



Central Water Commission
Upper Ganga Basin Organisation, Lucknow
Daily Flood Situation Report Cum Advisories
Date: 19 AUGUST, 2020

FSR No.58

Dated 19-08-2020

1. Weather forecast by IMD

I. SYNOPTIC SITUATION:

- ♦ The Low Pressure Area over north Bay of Bengal & neighbourhood now lies as a Well-Marked Low Pressure Area over Northwest Bay of Bengal & neighbourhood with associated cyclonic circulation extending upto 7.6 km above mean sea level tilting southwestwards with height. It is very likely to move westwards gradually and concentrate into a Depression during next 24 hours.
- ♦ The monsoon trough at mean sea level now passes through Ganganagar, Delhi, Badaun, Allahabad, Daltonganj and thence east-southeastwards to the centre of Well-Marked Low Pressure Area over Northwest Bay of Bengal & neighbourhood.
- ♦ The cyclonic circulation over northwest Rajasthan & neighbourhood now lies over West Rajasthan & neighbourhood and extends upto 1.5 km above mean sea level.
- ♦ The cyclonic circulation over northeast Madhya Pradesh & neighbourhood extending upto 5.8 km above mean sea level tilting southwards with height 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	0.1-10
2	Bhagirathi	Bhagirathi	0.1-10	11-25	0.1-10
3	Ganga	Chhatnag to Mirzapur	0.1-10	11-25	11-25
		Narora to Phaphamau	11-25	0.1-10	0.1-10
		Phaphamau to Ballia	0.1-10	0.1-10	0.1-10
		Gomti	11-25	0.1-10	0.1-10
		Sai	0.1-10	0.1-10	0.1-10
		Upper Ganga	11-25	11-25	0.1-10
4	Ghaghra	Lower Ghaghra	0.1-10	0.1-10	0.1-10
		Middle Ghaghra	11-25	0.1-10	0.1-10
		Upper Ghaghra	11-25	0.1-10	0.1-10
5	Ramganga	Ramganga	11-25	11-25	0.1-10
6	Rapti	Rapti	0.1-10	0.1-10	0.1-10
7.	Sharda	Sharda	11-25	11-25	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	M	WS	M	WS	L	SCT
2	Bhagirathi	Bhagirathi	M	FWS	M	WS	L	SCT
3	Ganga	Chhatnag to Mirzapur	L	WS	M	WS	M	WS
		Narora to Phaphamau	M	WS	M	FWS	L	ISOL
		Phaphamau to Ballia	L	ISOL	L	SCT	L	ISOL
		Gomti	M	WS	M	SCT	L	ISOL
		Sai	L	SCT	L	SCT	L	SCT
		Upper Ganga	M	WS	M	WS	L	SCT
4	Ghaghra	Lower Ghaghra	L	SCT	L	SCT	L	ISOL
		Middle Ghaghra	M	FWS	L	SCT	L	ISOL
		Upper Ghaghra	M	WS	M	FWS	L	ISOL
5	Ramganga	Ramganga	M	WS	M	WS	L	ISOL
6	Rapti	Rapti	L	SCT	L	SCT	L	ISOL
7.	Sharda	Sharda	M	WS	M	WS	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			H	ISOL		
Bhagirathi	Bhagirathi	H	ISOL	H	ISOL		
Ganga	Chhatnag to Mirzapur						
	Narora to Phaphamau	H	ISOL				
	Phaphamau to Ballia						
	Gomti						
	Sai						
	Upper Ganga	H	ISOL	H	ISOL		
Ghaghra	Lower Ghaghra						
	Middle Ghaghra						
	Upper Ghaghra	VH	ISOL	H	ISOL		
Ramganga	Ramganga	H	ISOL	H	ISOL		
Rapti	Rapti						
Sharda	Sharda	VH	ISOL	VH	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

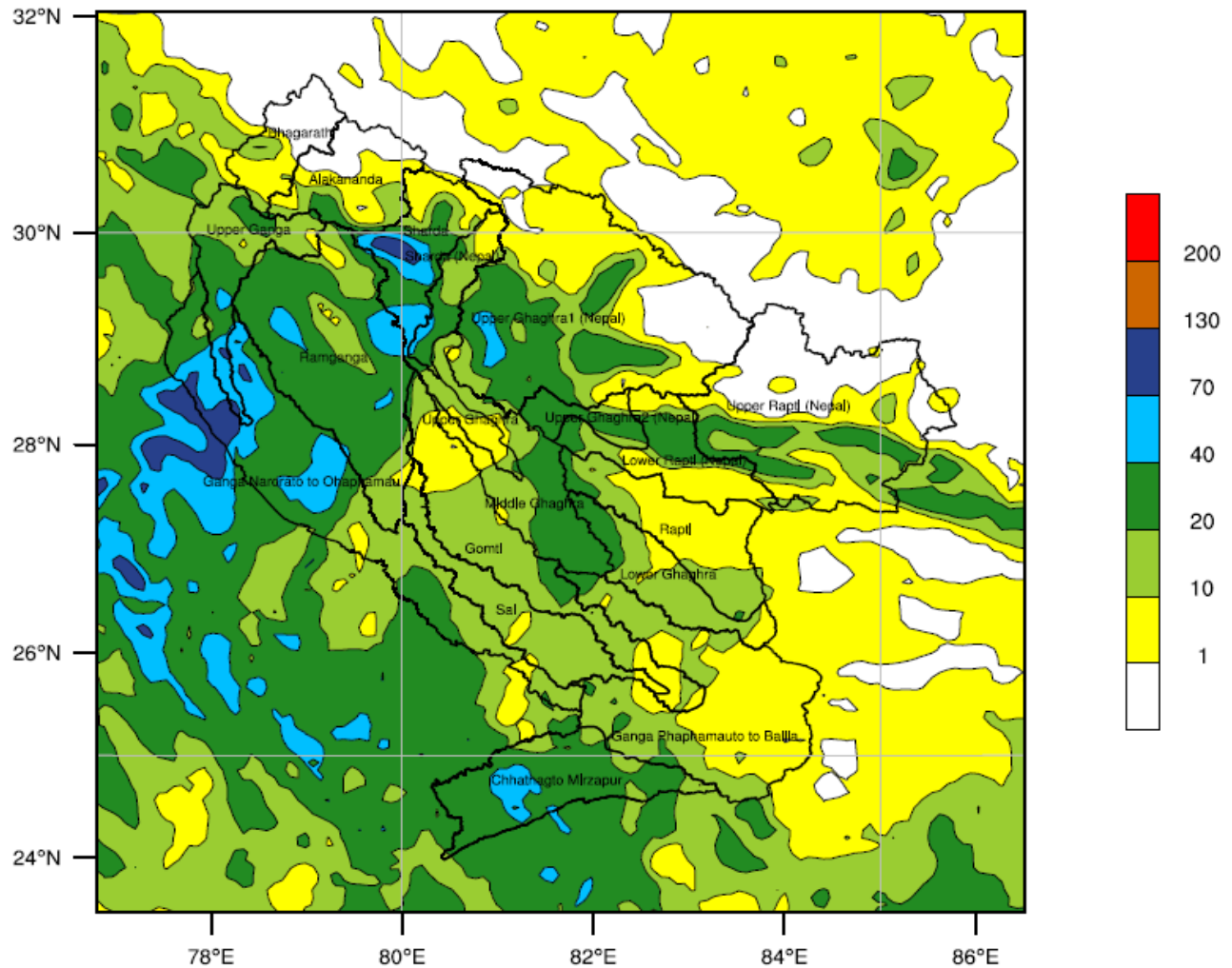
S. No.	BASIN NAME	SUBBASIN CODE/NAME	Day-1						Day-2						Day-3					
			0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm	0 mm	0.1-10 mm	11-25 mm	26-50 mm	51-100 mm	>100 mm
1	Alaknanda	Alaknanda			75-100					25-50	50-75					75-100				
2	Bhagirathi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

Probability of occurrence (%)	0-5	5-25	25-50	50-75	75-100
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Init: 2020-08-19_00:00:00
Valld: 2020-08-20_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(24hr)



Sub basin wise Average Rainfall Estimation

Alakananda =	7 mm	Raptl =	10 mm
Bhagratl =	5 mm	Sai =	14 mm
Chhatnagto Mirzapur =	28 mm	Sharda =	20 mm
Ganga Narorato Ohaphamau =	33 mm	Sharda (Nepal) =	27 mm
Ganga Phaphamauto Ballia =	10 mm	Upper Ganga =	26 mm
Gomtl =	12 mm	Upper Ghaghra =	13 mm
Lower Ghaghara =	14 mm	Upper Ghaghra1 (Nepal) =	22 mm
Lower Raptl (Nepal) =	14 mm	Upper Ghaghra2 (Nepal) =	16 mm
Middle Ghaghara =	22 mm	Upper Raptl (Nepal) =	8 mm
Ramganga =	27 mm		

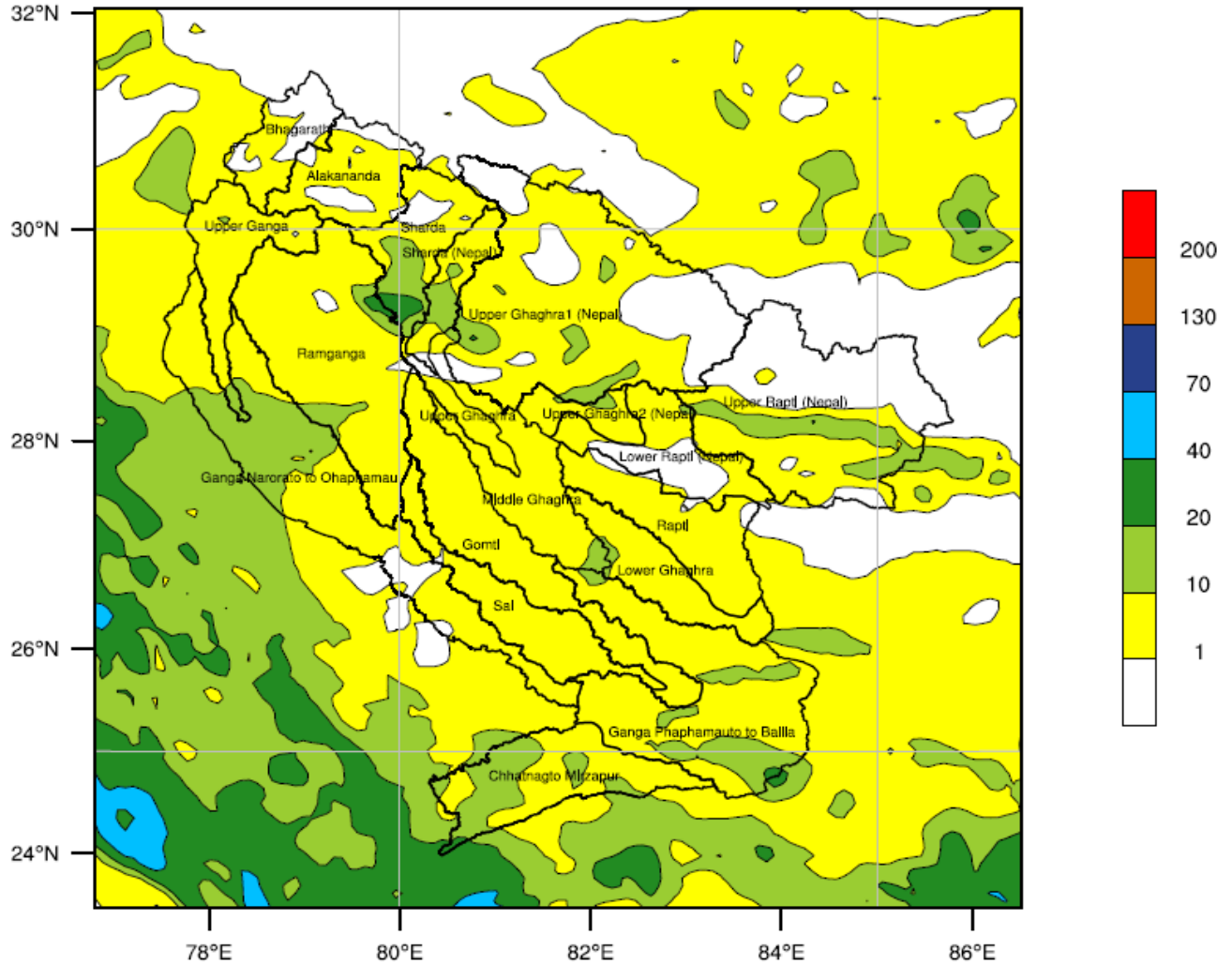
OUTPUT FROM WRF V3.6.1 MODEL

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

Init: 2020-08-19_00:00:00
Vald: 2020-08-21_03:00:00

FLOOD MET OFFICE LUCKNOW

IMD WRF Rainfall (mm) Forecast(48hr)



Sub basin wise Average Rainfall Estimation

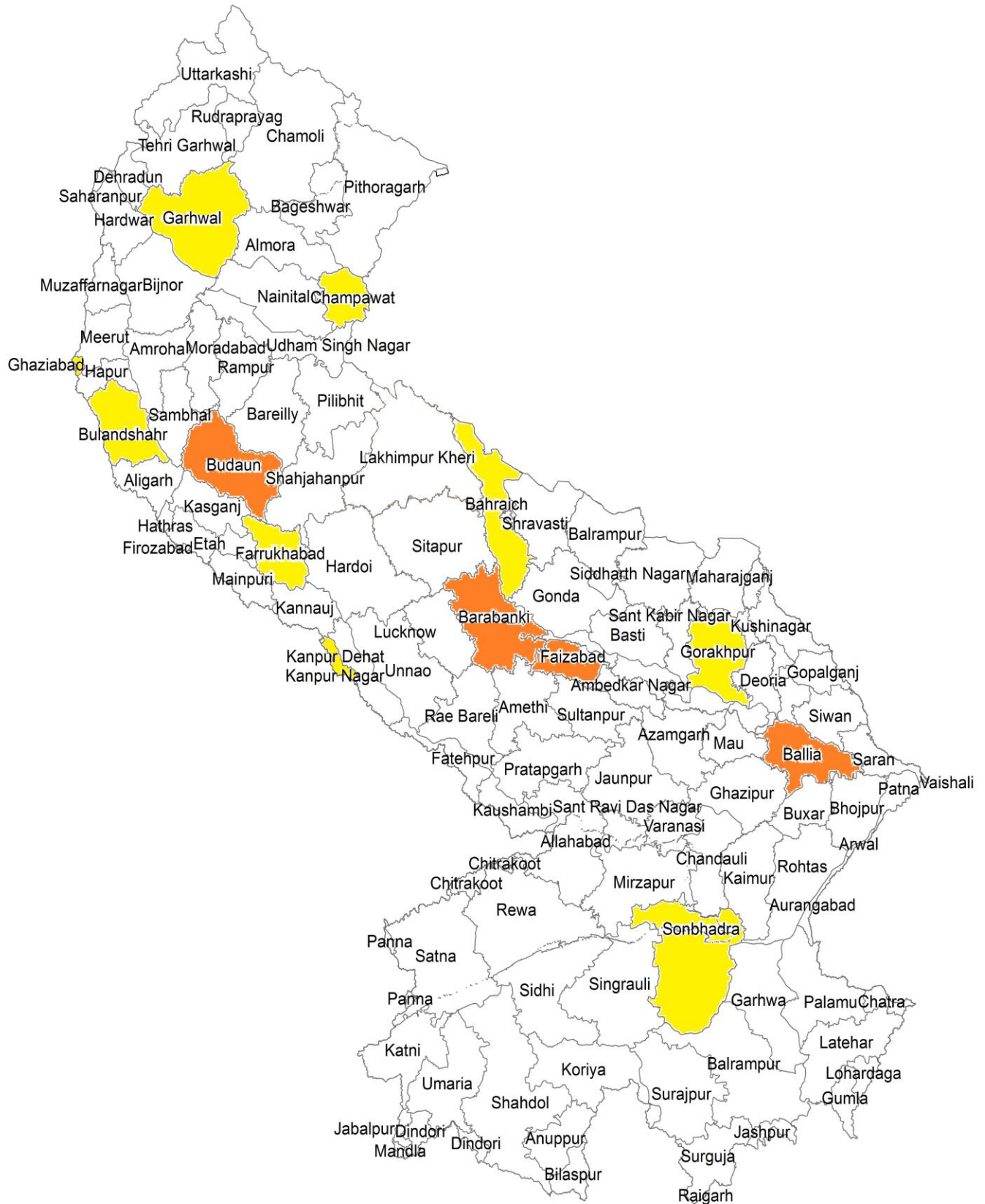
Alaknanda =	2 mm	Rapti =	3 mm
Bhagirathi =	2 mm	Sai =	5 mm
Chhatnagto Mirzapur =	10 mm	Sharda =	7 mm
Ganga Narorato Ohaphamau =	7 mm	Sharda (Nepal) =	6 mm
Ganga Phaphamauto Ballia =	8 mm	Upper Ganga =	5 mm
Gomti =	5 mm	Upper Ghaghra =	4 mm
Lower Ghaghara =	7 mm	Upper Ghaghra1 (Nepal) =	6 mm
Lower Rapti (Nepal) =	3 mm	Upper Ghaghra2 (Nepal) =	2 mm
Middle Ghaghara =	5 mm	Upper Rapti (Nepal) =	4 mm
Ramganga =	5 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 19 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 154.44 with steady trend which is 0.34m above its Danger Level of 154.1 m and 0.88m 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 65.11m with steady trend which is 1.10 above its Danger Level of 64.01 m and 0.89 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 106.826m with steady trend which is 0.756 m above its Danger Level of 106.07 m and 0.79m 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 93.50m with steady trend which is 0.77 m above its Danger Level of 92.73 m and 0.51 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 135.59 m with steady trend which is 0.10 above its Danger Level of 135.49 m and 0.96m 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 162.39m with steady trend which is 0.39m above its Danger Level of 162.0 m and 0.40 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)
Fafamau (U.P)	60.8
Kalagarh (U.P)	72.2
Bareilly (U.P)	55.6
Bhatpurwa Ghat (U.P)	54.0
Ghat (U.P)	74.6
Elginbridge (U.P)	105.6
Chauguruji (U.P)	70.8
Motipur (U.P)	115.2
Gaighat (U.P)	90.2
Colonelganj (U.P)	115.4
Pancheswar (U.K)	88.2
Paliakalan (U.K)	85.0
Jauljibi (U.K)	130.0
Kukea (U.K)	53.9
Bangapani (U.K)	88.2
Thal (U.K)	59.2
Mandla (R.J)	58.8
Chisapani (Nepal)	104.8

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)	5
Total Numbers of Sites above Warning Level (A+B+C)		9
INFLOW FORECAST		
Number of Sites for which inflow forecasts issued:		5
(Where inflow are equal or exceed the specified Threshold Limit for a particular reservoir/ barrage)		5

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	Birdghat	Gorakhpur	U.P	74.98	73.98	77.54	1998	74.06	0800	F	73.80	20.08.20	0800	F
Ganga	Garhmukt eshwar	Ghaziabad	U.P	199.33	198.33	199.9	2010	198.61	0800	S	198.65	20.08.20	0800	R
Ganga	Fatehgarh	Farukkhabad	U.P	137.6	136.60	138.14	2010	137.47	0800	S	137.38	20.08.20	0800	F
Ganga	Ankinghat	Kanpur Dehat	U.P	124.0	123.0	124.49	2010	123.00	0800	R	123.15	20.08.20	0800	R
Alakananda	Sri Nagar	Pauri Garhwal	U.K	536.0	535.0	137.90	2013	535.10	0800	R	534.35	19.08.20	1600	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	65.11	0800	S	65.05	20.08.20	0800	F
Ghaghra	Elgin Bridge	Barabanki	U.P	106.07	105.07	107.616	2014	106.826	0800	S	106.65	20.08.20	0800	F
Ghaghra	Ayodhya	Faizabad	U.P	92.73	91.73	94.01	2009	93.50	0800	S	93.35	20.08.20	0800	F
Ganga	Kachhla bridge	Budaun	U.P	161.00	162.00	162.79	2010	162.39	0800	S	162.55	20.08.20	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 19.08.2020

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			4392.028	0800	R	5200.00	20.08.20	0800	R
Sharda	Banbasa Barrage	Champawat	U.K		222.96			3927.575	1500	S	3600.00	20.08.20	0800	F
Sharda	Narora Barrage	Bulandshahr	U.P						0800	S	4587.8	20.08.20	0800	R
Sone	Bansagar Dam	Harda	M.P.		341.64				0800	F	2739.0	20.08.20	0800	R
Rihand	Rihand Dam	Sonbhadra	U.P.		265.18				0800	R	610.0	20.08.20	0800	R

Advisory on Hydro Meteorological Situation Expected from 20-08-2020 to 21-08-2020

As per rainfall pattern given in section II, Alaknanda, Bhagirathi rivers are expected to receive moderate to heavy rain at widespread areas in next 48 hrs. Ganga river is expected to receive light to moderate rain at scattered to widespread areas in next 48 hrs. Ghaghra, Ramganga, Sharda & Rapti river basins are expected to receive moderate to heavy rain at scattered to 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