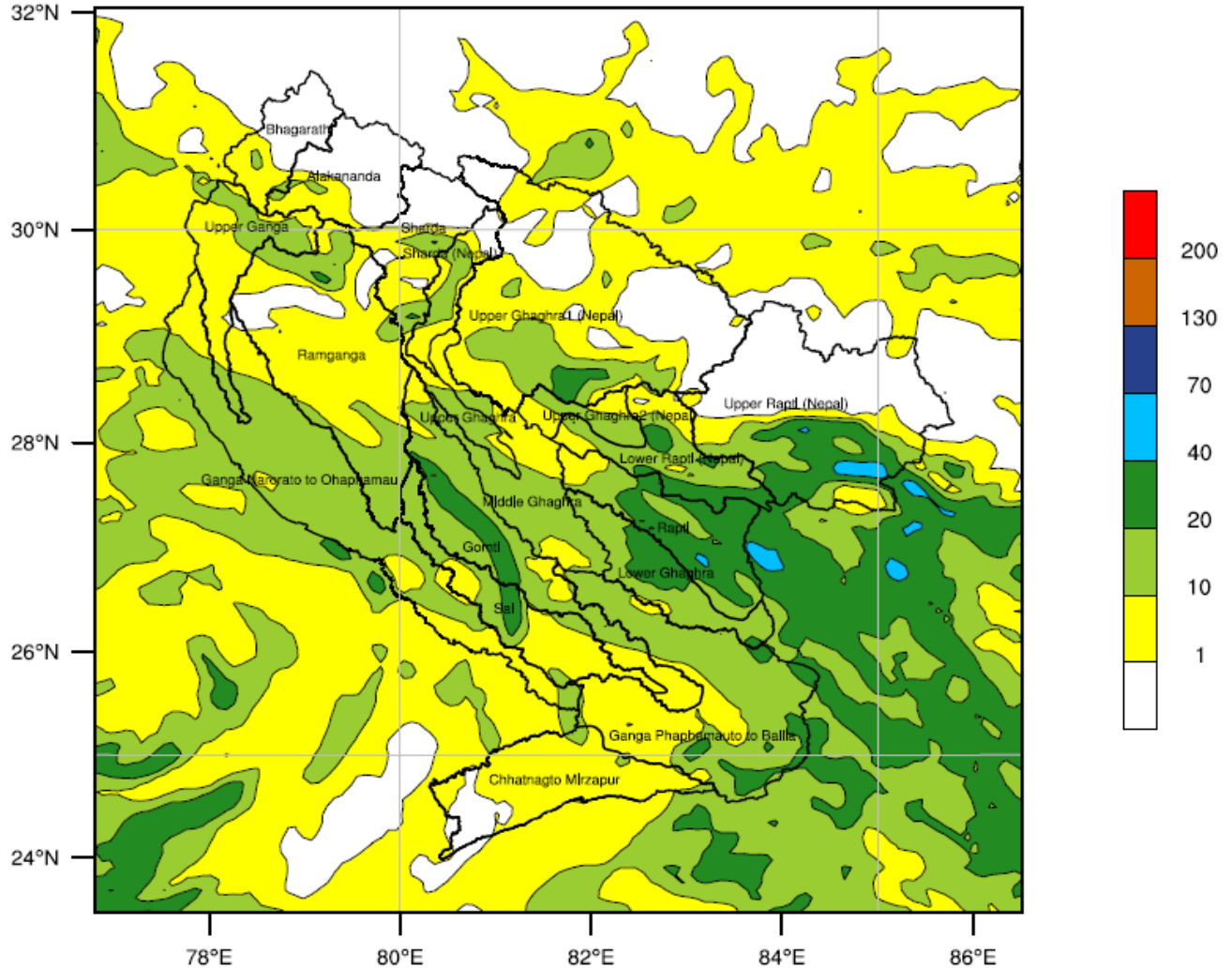
OUTPUT FROM WRF V3.6.1 MODEL

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

Init: 2020-08-22_00:00:00
Valld: 2020-08-24_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(48hr)



Sub basin wise Average Rainfall Estimation

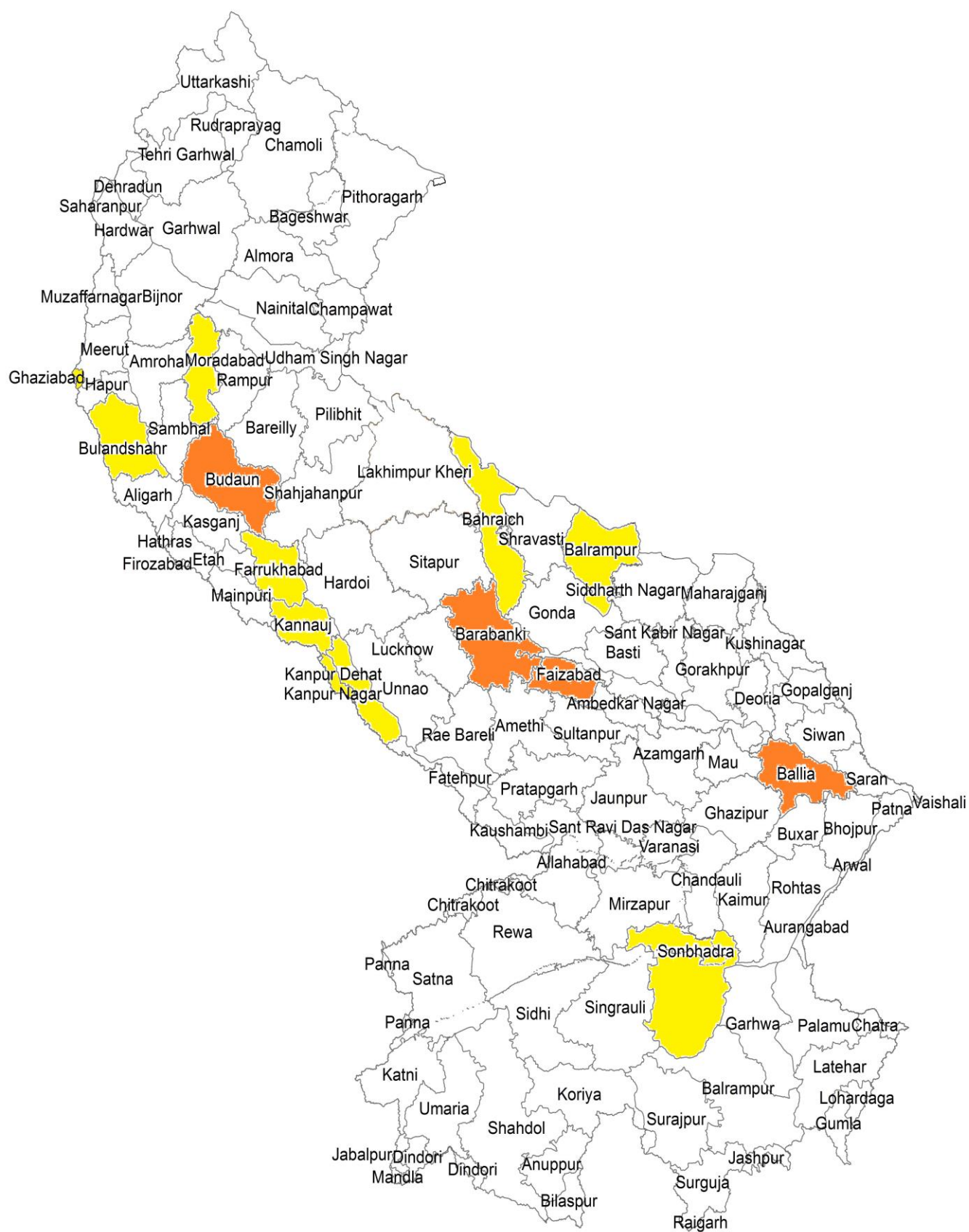
Alaknanda =	2 mm	Rapti =	21 mm
Bhagirathi =	2 mm	Sai =	11 mm
Chhatnagto Mirzapur =	5 mm	Sharda =	7 mm
Ganga Narorato Ohaphamau =	11 mm	Sharda (Nepal) =	6 mm
Ganga Phaphamauto Balia =	13 mm	Upper Ganga =	8 mm
Gomti =	15 mm	Upper Ghaghra =	5 mm
Lower Ghaghara =	18 mm	Upper Ghaghra1 (Nepal) =	11 mm
Lower Rapti (Nepal) =	16 mm	Upper Ghaghra2 (Nepal) =	8 mm
Middle Ghaghara =	13 mm	Upper Rapti (Nepal) =	9 mm
Ramganga =	7 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 22 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 154.31 with falling trend which is 0.21m above its Danger Level of 154.1 m and 1.01m 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 65.00m with steady trend which is 0.99 above its Danger Level of 64.01 m and 1.0m 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 106.716m with falling trend which is 0.646 m above its Danger Level of 106.07 m and 0.90m 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 93.48m with falling trend which is 0.75 m above its Danger Level of 92.73 m and 0.53 m below its previous HFL of 94.01 m (2009-10-11).
5. River Sharda at Sarda Nagar 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 135.53 m with falling trend which is 0.04 above its Danger Level of 135.49 m and 1.02m below its previous HFL of 136.55 m (199-09-16).
6. 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 162.58m with steady trend which is 0.58m above its Danger Level of 162.0 m and 0.21 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)
Hetimpur (U.P)	56.4

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)	7
Total Numbers of Sites above Warning Level (A+B+C)		11
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	103.90	0800	S	104.0	23.08.20	0800	R
Ganga	Garhmukteshwar	Ghaziabad	U.P	199.33	198.33	199.9	2010	198.81	0800	F	198.68	23.08.20	0800	F
Ganga	Fatehgarh	Farukhabad	U.P	137.6	136.60	138.14	2010	137.41	0800	S	137.48	23.08.20	0800	R
Ganga	Ankinghat	Kanpur Dehat	U.P	124.0	123.0	124.49	2010	123.44	0800	S	123.30	23.08.20	0800	F
Ganga	Gumatiya	Kannauj	U.P	125.97	124.97	126.78	2010	125.02	0800	S	125.05	23.08.20	0800	R
Ganga	Kanpur	Kanpur	U.P	113.0	112.0	114.075	2010	112.08	0800	S	112.15	23.08.20	0800	R
Ram Ganga	Moradabad	Moradabad	U.P	190.60	189.60	192.88	2010	190.08	0800	R	190.15	23.08.20	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	65.00	0800	S	64.95	23.08.20	0800	F
Ghaghra	Elgin Bridge	Barabanki	U.P	106.07	105.07	107.616	2014	106.756	0800	F	106.70	23.08.20	0800	F
Ghaghra	Ayodhya	Faizabad	U.P	92.73	91.73	94.01	2009	93.50	0800	S	93.40	23.08.20	0800	F
Ganga	Kachhla bridge	Budaun	U.P	161.00	162.00	162.79	2010	162.58	0800	S	162.80	23.08.20	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 22.08.2020

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			4047.052	0800	S	3550.00	23.08.20	0800	F
Sharda	Narora Barrage	Bulandshahr	U.P.						0800	S	4814.40	23.08.20	0800	F
Sone	Bansagar Dam	Harda	M.P.		341.64				0800	R	2169.00	23.08.20	0800	R
Rihand	Rihand Dam	Sonbhadra	U.P.		265.18				0800	R	712.00	23.08.20	0800	R

Advisory on Hydro Meteorological Situation Expected from 23-08-2020 to 24-08-2020

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