



**India Meteorological Department  
(Ministry of Earth Sciences)**

**NATIONAL BULLETIN NO. 13 (LAND/02/2024)**

**TIME OF ISSUE: 1520 HOURS IST**

**DATED: 27.08.2024**

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**Sub: (a) Deep Depression over north Gujarat**

The deep depression over north Gujarat moved slowly westwards with a speed of 8 kmph during past 6 hours and lay centered at 1130 hours IST of today, the 27<sup>th</sup> August over the same region near latitude 23.7°N and longitude 71.7 °E, about 20 km southeast of Radhanpur (Gujarat), 80 km southwest of Deesa (Gujarat), 120 km northwest of Ahmedabad (Gujarat), 110 km north of Surendranagar (Gujarat) and 200 km east-northeast of Bhuj (Gujarat).

It is likely to move slowly west-southwestwards across Gujarat region and reach Saurashtra & Kutch coast and adjoining areas of Pakistan and northeast Arabian Sea by morning of 29<sup>th</sup> August.

**(b) Low Pressure Area over northwest Jharkhand and neighbourhood**

The low pressure area over northwest Jharkhand and neighbourhood moved slightly west-northwestwards and lay over the same region at 1130 hours IST of today, the 27<sup>th</sup> August 2024. It is likely to continue to move west-northwestwards across Jharkhand, and north Chhattisgarh & adjoining southeast Uttar Pradesh and weaken gradually during next 24 hours.

## **Warnings:**

### **(i) Rainfall Warning:**

#### **Gujarat State:**

**(a) North Gujarat region:** Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places is very likely over North Gujarat on 27<sup>th</sup> August and heavy rainfall at isolated places on 28<sup>th</sup> & 29<sup>th</sup> August.

**(b) South Gujarat Region:** Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places is likely on 27<sup>th</sup> heavy to very heavy rainfall at isolated places is likely on 28<sup>th</sup> August and heavy rainfall at isolated places during 29<sup>th</sup> to 31<sup>st</sup> August.

**(c) Saurashtra & Kutch:** Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places is likely during 27<sup>th</sup> to 29<sup>th</sup> and heavy rainfall at isolated places on 30<sup>th</sup> August.

**South Rajasthan:** Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places is very likely on 27<sup>th</sup> and heavy rainfall at isolated places on 28<sup>th</sup> August.

**Madhya Maharashtra:** Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places on 27<sup>th</sup> and heavy rainfall at isolated places is likely on 28<sup>th</sup> August.

**Konkan & Goa:** Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places on 27<sup>th</sup> and heavy rainfall at isolated places is likely on 28<sup>th</sup> August.

**West Madhya Pradesh:** Light to moderate rainfall at most places with heavy rainfall at isolated places over West Madhya Pradesh is very likely on 27<sup>th</sup> August.

**Odisha:** Light to moderate rainfall at most places with heavy rainfall at isolated places is likely during 27<sup>th</sup> to 28<sup>th</sup> August and heavy to very heavy rainfall on 29<sup>th</sup> August.

**Gangetic West Bengal:** Light to moderate rainfall at most places with heavy rainfall at isolated places is likely on 27<sup>th</sup> August.

**Jharkhand:** Light to moderate rainfall at many places with heavy to very heavy rainfall at isolated places is likely on 27<sup>th</sup> and heavy rainfall at isolated places on 28<sup>th</sup> August.

**Bihar:** Light to moderate rainfall at many places with heavy rainfall at isolated places is likely during 27<sup>th</sup> to 28<sup>th</sup> August.

### **(ii) Wind warning:**

- Squally wind speed reaching 40-50 kmph gusting to 60 kmph is very likely over the districts of North Gujarat region on 27<sup>th</sup> August; Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely over the districts of South Gujarat Region and Saurashtra & Kutch during 27<sup>th</sup>-29<sup>th</sup> August.
- Squally wind speed reaching 55-65 kmph gusting to 75 kmph is very likely to prevail along & off Gujarat coasts & adjoining Pakistan coasts and northeast & adjoining eastcentral Arabian Sea during 27<sup>th</sup>-30<sup>th</sup> August.
- Strong surface wind speed reaching 40-50 kmph gusting to 60 kmph is very likely to prevail over South Rajasthan on 27<sup>th</sup> August.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail along and off north Maharashtra coasts on 27- 29<sup>th</sup> August.

### **(iii) Sea condition:**

- Squally weather with Rough to very Rough sea conditions is very likely to prevail along & off Gujarat & adjoining Pakistan and north Maharashtra Coasts and Northeast & adjoining Eastcentral Arabian Sea till 30<sup>th</sup> August.

**(iv) Fisherman warning:**

- Fishermen are advised not venture into Northeast & adjoining Eastcentral Arabian Sea and along & off Gujarat & adjoining Pakistan and north Maharashtra Coasts till 30<sup>th</sup> August.

**(v) Advisory for offshore/onshore Exploration and Production (E & P) Operators:**

The small ships and offshore -onshore E & P operators, shipping and port authorities along & off Gujarat & north Maharashtra Coasts and Northeast & adjoining Eastcentral Arabian Sea are advised to keep watch on developing weather and take necessary actions.

**(vi) Impact Expected**

- 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.
- Reduction of visibility over sea area due to sea spray induced by strong wind and heavy rainfall.
- Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- Minor damage to kutcha 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.
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

**(v) Action Suggested**

- Fishermen are advised not to venture into Northeast & adjoining Eastcentral Arabian Sea and along & off Gujarat & adjoining Pakistan and north Maharashtra Coasts till 30<sup>th</sup> August.
- Judicious regulation of offshore/onshore Operations
- 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.

**(vi) Agromet advisories for Heavy Rainfall likely over various Madhya Pradesh, South Rajasthan, Gujarat State and North Maharashtra**

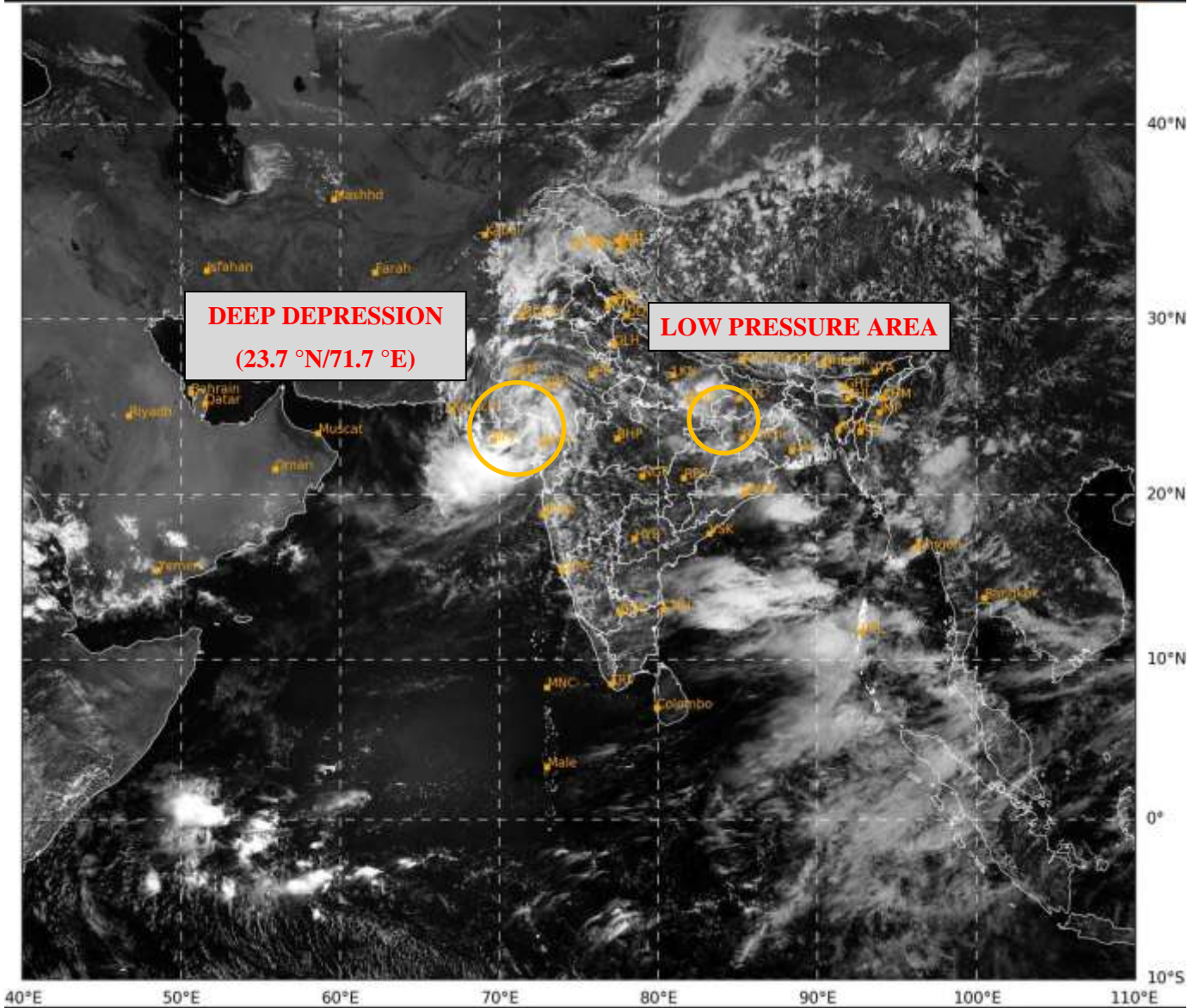
- Make provision for draining out excess water from crop fields to avoid water stagnation in Madhya Pradesh, South Rajasthan, Gujarat State and North Maharashtra.
- Provide mechanical support to horticultural crops and staking to vegetables.

Significant Rainfall (in cm) recorded during past 24 hours till 0830 hours IST of today, the 27.08.2024 is placed at Annexure-1.

**Next bulletin will be issued at 2030 hours IST of today, the 27<sup>th</sup> August, 2024.**

**(Dr. Ananda Kumar Das)  
Scientist F, Cyclone Warning, New Delhi**

*Copy to: ACWC Kolkata/ACWC Mumbai/RMC Mumbai/CWC Ahmedabad/MC Jaipur/RMC, Nagpur/MC, Bhopal//CWC Bhubaneswar/MC, Goa/MC, Ranchi*







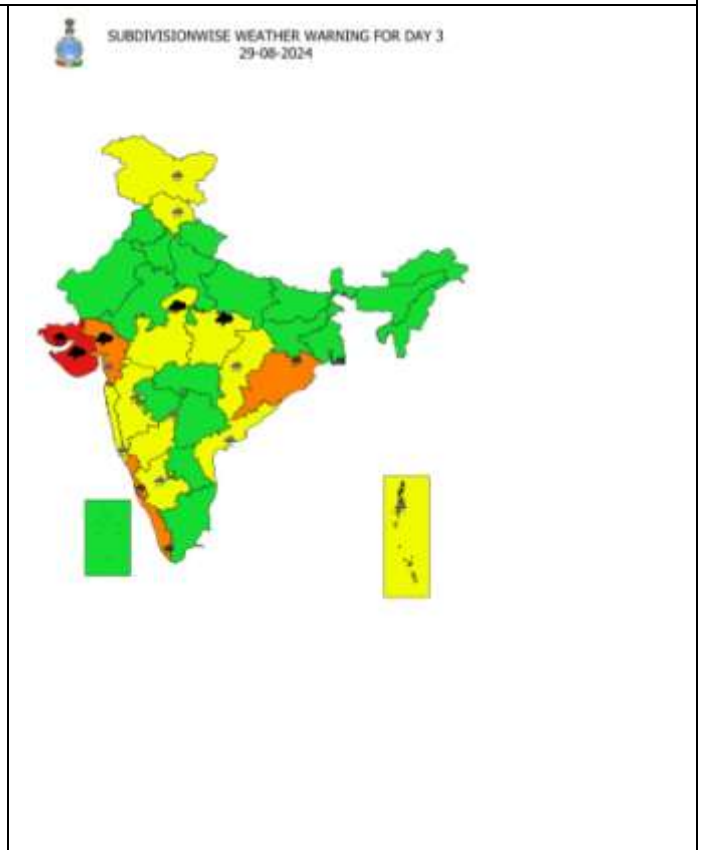
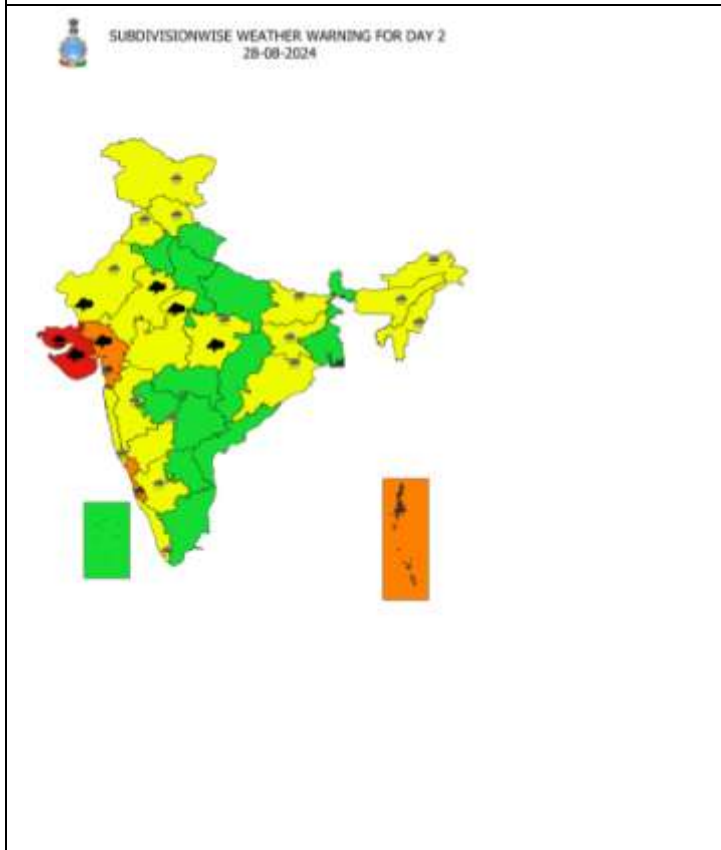
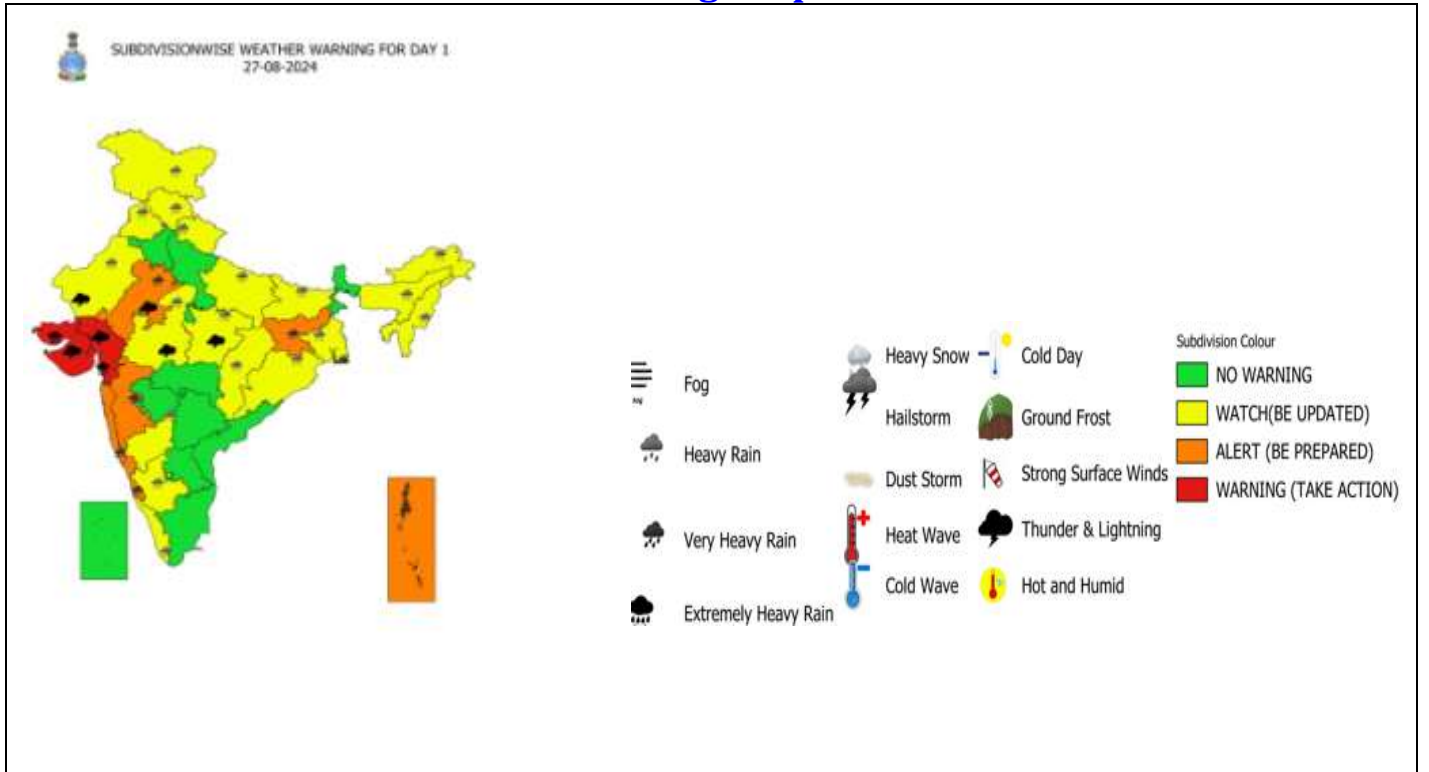
**OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER NORTH GUJARAT BASED ON 0600 UTC (1130 IST) OF 27<sup>TH</sup> AUGUST, 2024.**

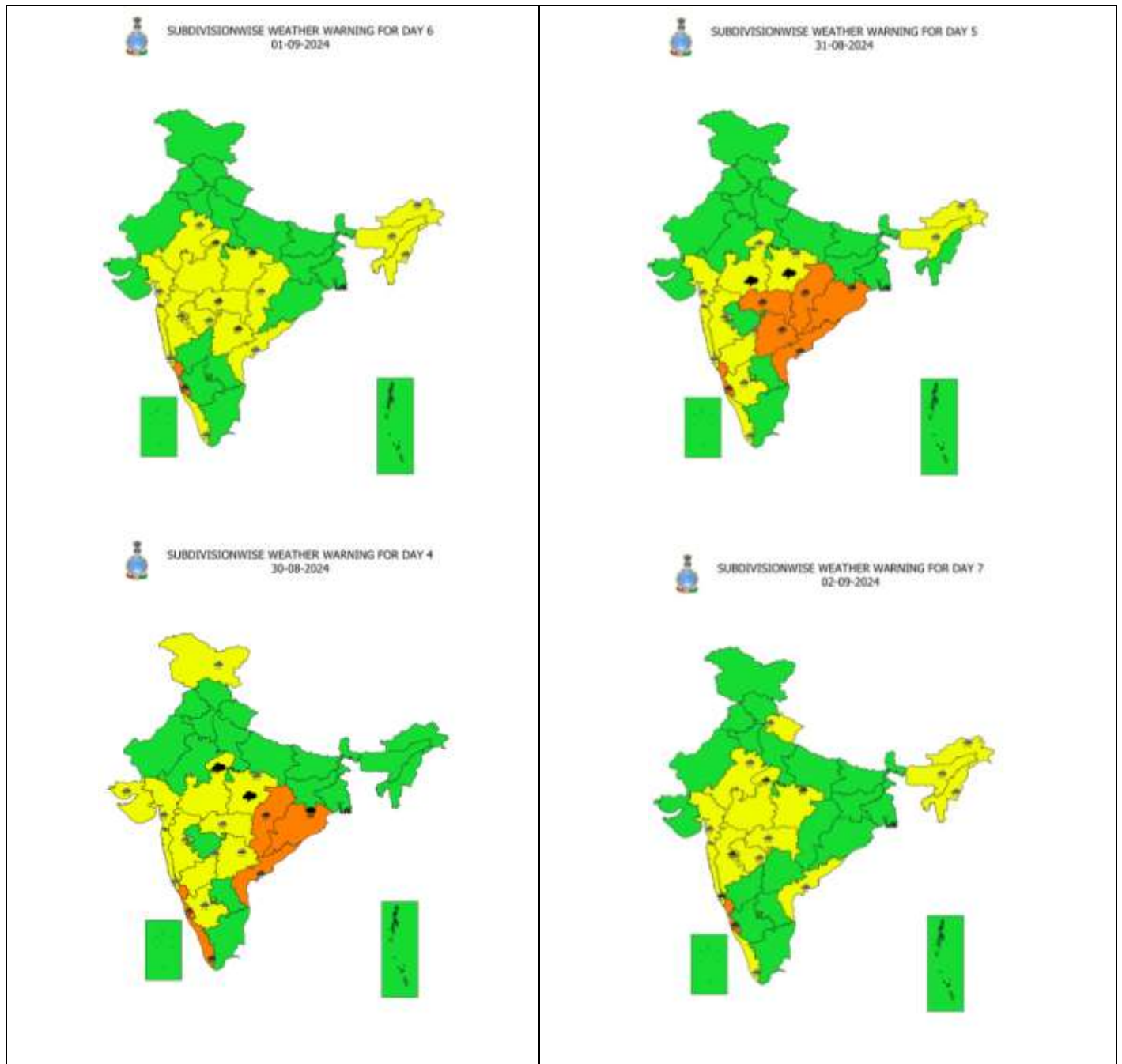


DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE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

-  LESS THAN 34 KT
-  34-47 KT
-   $\geq$  48 KT
-  OBSERVED TRACK
-  FORECAST TRACK
-  CONE OF UNCERTAINTY

# Weather Warning Graphics

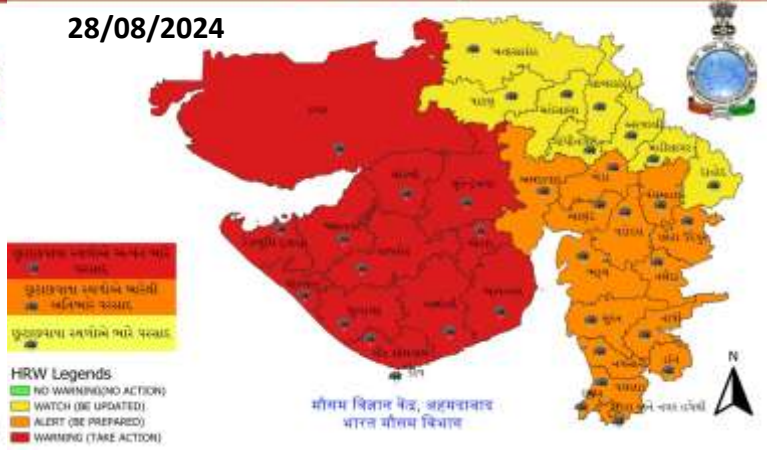
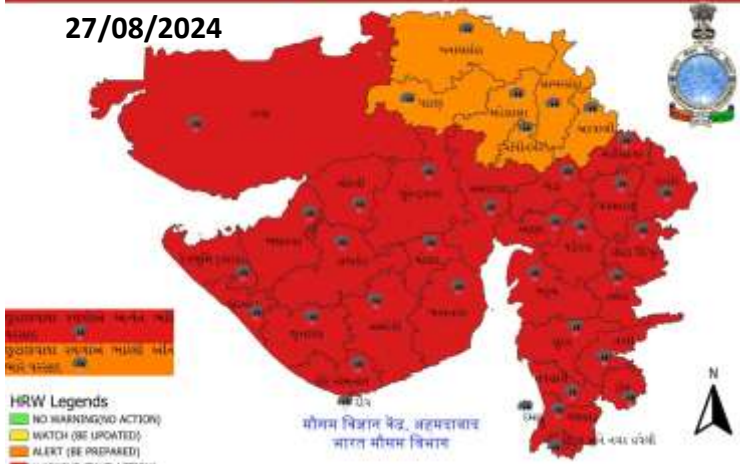




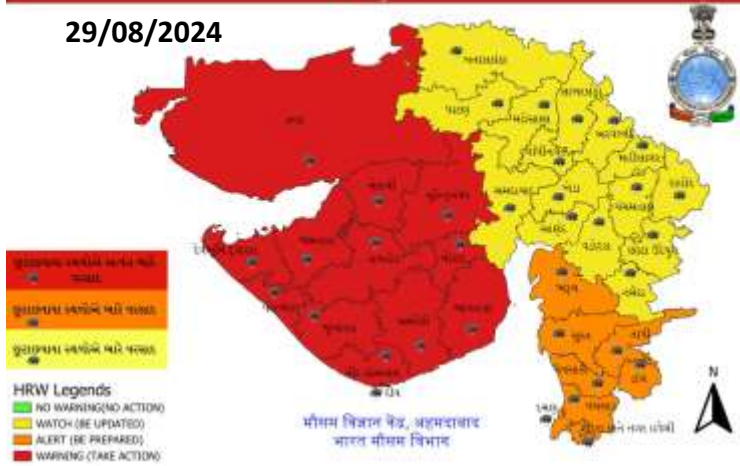
- Action may be taken based on **ORANGE AND RED** COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

# District wise Warning Graphics Gujarat

દિવસ - 1 ગુજરાત રાજ્ય અને દીવ, દમણ, દાદરા નગર હવેલી ની 27-08-2024 માટે 'ભારે વરસાદ ની ચેતવણી !'  
 દિવસ - 2 ગુજરાત રાજ્ય અને દીવ, દમણ દાદરા નગર હવેલી ની 28-08-2024 માટે 'ભારે વરસાદ ની ચેતવણી !'



દિવસ - 3 ગુજરાત રાજ્ય અને દીવ, દમણ દાદરા નગર હવેલી ની 29-08-2024 માટે 'ભારે વરસાદ ની ચેતવણી !'



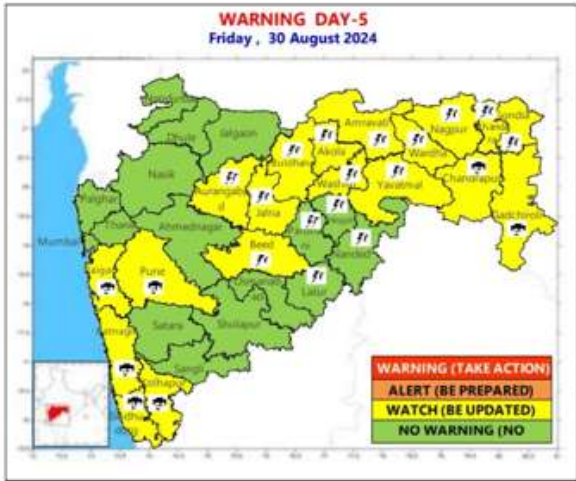
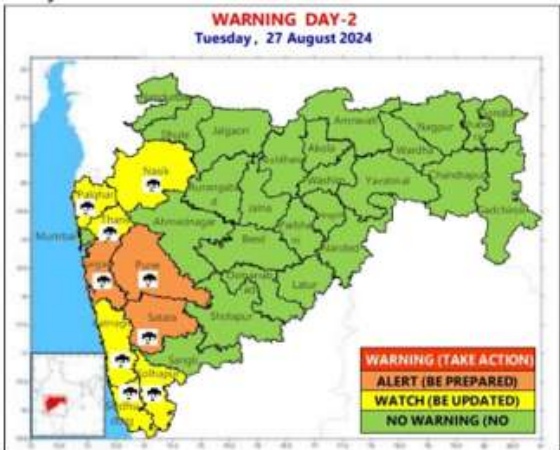
દિવસ - 4 ગુજરાત રાજ્ય અને દીવ, દમણ દાદરા નગર હવેલી ની 30-08-2024 માટે 'ભારે વરસાદ ની ચેતવણી !'



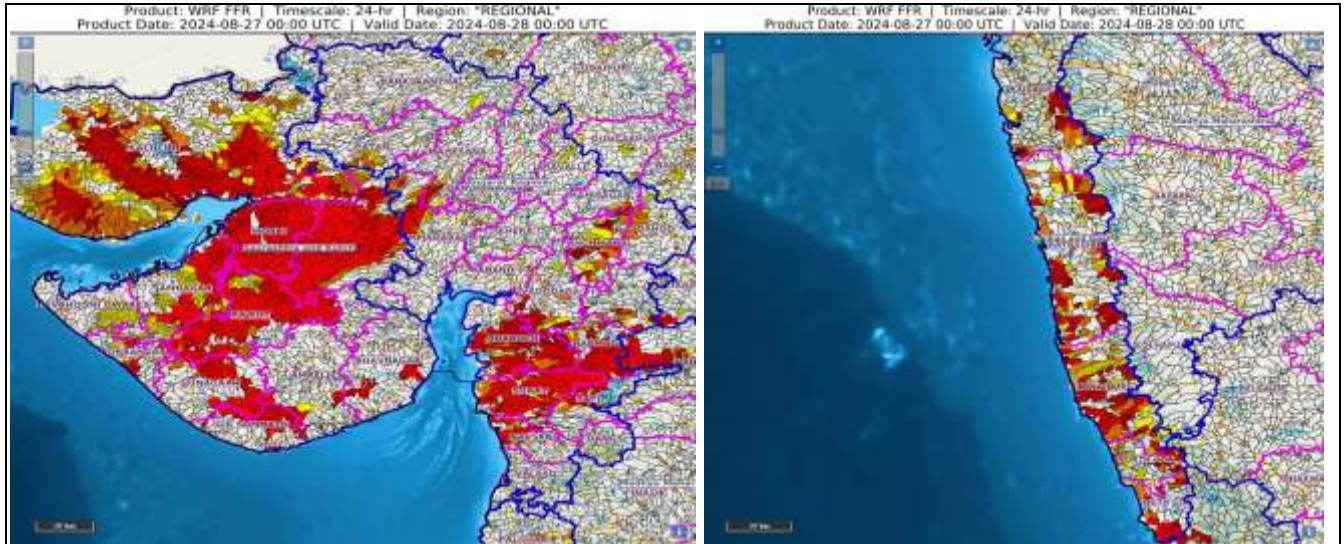
**Rajasthan**






Maharashtra



## Flood Guidance



### Flash Flood Risk

	<b>High Risk (Take Action)</b>
	<b>Moderate Risk (Be Prepared)</b>
	<b>Low Risk (Be Updated)</b>

### 24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 28-08-2024 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of

**Gujarat Region** - Bharuch, Chhota Udepur, Narmada, Navsari, Surat, Tapi and Vadodara districts.

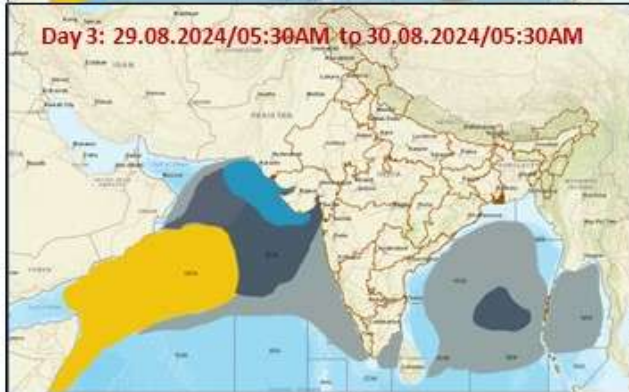
**Saurashtra & Kutch** - Amreli, Bhavnagar, Botad, Diu, Gir Somnath, Jamnagar, Junagarh, Porbandar, Rajkot, Surendranagar, Morbi and Kachchh districts.

Low flash flood risk likely over few watersheds & neighbourhoods of

**Konkan & Goa** - North Goa, South Goa, Mumbai City, Palghar, Raigarh, Ratnagiri, Sindhudurg and Suburban Mumbai districts.

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

**Fishermen Warning Graphics**



	Squally WX with wind speed 35-45 kmph gusting to 55 kmph
	Squally WX with wind speed 45-55 kmph gusting to 65 kmph
	Squally wind with speed 45-55 kmph gusting to 65 kmph
	Squally wind with speed 55-65 kmph gusting to 75 kmph

**Fishermen are advised not to venture into the marked areas.**

**Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 27.08.2024 (in cm):**

- ❖ **Saurashtra & Kutch:** Tankara (Morbi) 36, Wankaner (Morbi) 34, Rajkot (Rajkot) 32, Kalavad (Jamnagar) 26, Mandvi(k) (Kutch) 25, Khambhalia (Devbhoomi Dwarka) 25, Lodhika (Rajkot) 23, Chotila (Surendranagar) 22, Morbi (Morbi) 22, Nakhatrana (Kutch) 22, Thangadh (Surendranagar) 21, Lalpur (Jamnagar) 21, Kotdasangani (Rajkot) 17, Chuda (Surendranagar) 16, Jodia (Jamnagar) 16, Dhrol (Jamnagar) 14, Sayla (Surendranagar) 14, Lakhtar (Surendranagar) 13, Barvala (Botad) 13, Jamnagar (Jamnagar) 12, Gadhda (Botad) 12, Dasada (Surendranagar) 12, Vadia (Amreli) 12, Paddhari (Rajkot) 12, Gondal (Rajkot) 12, Botad (Botad) 12, Visavadar (Junagadh) 11, Ranpur (Botad) 11, Muli (Surendranagar) 11, Wadhvan (Surendranagar) 11, Jasdan (Rajkot) 11, Dwarka (Devbhoomi Dwarka) 11, Naliya (Kutch) 11, Babra (Amreli) 11, Kalyanpur (Devbhoomi Dwarka) 10, Jamnagar (Jamnagar) 10, Okha (Devbhoomi Dwarka) 10, Surendranagar (Surendranagar) 10, Keshod (Junagadh) 10
- ❖ **Gujarat Region:** Morva Hadaf (Panchmahal) 34, Tarapur (Anand) 31, Nadiad (Kheda) 29, Khambhat (Anand) 29, Borsad (Anand) 28, Padra (Vadodara) 28, Vadodara (Vadodara) 28, Godhra (Panchmahal) 27, Sojitra (Anand) 27, Wanakbori (Mahisagar) 26, Anand (Anand) 24, Mahemdavad (Kheda) 23, Vaso (Kheda) 22, Balasinor (Mahisagar) 21, Mahudha (Kheda) 21, Dholka (Ahmedabad) 20, Bilodara\_aws (Kheda) 19, Matar (Kheda) 19, Kheda (Kheda) 19, Meghraj (Aravalli) 19, Halol (Panchmahal) 18, Ghoghamba (Panchmahal) 18, Jotana (Mehsana) 18, Galteshwar (Kheda) 17, Shahera (Panchmahal) 17, Santrampur (Mahisagar) 17, Jambughoda (Panchmahal) 17, Limkheda (Dahod) 17, Dhandhuka (Ahmedabad) 17, Arnej\_aws (Ahmedabad) 16, Siddhpur (Patan) 15, Fatepura (Dahod) 15, Kadi (Mehsana) 15, Singvad (Dahod) 14, Dhandhuka (Ahmedabad) 14, Mansa (Gandhinagar) 14, Abad City (Ahmedabad) 14, Kathalal (Kheda) 14, Chhota Udepur (Chhota Udepur) 14, Khanpur (Mahisagar) 14, Anklav (Anand) 14, Umreth (Anand) 13, Visnagar (Mehsana) 13, Modasa (Aravalli) 13, Dascroi (Ahmedabad) 13, Mc Ahmedabad (Ahmedabad) 13, Mandal (Ahmedabad) 13, Waghai (Dangs) 13, Bavla (Ahmedabad) 12, Virpur (Mahisagar) 12, Savli (Vadodara) 12, Dholera (Ahmedabad) 12, Becharaji (Mehsana) 12, Viramgam (Ahmedabad) 11, Jhalod (Dahod) 11, Dang (Dangs) 11, Vadodara\_aws (Vadodara) 11, Desar (Vadodara) 11, Harij (Patan) 11, Waghodia (Vadodara) 11, Petlad (Anand) 11, Bayad (Aravalli) 11, Jetpur Pavi (Chhota Udepur) 11, Vadnagar (Mehsana) 11, Godra\_aws (Panchmahal) 11, Bodeli (Chhota Udepur) 11, Vijapur (Mehsana) 10, Subir (Dangs) 10, Dhanpur (Dahod) 10, Gandhinagar (Gandhinagar) 10, Mahesana (Mehsana) 10, Kalol(g) (Gandhinagar) 10, Sanjeli (Dahod) 10, Dahegam (Gandhinagar) 10, Detroj (Ahmedabad) 10, Prantij (Sabarkantha) 10
- ❖ **Chhattisgarh:** Kusmi (Balrampur) 25, Wandrafnagar (Balrampur) 15, Raghunath Nagar (Balrampur) 9, Manora (Jashpur) 9, Sanna (Jashpur) 7
- ❖ **East Rajasthan:** Bagidora(Banswara) 20, Sallopat(Banswara) 17, Shergarh(Banswara) 17, Dhambola (Dungarpur) 14, Veja(Dungarpur) 13, Arthuna (Banswara) 11, Sajjangarh (Banswara) 10, Loharia (Banswara) 9, Khushalgarh (Banswara) 9, Chikali (Dungarpur) 9, Garhi (Banswara) 8, Kanva (Dungarpur) 7, Galiakot (Dungarpur) 7, Sanganer Tehsil(Jaipur) 7
- ❖ **East Madhya Pradesh:** Kusmi (Sidhi) 15, Sidhi (gopadbanas) (Sidhi) 14, Churhat (Sidhi) 14, Nagode (Satna) 11, Beohari (Shahdol) 11, Bahri (Sidhi) 11, Rampur (Sidhi) 10, Majhauri (Sidhi) 9, Devser (Singrauli) 9, Sihawal (Sidhi) 9, Orchha (Niwari) 8,

- Bilhari (Katni) 8, Naigarhi (Rewa) 7, Semariya (Rewa) 7, Gudh (Rewa) 7, Lavkushnagar (Chhatarpur) 7
- ❖ **Madhya Maharashtra:** Gaganbawada (Kolhapur) 13, Mahabaleshwar- Imd Obsy (Satara) 13, Surgana (Nashik) 12, Lonavala\_agri (Pune) 11, Trimbakshwar (Nashik) 11, Shahuwadi (Kolhapur) 10, Ajra (Kolhapur) 9, Chandgad (Kolhapur) 9, Radhanagari (Kolhapur) 9, Velhe (Pune) 9, Peth (Nashik) 8, Patan (Satara) 7, Igatpuri (Nashik) 7, Harsul (Nashik) 7
  - ❖ **Konkan & Goa:** Jawhar (Palghar) 12, Awalegaon - Arg (Sindhudurg) 10, Matheran (Raigad) 8, Pawarwadi (Ratnagiri) 8, Lanja (Ratnagiri) 7, Mandangad (Ratnagiri) 7, Mokheda (Palghar) 7, Vikramgad (Palghar) 7, Rajapur (Ratnagiri) 7
  - ❖ **West Madhya Pradesh:** Kathiwada (Alirajpur) 10, Bhabhra (Alirajpur) 9, Meghnagar (Jhabua) 7, Udaigarh (Alirajpur) 7, Thandla (Jhabua) 7
  - ❖ **Bihar:** Khaira (Jamui) 7, Silao (Nalanda) 7, Sono (Jamui) 7
  - ❖ **Jharkhand:** Rania (Khunti) 14, Kharsema (Seraikela-Kharsawan) 13, Maithon (Dhanbad) 12, Dumri (Giridih) 12, Bagodari (Giridih) 11, Panchet Dist Dhanbad) 9, Nandadih (Giridih) 9, Panchet (Dhanbad) 9, Nawadih (Bokaro) 9, Dumri (Giridih) 9, Hunterganj (Chatra) 8, Chandil (Seraikela-Kharsawan) 8, Markachou (Koderma) 8, Gobindpur (Dhanbad) , Madhupur (Deoghar) 8, Chakulia (East Singbhum) 8, Torpa (Khunti) 7, Giridih Bengbad (Giridih) 7, Giridih (Giridih) 7, Jamtara Fmo (Jamtara) 7, Diyakel Khunti (Khunti) 7
  - ❖ **Orissa:** Jagatsinghpur ( Jagatsinghpur) 11, Cuttack ( Cuttack) 9, Bhuban ( Dhenkanal) 9, Kantapada ( Cuttack) 9, Athgarh ( Cuttack) 7, Mundali ( Cuttack) 7, Banki ( Cuttack) 7
  - ❖ **Chhattisgarh:** Kusmi (Balrampur) 25, Wandrafnagar (Balrampur) 15, Raghunath Nagar (Balrampur) 9, Manora (Jashpur) 9, Sanna (Jashpur) 7
  - ❖ **Gangetic West Bengal:** Bankura (Bankura) 13, Luchipur (Paschim Bardhaman) 11, Diamond Harbour (South 24 Parganas) 11, Bankura (Bankura) 10, Asansol (Paschim Bardhaman) 9, Asansol (Paschim Bardhaman) 9, Jhargram (pto) (Jhargram) 8, Burnpur (Paschim Bardhaman) 8, Kalaikunda (West Midnapore) 7, Midnapore (West Midnapore) 7