



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

**NATIONAL BULLETIN NO. 16 (LAND/02/2024)**

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**Sub: Deep Depression over Saurashtra & Kachchh**

**(a) Deep Depression over Saurashtra & Kachchh**

The deep depression over Saurashtra & Kachchh and adjoining north Gujarat moved westwards with a speed of 10 kmph during past 6 hours and lay centered at 0530 hours IST of today, the 28th August over Saurashtra & Kachchh near latitude 23.7°N and longitude 70.0 °E, 50 km north-northeast of Bhuj (Gujarat), 120 km east-northeast of Naliya (Gujarat) and 320 km east-southeast of Karachi (Pakistan).

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

**(b) Low Pressure Area over northern parts of central Madhya Pradesh & adjoining south Uttar Pradesh became less marked**

The low pressure area over northern parts of central Madhya Pradesh & adjoining south Uttar Pradesh became less marked at 0530 hours IST of today, the 28<sup>th</sup> August 2024.

## **Warnings:**

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

#### **Gujarat State:**

**(a) Saurashtra & Kachchh:** 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 28<sup>th</sup> August; heavy to extremely heavy rainfall at isolated places on 29<sup>th</sup> August and heavy rainfall at isolated places on 30<sup>th</sup> August.

**(b) Gujarat region:** Light to moderate rainfall at many places with heavy rainfall at isolated places is very likely on 28<sup>th</sup> August.

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

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

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

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

- Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely over the districts of South Gujarat Region and Saurashtra & Kutch during 28<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 28<sup>th</sup>-30<sup>th</sup> August.
- Strong surface wind speed reaching 40-50 kmph gusting to 60kmph is very likely to prevail over South Rajasthan on 27<sup>th</sup> August.
- Strong wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail along and off north Maharashtra coasts on 28<sup>th</sup>- 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 till 30<sup>th</sup> August.

### **(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 30th 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) Agrometadvisories for Heavy** Rainfall likely over 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.

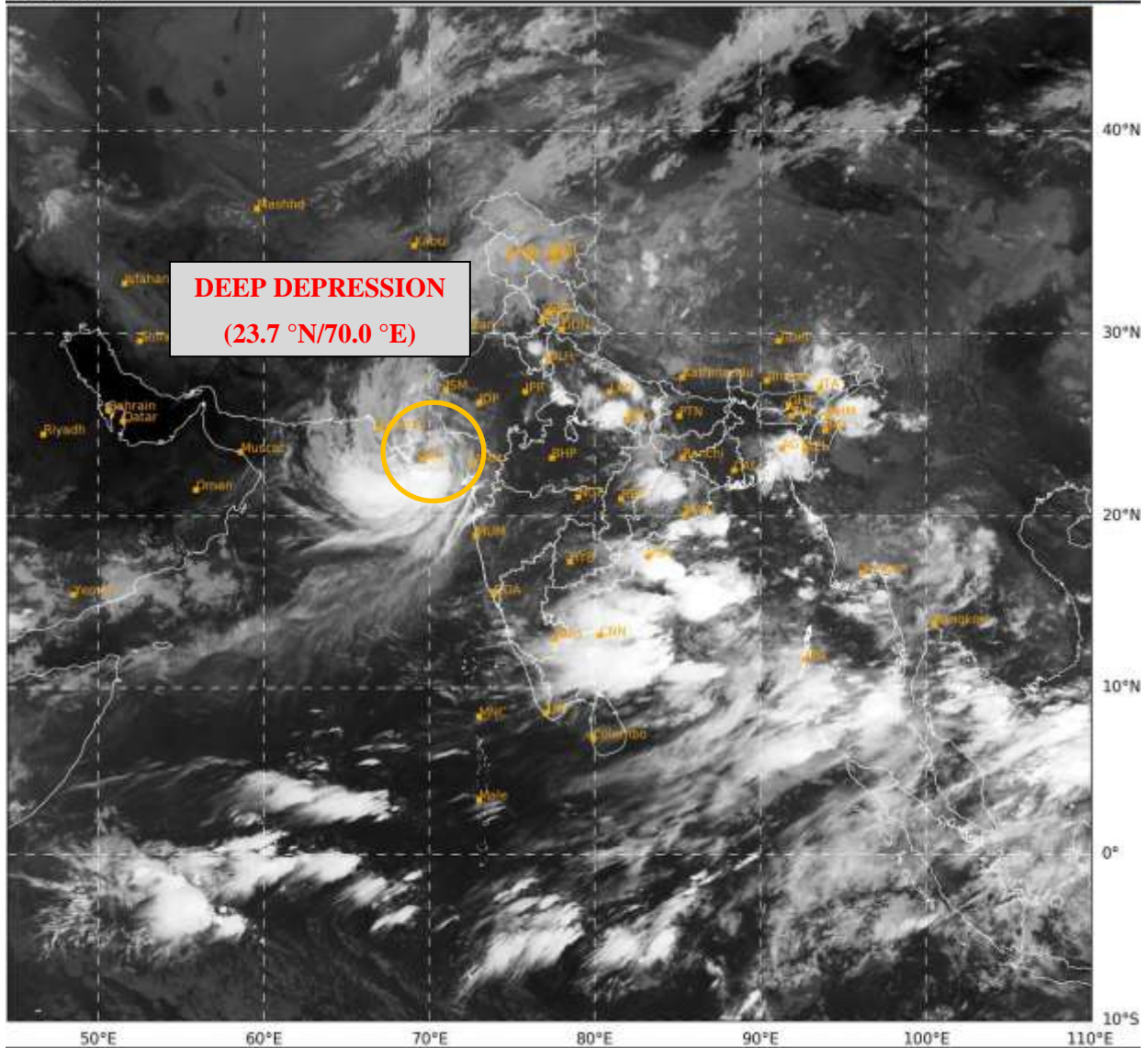
**Significant Rainfall (in cm) recorded during 0830 hours IST of 27<sup>th</sup> August to 0530 hours IST of 28<sup>th</sup> August is given below:**

Saurashtra & Kutch: **Jamnagar 55**, Dwarka 26, Parbandar 26, Rajkot 10, Naliya 8, Bhuj 7;

**Next bulletin will be issued at 1130 hours IST of today, the 28<sup>th</sup> August, 2024.**

**(M Sharma)**  
**Scientist D, 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*



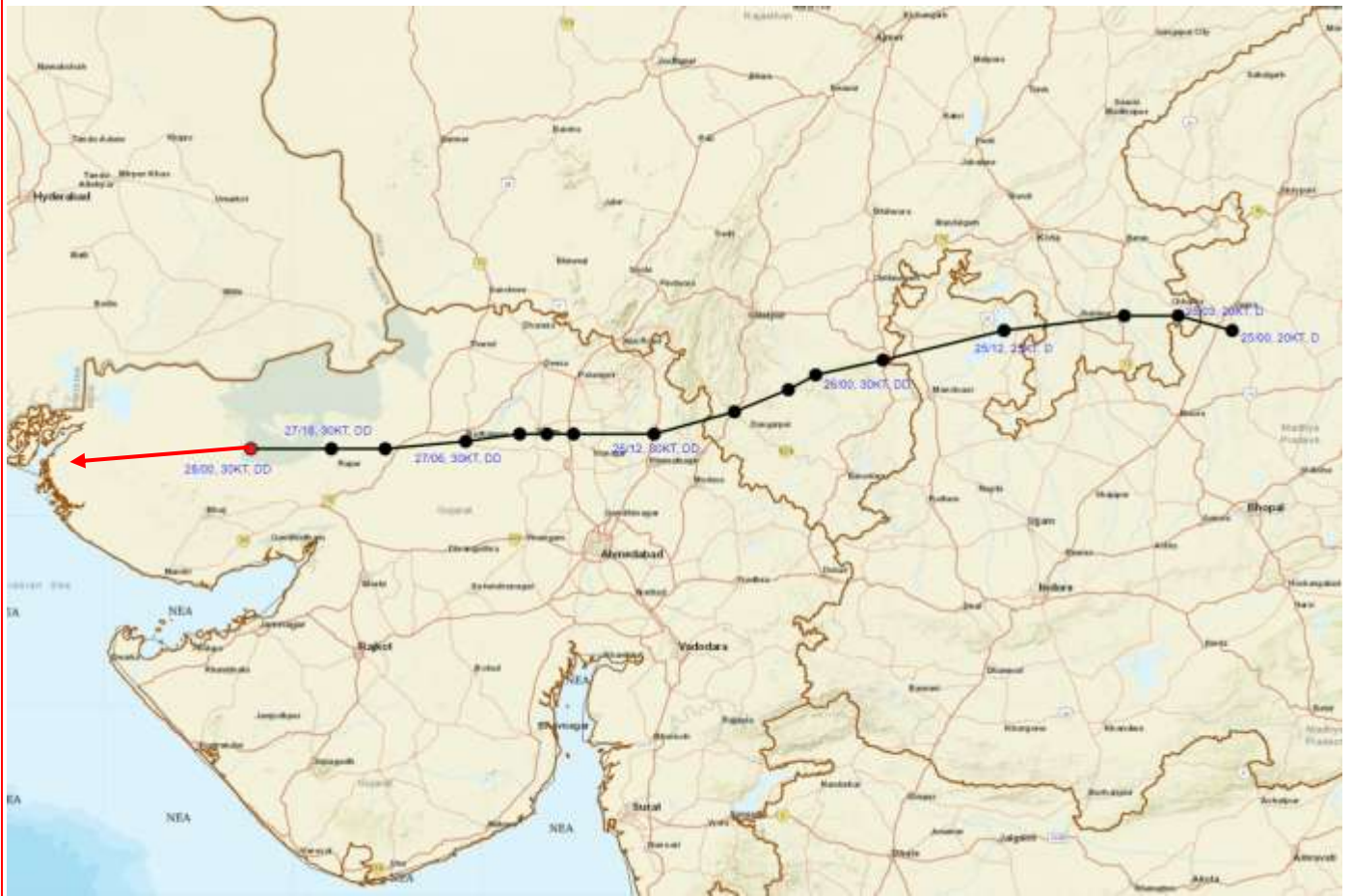
**DEEP DEPRESSION**  
**(23.7 °N/70.0 °E)**



IMD, DELHI



## OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER SAURASHTRA & KACHCHH BASED ON 0000 UTC (0530 IST) OF 28<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 ( $\geq 20$  KT)



LESS THAN 34 KT



34-47 KT



$\geq 48$  KT



OBSERVED TRACK

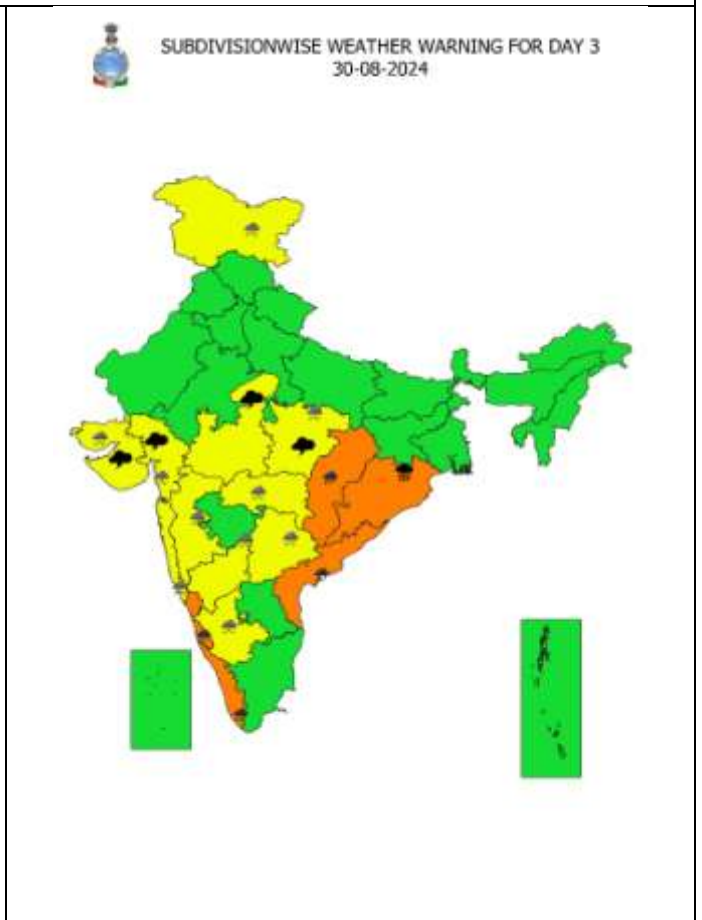
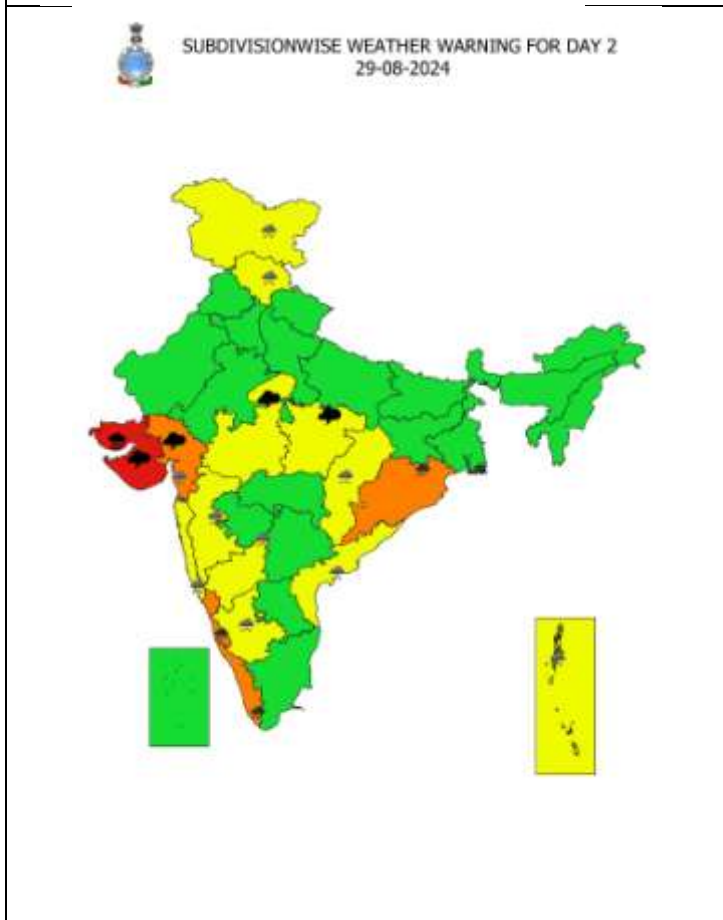
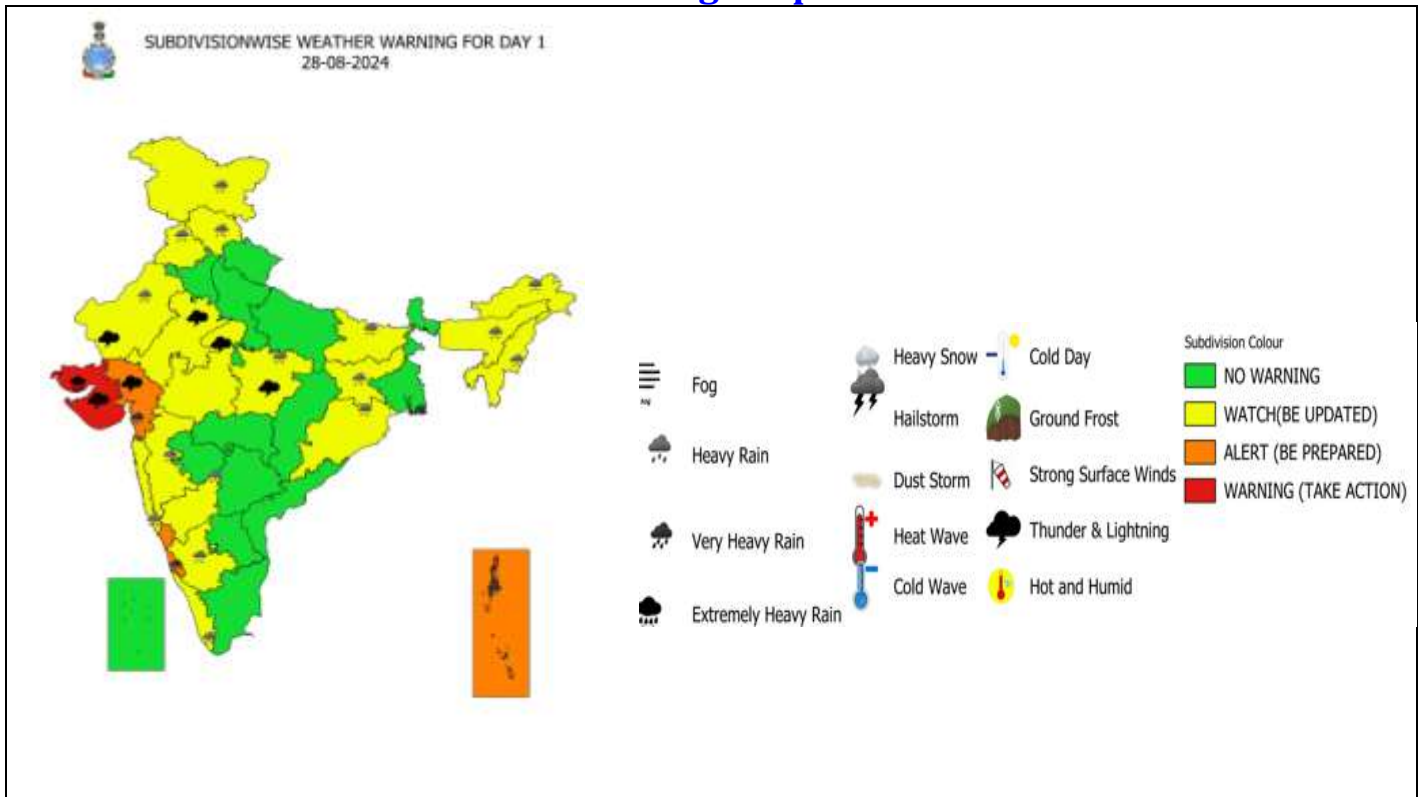


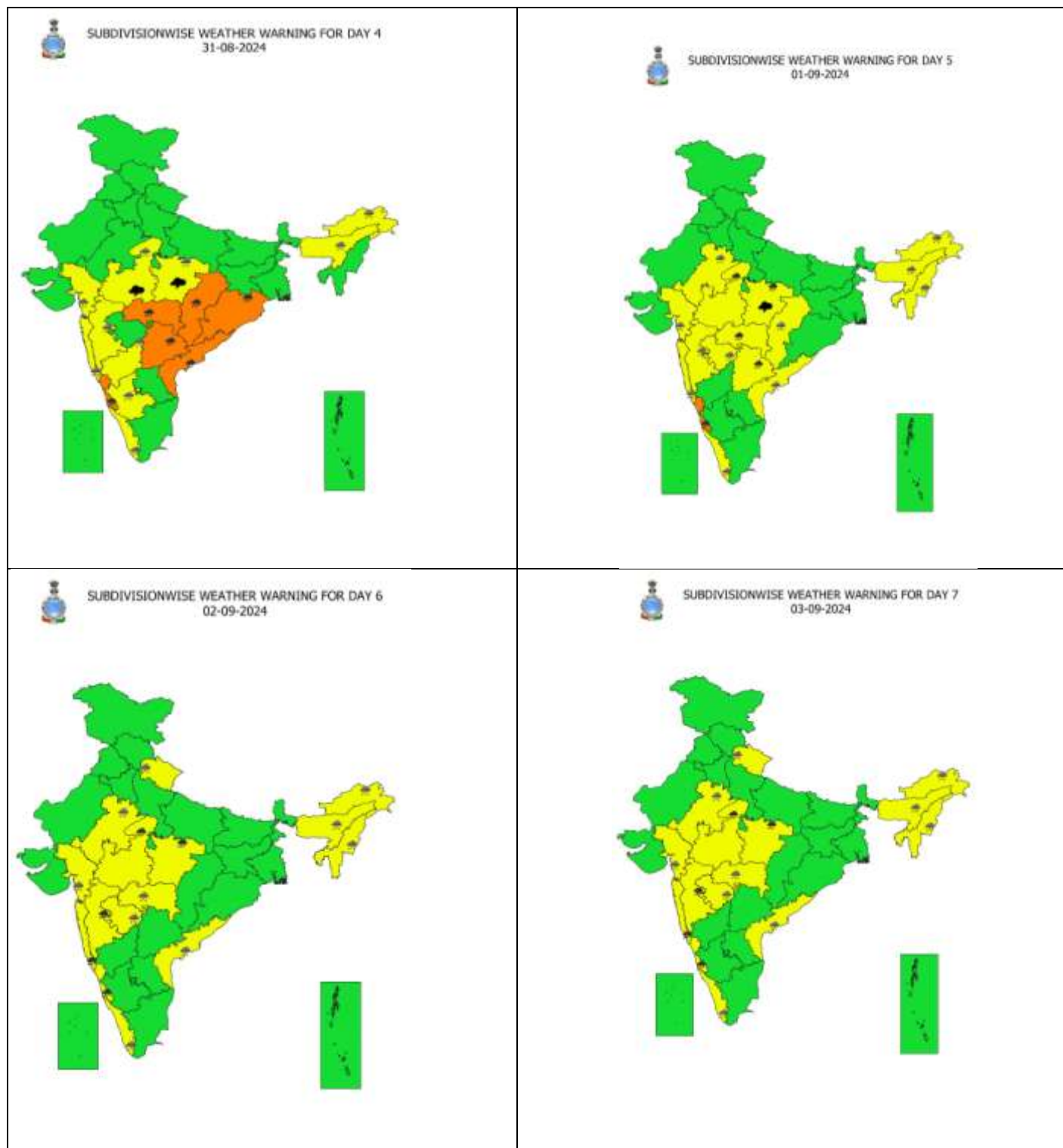
FORECAST TRACK



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# Weather Warning Graphics



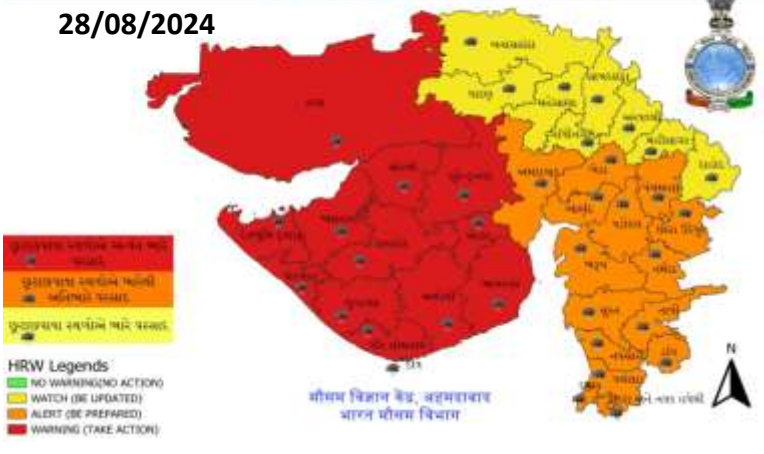


- Action may be taken based on **ORANGE AND RED** COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

# District wise Warning Graphics Gujarat

दिवस - 2 गुजरात राज्या अने हीव, हमाजू हादसा नजरे हावेची नी 28-08-2024 माटे 'भारे वरसाद नी येतवची'

दिवस - 3 गुजरात राज्या अने हीव, हमाजू हादसा नजरे हावेची नी 29-08-2024 माटे 'भारे वरसाद नी येतवची'



दिवस - 4 गुजरात राज्या अने हीव, हमाजू हादसा नजरे हावेची नी 30-08-2024 माटे 'भारे वरसाद नी येतवची'



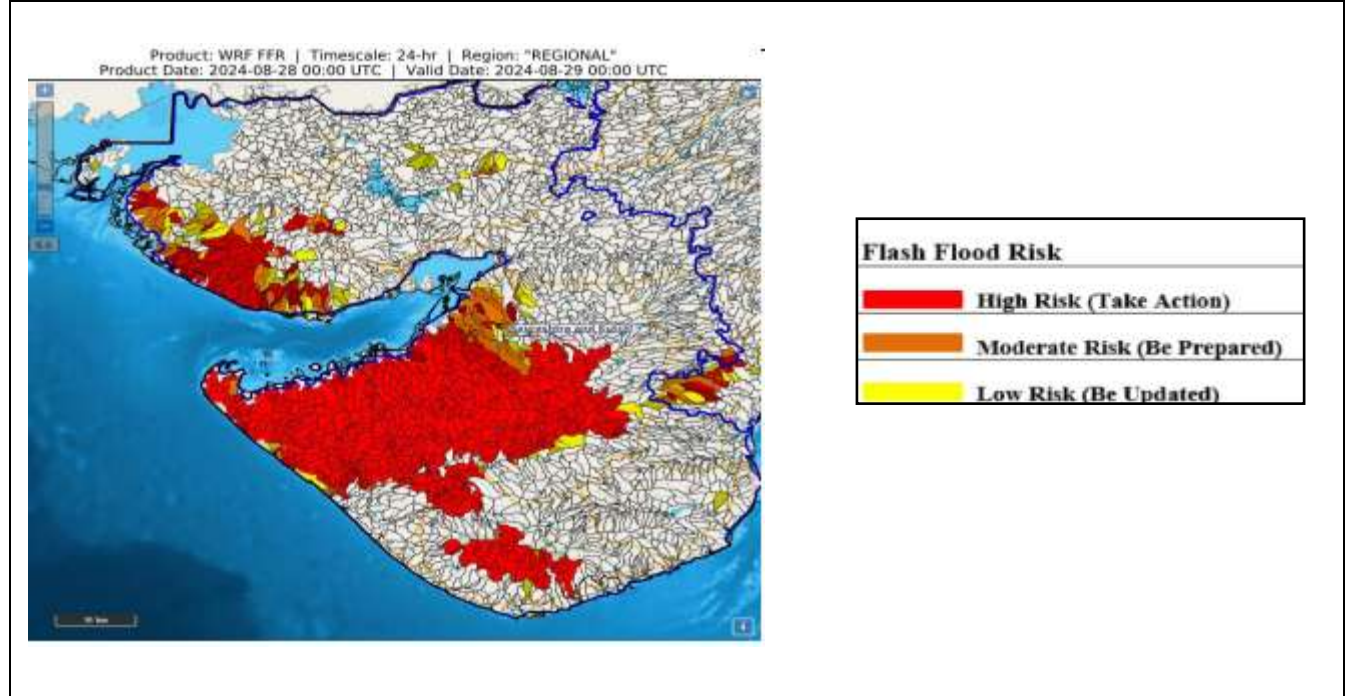
## Rajasthan







## Flood Guidance



**24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 29-08-2024 :**

**Moderate to High flash flood risk likely over few watersheds & neighbourhoods of Saurashtra & Kutch - Amreli, Bhavnagar, Botad, Devbhoomi Dwarka, Diu, Gir Somnath, Jamnagar, Junagarh, Porbandar, Rajkot, Surendranagar, Morbi and Kachchh 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.**

## Fishermen Warning Graphics

