



India Meteorological Department

(Ministry of Earth Sciences)

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Sub: (a) Well Marked Low Pressure Area over northwest Uttar Pradesh & neighborhood

(b) Well Marked Low Pressure Area over northeast Bay of Bengal and adjoining southeast Bangladesh coast

(a) Well Marked Low Pressure Area over northwest Uttar Pradesh & neighborhood

The depression over central Uttar Pradesh moved north-northwestwards during past 6 hours and weakened into a well marked low pressure area over northwest Uttar Pradesh & neighborhood at 0830 hours IST of 13th September.

It is likely to weaken further into a low pressure area during next 12 hours.

This is last update in association with this system. However, regular weather bulletins will continue from National Weather Forecasting Centre and respective Regional Meteorological Centres and Meteorological Centres in association with the Well Marked Low Pressure Area over northwest Uttar Pradesh and neighbourhood.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

Warnings:

(i) Rainfall warning

Uttarakhand: Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at a few places and **extremely heavy rainfall** at isolated places on 13th and **heavy rainfall** at isolated places on 14th September.

Himachal Pradesh: Light to moderate rainfall at most places is very likely with **heavy rainfall** at isolated places on 13th September.

Uttar Pradesh: Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at isolated places on 13th and **heavy rainfall** at isolated places on 14th September.

Haryana: Light to moderate rainfall at isolated places is very likely with **heavy rainfall** at isolated places on 13th & 14th September.

(ii) Flash Flood Guidance: (Graphics Attached)

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 14-09-2024:

Moderate to High flash flood risk likely over few watersheds & neighbourhoods of

Uttarakhand - Almora, Bageshwar, Chamoli, Champawat, Nanital, Pauri Garhwal, Pithoragarh, Rudrapur, Tehri Garwal, Udham Singh Nagar and Uttarkashi districts.

Himachal Pradesh- Shiomla, Sirmour districts

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.

(b) Well Marked Low Pressure Area over northeast Bay of Bengal and adjoining southeast Bangladesh coast

The low pressure area over southeast Bangladesh and neighbourhood moved west-northwestwards and lay as a well marked low pressure area over northeast Bay of Bengal and adjoining southeast Bangladesh coast at 0830 hours IST of today, the 13th September, 2024.

It is likely to move west-northwestwards and intensify into a depression over coastal West Bengal and adjoining northwest Bay of Bengal by tomorrow, the 14th September.

Warnings:

(i) Rainfall warning

Gangetic West Bengal: Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at a few places and **extremely heavy rainfall** at isolated places on 14th; **heavy to very heavy rainfall** at isolated places on 13th and **heavy rainfall** at isolated places on 15th September.

Odisha: Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at a few places and **extremely heavy rainfall** at isolated places on 14th and **heavy rainfall** at isolated places on 13th & 15th September.

Jharkhand: Light to moderate rainfall at most places with isolated **heavy rainfall** very likely on 13th and **heavy to very heavy rainfall** at isolated places on 14th & 15th September.

Bihar: Light to moderate rainfall at most places with **heavy rainfall** at isolated places very likely during 13th-15th September.

Chhattisgarh: Light to moderate rainfall at most places with isolated **heavy rainfall** on 14th & 15th September.

Mizoram & Tripura: Light to moderate rainfall at most places is very likely with **heavy to very heavy rainfall** at isolated places on 13th and isolated **heavy rainfall** during 14th - 15th September.

Assam & Meghalaya: Light to moderate rainfall at many places is very likely with isolated **heavy rainfall** is likely during 13th -15th September.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

(ii) Flash Flood Guidance: (Graphics Attached)

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 14-09-2024:

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of

Gangetic West Bengal – South and North 24 Paraganas, East Mednipur, Pashim Medipur, Haora, Hugli, Nadia and Bankura.

Mizoram & Tripura – Saiha, Lunglai, Serchip, Champai, Aizwal, Mamit and Lawngtai districts

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.

(iii) Wind warning:

Squally weather with strong wind speed reaching 30-40 kmph gusting to 50 kmph is likely to prevail over coastal areas of Bangladesh, West Bengal and adjoining north Bay of Bengal on 13th September. It is likely to increase gradually becoming squally wind speed reaching 40-50 kmph gusting to 60 kmph from 14th evening till 15th September.

Squally wind speed reaching 40-50 kmph gusting to 60 kmph over northwest Bay of Bengal and along & off West Bengal and Odisha coasts from 14th evening till 16th morning.

(iv) Sea Condition:

The Rough sea condition is very likely to prevail over north Bay of Bengal from 13th till 15th September.

(iv) Fishermen Warning:

Fishermen are advised not to venture into north Bay of Bengal till 15th September.

Impact Expected (Uttarakhand, Himachal Pradesh, Uttar Pradesh, Haryana, Gangetic West Bengal, Odisha, Jharkhand, Bihar, and Chhattisgarh due to heavy rainfall)

- ✓ Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- ✓ Occasional reduction in visibility due to heavy rainfall.
- ✓ Disruption of traffic in major cities and roadways due to water logging in roads leading to increased travel time.
- ✓ Minor damage to kutchha roads.
- ✓ Possibilities of damage to vulnerable structure.
- ✓ Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
- ✓ Damage to horticulture and standing crops in some areas due to inundation and wind.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

Action Suggested (Uttarakhand, Himachal Pradesh, Uttar Pradesh, Haryana, Gangetic West Bengal, Odisha, Jharkhand, Bihar, and Chhattisgarh)

- ✓ Fishermen are advised not to venture into north Bay of Bengal from 13th to 15th September.
- ✓ Judicious regulation of surface transports including railways and roadways.
- ✓ Check for traffic congestion on your route before leaving for your destination.
- ✓ Follow any traffic advisories that are issued in this regard.
- ✓ Avoid going to areas that face the water logging problems often.
- ✓ Avoid staying in vulnerable structure.

Agromet advisories for Heavy Rainfall likely over various parts of the country

- ✓ Provide mechanical support to horticultural crops & staking to vegetables.
- ✓ Keep the harvested produce at safer place.

Significant amount of rainfall (in cm) recorded from 0830 hrs IST of yesterday, the 12th to 0830 hrs IST of today, the 13th September (is given in Annexure –I).

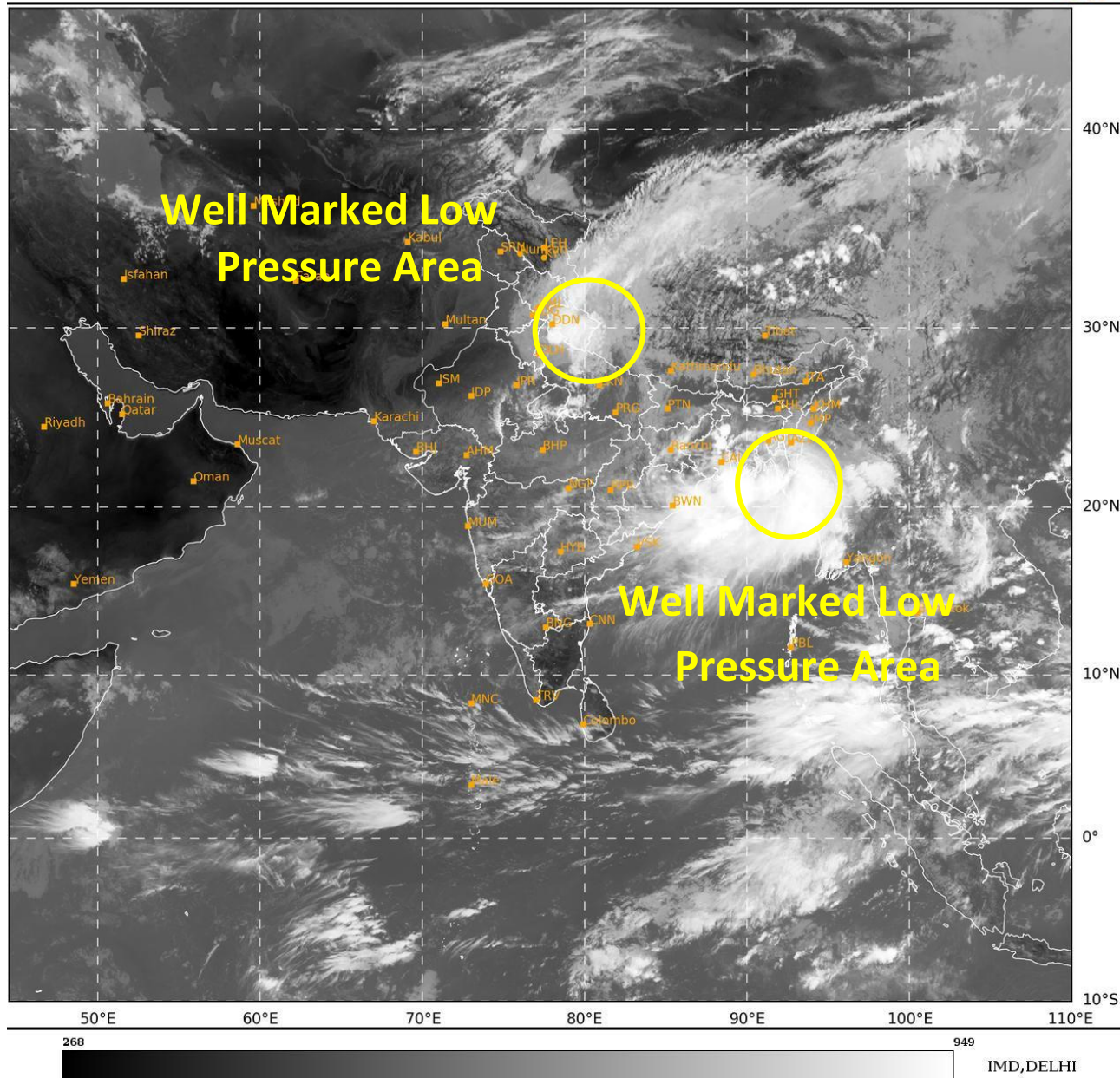
The next bulletin will be issued at 1230 hrs IST of 14th September, 2024.

(Suprit Kumar)
Scientist-E, NWFC, New Delhi

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%
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SAT : INSAT-3DR IMG
IMG_TIR1 10.8 um
L1C Mercator

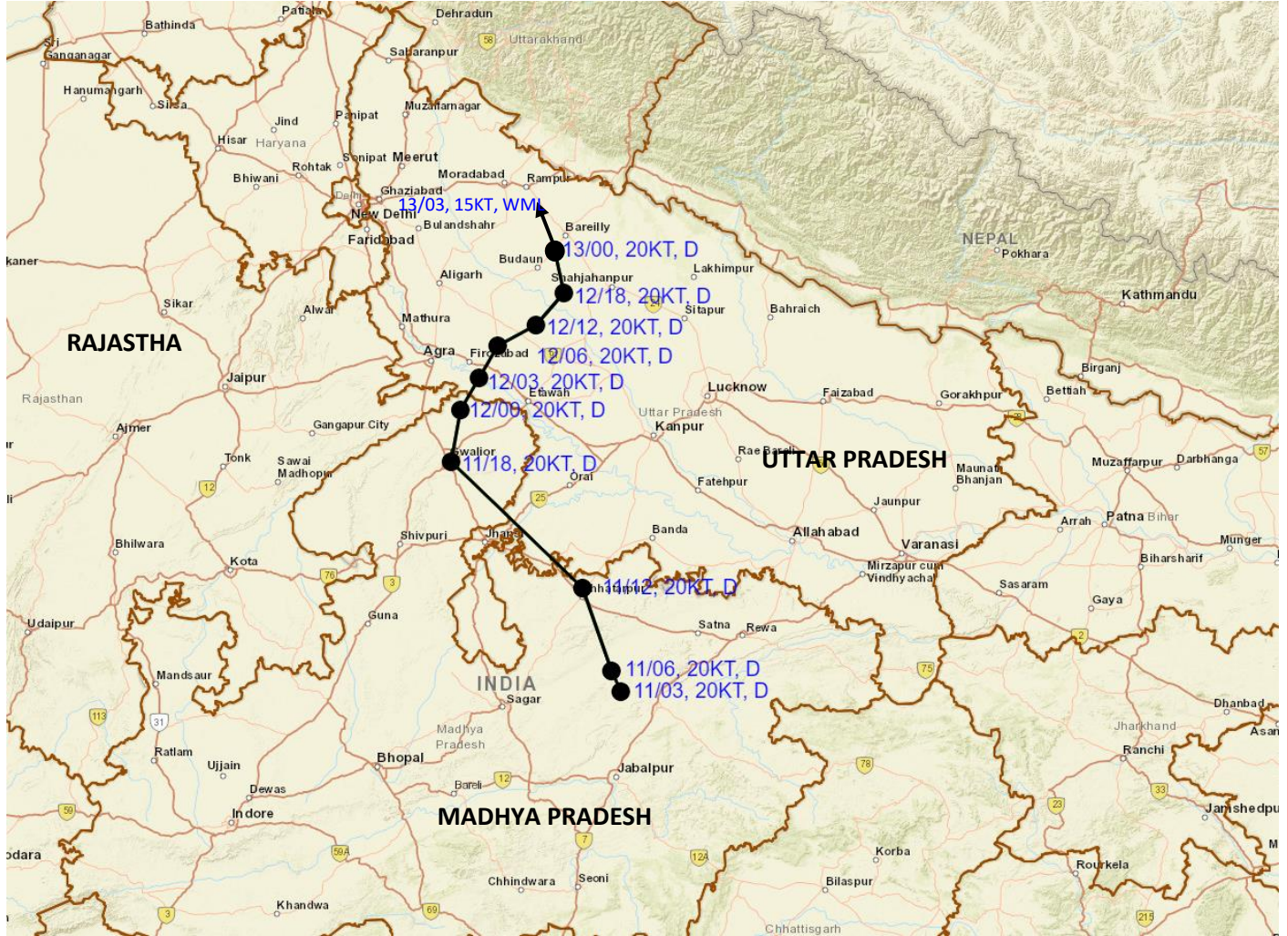
13-09-2024/(0615 to 0642) GMT
13-09-2024/(1145 to 1212) IST



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OBSERVED TRACK OF LAND DEPRESSION OVER CENTRAL INDIA DURING 11TH – 13TH SEPTEMBER, 2024

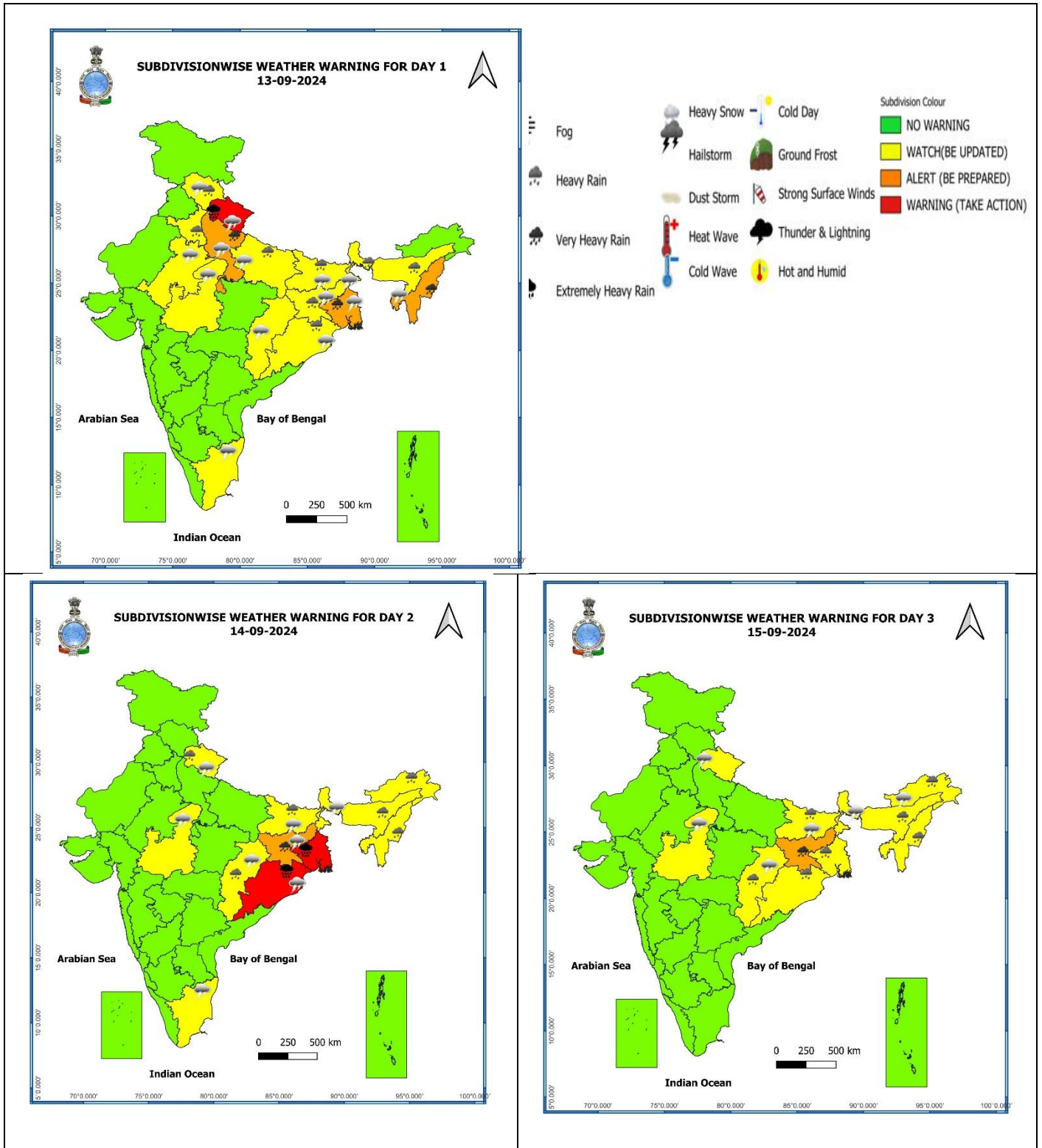


DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

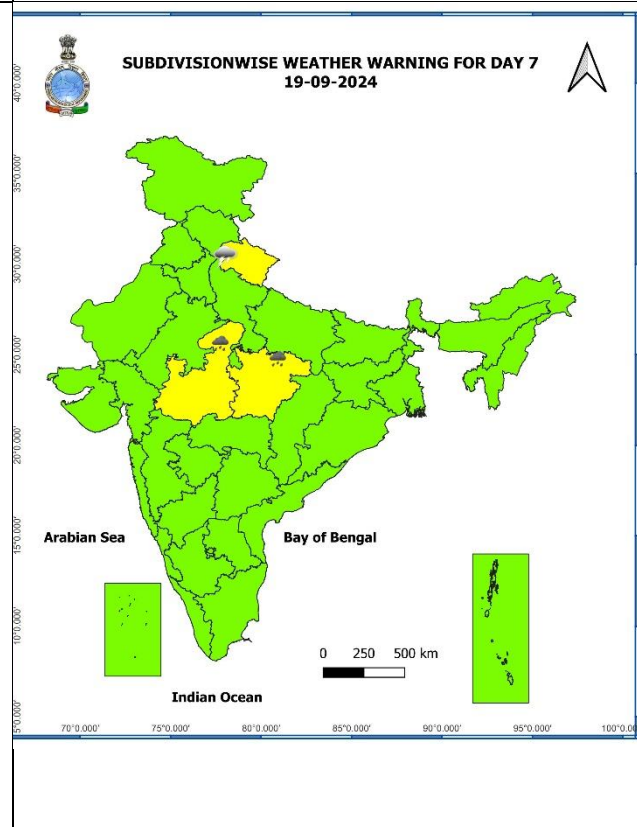
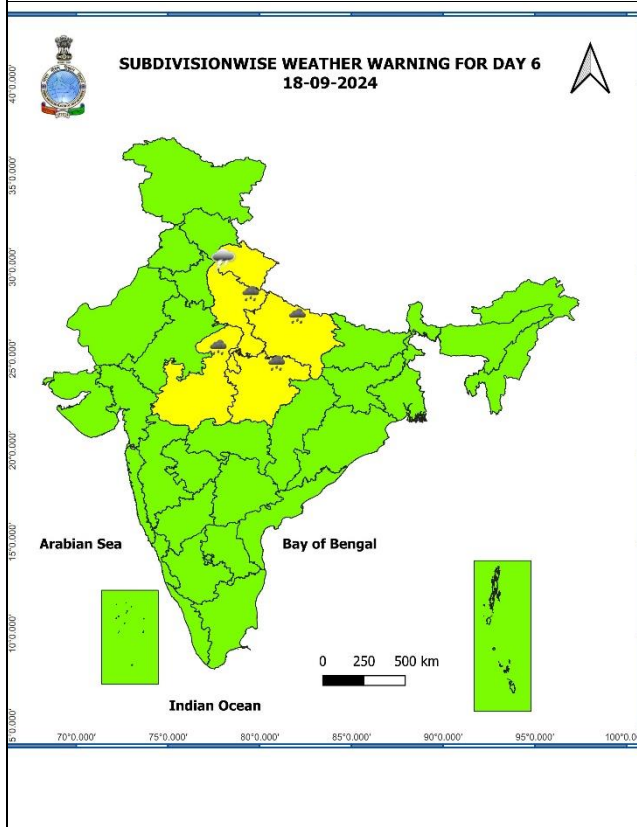
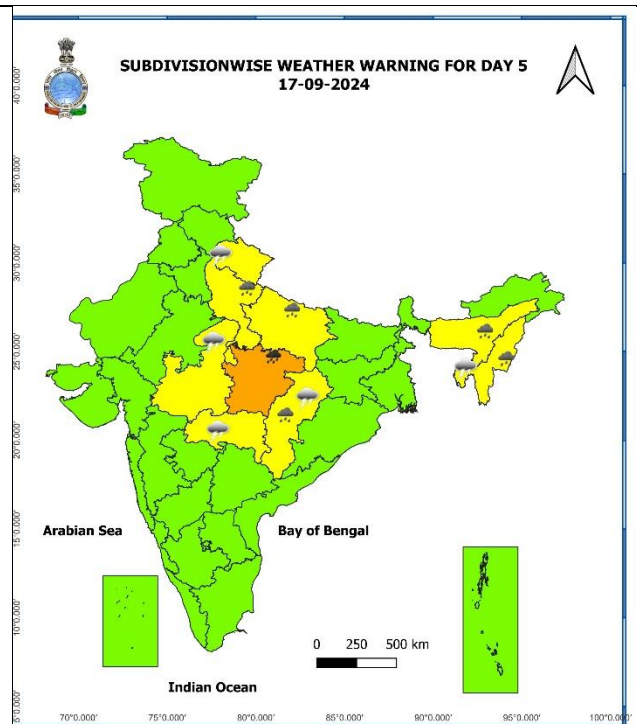
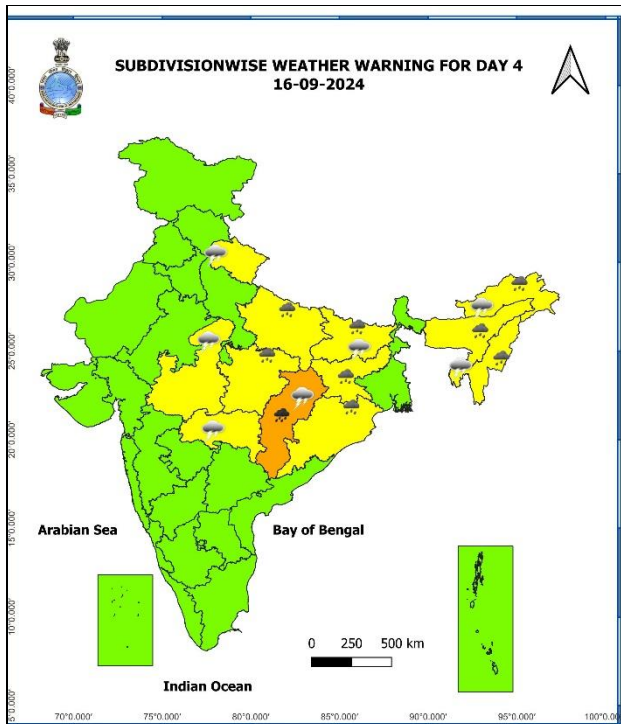
- LESS THAN 34 KT
- 34-47 KT
- ≥ 48 KT
- OBSERVED TRACK
- FORECAST TRACK
- CONE OF UNCERTAINTY

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Warning Graphics



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- Action may be taken based on **ORANGE AND RED COLOUR** warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases

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Flash Flood Guidance

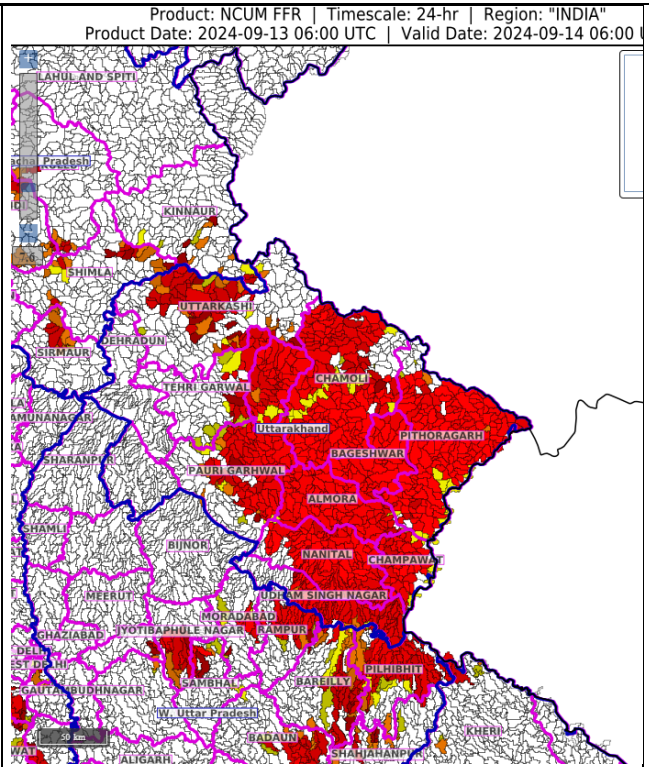
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24 hours Outlook for the Flash Flood

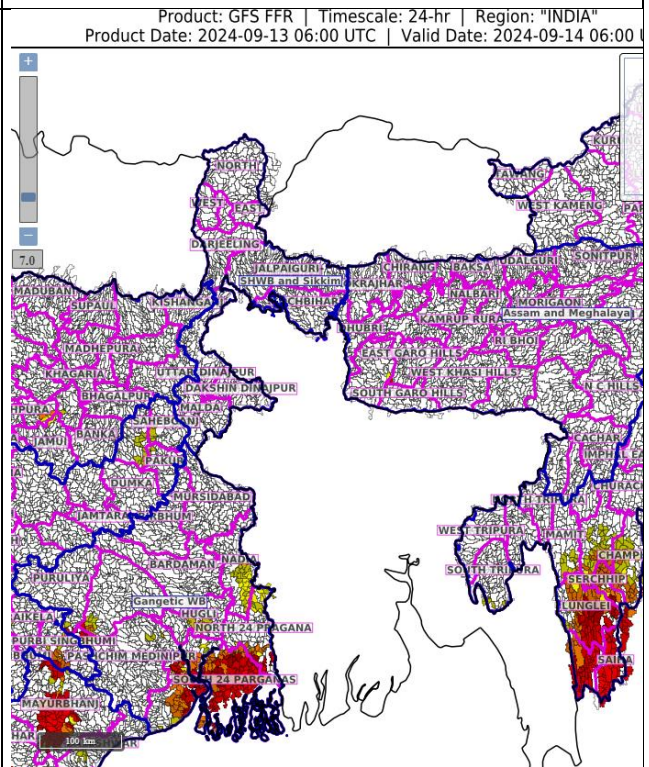
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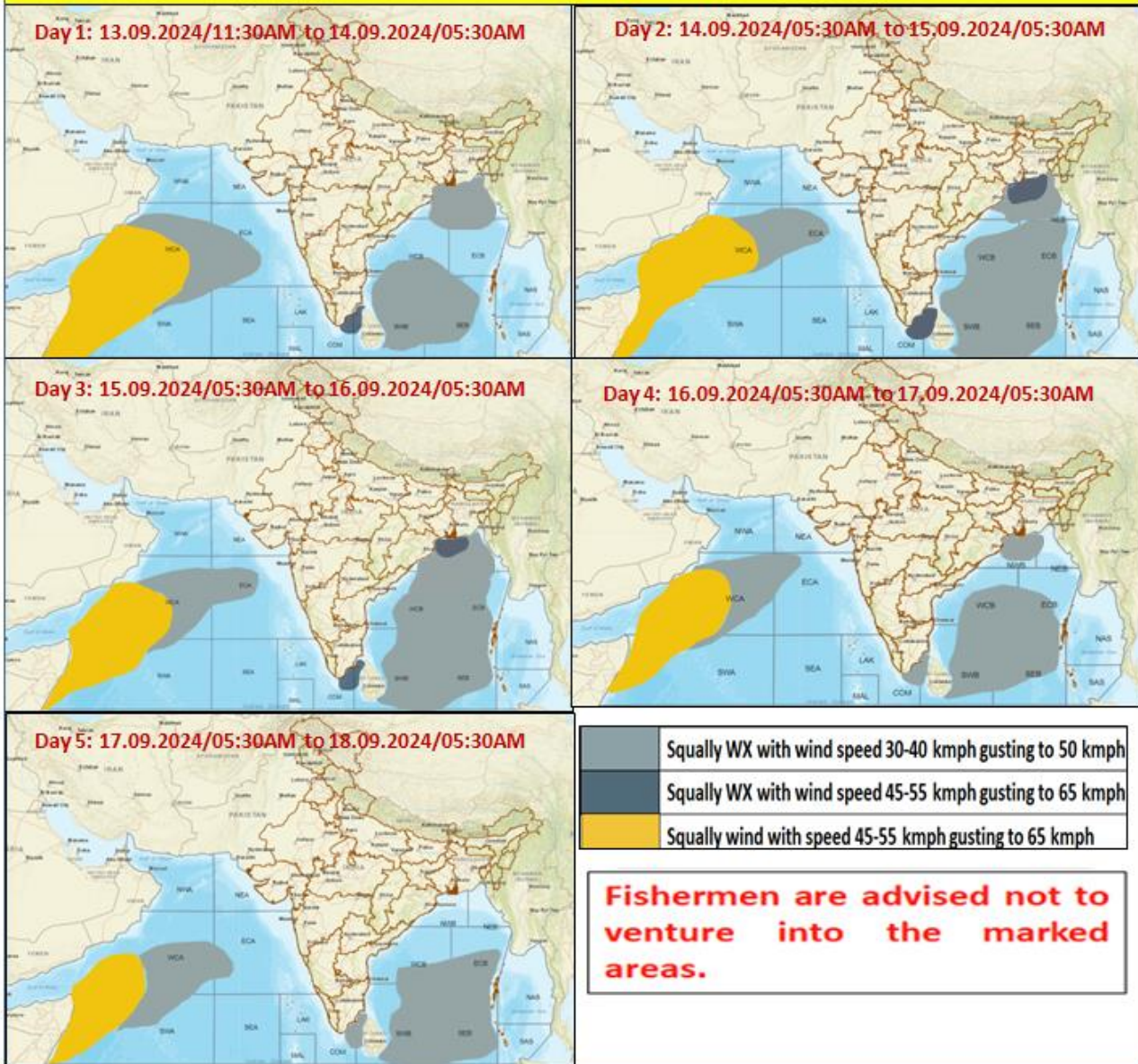
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Fishermen Warning Graphics



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**Significant Rainfall recorded during past 24 hours till 0830 hours IST of today
13.09.2024 (in cm):**

- ❖ **Uttarakhand:** Lohaghat (Champawat): 26, Champawat (Champawat) : 20, Banbasa (Champawat) : 13, Khatima (Udham singh nagar) : 13, Kashipur (Udham singh nagar) : 11, Pithoragarh (Pithoragarh) : 11, Jaspur (Udham singh nagar) : 9, Mukteshwar (Nainital) : 9, Pantnagar (Udham singh nagar) : 9, Pati (Champawat) : 9, Haldwani (Nainital) : 9, Almora (Almora) : 8, Betalghat (Nainital) : 7, Ranikhet (Almora) : 7, Nainital (Nainital) : 7, Haridwar (Haridwar) : 7, Gairsain (Chamoli) : 7,
- ❖ **West Uttar Pradesh:** Bijnor (dist Bijnor) 18, Kasganj (dist Kasganj) 15, Sahawar (dist Kasganj) 15, Budaun (dist Badaun) 14, Mirganj (dist Bareilly) 13, Sahaswan (dist Badaun) 13, Pawayan (dist Shahjahanpur) 13, Baheri (dist Bareilly) 12, Nauganva Sadat (dist Amroha) 12, Sikandra Rao (dist Hathras) 11, Amroha (dist Amroha) 11, Moradabad Cwc (dist Moradabad) 11, Hasanpur (dist Amroha) 10, Dhampur (dist Bijnor) 10, Dataganj (dist Badaun) 10, Aligarh (dist Aligarh) 10, Bilari (dist Moradabad) 10, Moradabad (dist Moradabad) 9, Thakurdwara (dist Moradabad) 9, Kasba Tanda (dist Rampur) 9, Jansath (dist Muzaffarnagar) 9, Jasrana (dist Firozabad) 9, Nagina (dist Bijnor) 9, Moradabad Obsy (dist Moradabad) 9, Shahjahapur Obsy (dist Shahjahanpur) 9, Bisauli (dist Badaun) 9, Narora (dist Bulandshahar) 8, Aonla (dist Bareilly) 8, Mawana (dist Meerut) 8, Nawabganj (dist Bareilly) 8, Aliganj (dist Etah) 8, Etawah (cwc) (dist Etawah) 8, Chandpur (dist Bijnor) 8, Bareilly Cwc (dist Bareilly) 8, Suar (dist Rampur) 8, Agra (cwc) (dist Agra) 7, Gunnaur (dist Sambhal) 7, Chandausi (dist Sambhal) 7, Pilibhit Tehsil (dist Pilibhit) 7, Shahjahanpur (t) (dist Shahjahanpur) 7, Tundla (dist Firozabad) 7, Bisalpur (dist Pilibhit) 7, Bareilly Pbo (dist Bareilly) 7,
- ❖ **East Uttar Pradesh:** Muhammadi (dist Kheri) 14, Ankinghat (dist Kanpur Dehat) 12, Nighasan (dist Kheri) 11, Neemsar (dist Sitapur) 11, Dhaurahara (dist Kheri) 11, Kaimganj (dist Farrukhabad) 11, Mahsi (dist Bahraich) 10, Katarniaghat (dist Bahraich) 10, Nanpara (dist Bahraich) 9, Hardoi Obsy (dist Hardoi) 9, Dabri Fmo (dist Farrukhabad) 8, Kheri Lakhimpur (dist Kheri) 7, Chhibramau (dist Kannauj) 7, Bahraich (dist Bahraich) 7, Shardanagar (dist Kheri) 7,
- ❖ **East Rajasthan:** Viratnagar Sr (dist Jaipur) 8, Asnawar Sr (dist Jhalawar) 8, Bharatpur Tehsil Sr (dist Bharatpur) 7, Shahabad (dist Baran) 7,
- ❖ **Haryana-Chandigarh-Delhi:** Hassanpur (dist Palwal) 7, Delhi Ridge (dist North Delhi) 7,
- ❖ **West Madhya Pradesh:** Ambah (dist Morena) 7, Karhal (dist Sheopur) 7, Porsa (dist Morena) 7,
- ❖ **Bihar:** Barauni (dist Begusarai) 7,

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