



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

**NATIONAL BULLETIN NO. 24 (LAND/02/2024)**

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**FROM:INDIA METEOROLOGICAL DEPARTMENT**

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**Sub: (a) Deep Depression over Saurashtra & Kachchh and (b) Low Pressure Area over central and adjoining North Bay of Bengal**

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

The deep depression over Saurashtra & Kachchh moved slowly southwestwards with a speed of 3 kmph during past 6 hours and lay centered at 1730 hours IST of today, the 29<sup>th</sup> August, 2024 over the same region near latitude 23.6°N and longitude 69.2 °E, 70 km west-northwest of Bhuj (Gujarat), 50 km northeast of Naliya (Gujarat) and 250 km east-southeast of Karachi (Pakistan).

It is likely to move west-southwestwards, emerge into northeast Arabian Sea off Kachchh and adjoining Saurashtra & Pakistan coasts and intensify into a Cyclonic Storm on 30<sup>th</sup> August. Thereafter, it would continue to move nearly west-southwestwards over northeast Arabian Sea away from Indian coast during subsequent 2 days.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.08.24/1730	23.6/69.2	50-60 gusting to 70	Deep Depression
29.08.24/2330	23.5/68.9	50-60 gusting to 70	Deep Depression
30.08.24/0530	23.5/68.5	55-65 gusting to 75	Deep Depression
30.08.24/1130	23.6/68.0	60-70 gusting to 80	Cyclonic Storm
30.08.24/1730	23.7/67.5	65-75 gusting to 85	Cyclonic Storm
31.08.24/0530	23.9/66.1	70-80 gusting to 90	Cyclonic Storm
31.08.24/1730	24.0/64.1	65-75 gusting to 85	Cyclonic Storm
01.09.24/0530	23.8/62.3	60-70 gusting to 80	Cyclonic Storm
01.09.24/1730	23.3/61.0	50-60 gusting to 70	Deep Depression

### **Warnings:**

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

##### **Gujarat State:**

**Saurashtra & Kachchh:** Light to moderate rainfall at most places with heavy to extremely heavy rainfall at isolated places on 29<sup>th</sup>, heavy to very heavy rainfall at isolated places on 30<sup>th</sup> August and heavy rainfall at isolated places over coastal districts on 31<sup>st</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 on 29<sup>th</sup> & 30<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 over northeast & adjoining eastcentral Arabian Sea during 29<sup>th</sup> to 31<sup>st</sup> August.
- Gale wind speed reaching 65-75 kmph gusting to 85 kmph is likely to prevail over northeast Arabian Sea off Gujarat and Pakistan coasts on 30<sup>th</sup> August, becoming 70-80 kmph gusting to 90 kmph from 31<sup>st</sup> August morning till 1<sup>st</sup> September morning and decrease gradually thereafter.
- Gale wind speed reaching 65-75 kmph gusting to 85 kmph is likely to prevail over northwest and adjoining westcentral Arabian Sea off Pakistan and southeast Iran coasts from 31<sup>st</sup> August till 1<sup>st</sup> September, morning. Thereafter, the winds would gradually decrease becoming squally wind speed reaching 50-60 kmph gusting to 70 kmph from evening of 1<sup>st</sup> September.
- Strong wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail along and off north Maharashtra coasts during 29<sup>th</sup> to 31<sup>st</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 till 31<sup>st</sup> August.
- Very rough to high sea condition is likely to prevail over northeast & adjoining eastcentral and Arabian Sea off Gujarat and Pakistan coasts during 30<sup>th</sup> August to 1<sup>st</sup> September.
- Very rough to high Sea condition is likely to prevail over northwest and adjoining westcentral Arabian Sea off Pakistan and southeast Iran coasts from 31<sup>st</sup> August till 2<sup>nd</sup> September.

#### **(iv) Fishermen warning:**

Fishermen are advised not venture into

- Northeast & adjoining Eastcentral Arabian Sea and along & off Gujarat & adjoining Pakistan and north Maharashtra Coasts till 31<sup>st</sup> August.
- Northwest & adjoining westcentral Arabian Sea and along & off Pakistan and southeast Iran coasts from 31<sup>st</sup> August till 2<sup>nd</sup> September.

**(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.

**(b) Low Pressure Area over central and adjoining North Bay of Bengal**

The low pressure area over central and adjoining north Bay of Bengal persisted over the same region at 1730 hours IST of today, the 29<sup>th</sup> August, 2024.

It is likely to move west-northwestwards and become more marked over westcentral and adjoining northwest Bay of Bengal by 30<sup>th</sup> August. Thereafter, while moving towards north Andhra Pradesh and adjoining south Odisha coasts, it is likely to intensify into a depression over westcentral and adjoining northwest Bay of Bengal during subsequent 2 days.

**Warnings:**

**(i) Rainfall Warning:**

**Odisha:** Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places during 29<sup>th</sup> to 31<sup>st</sup> and extremely heavy rainfall at isolated places on 30<sup>th</sup> August. Light to moderate rainfall at most places with isolated heavy rainfall on 1<sup>st</sup> September.

**Coastal Andhra Pradesh:** Light to moderate rainfall at most places with heavy rainfall at isolated places during 29<sup>th</sup> August to 1<sup>st</sup> September and heavy to very heavy rainfall at isolated places on 30<sup>th</sup> and 31<sup>st</sup> August.

**(ii) Wind warning:**

- Squally weather with wind speed reaching 30-40 kmph gusting to 50 kmph is likely to prevail over Westcentral and adjoining Northwest Bay of Bengal during 30<sup>th</sup> becoming 45-55 kmph gusting to 65 kmph 31<sup>st</sup> August.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely to prevail along & off North Andhra Pradesh & south Odisha coasts on 31 August.

**(iii) Sea condition:**

- Rough sea condition is very likely to prevail over Westcentral and adjoining Northwest Bay of Bengal till 31<sup>st</sup> August.
- Rough sea condition is very likely to prevail along & off North Andhra Pradesh & south Odisha coasts on 31 August.

**(iv) Fishermen warning:**

Fishermen are advised not venture into

- Westcentral & adjoining northwest Bay of Bengal from 29<sup>th</sup> till 31<sup>st</sup> August and along & off south Odisha and north Andhra Pradesh Coasts on 31<sup>st</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 north Andhra Pradesh & south Odisha coasts and westcentral and adjoining northwest

Bay of Bengal are advised to keep watch on developing weather and take necessary actions till 30<sup>th</sup> August.

❖ **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)

❖ **Action Suggested**

Fishermen are advised not venture into

- Northeast & adjoining Eastcentral Arabian Sea and along & off Gujarat & adjoining Pakistan and north Maharashtra Coasts till 31<sup>st</sup> August.
- Northwest & adjoining westcentral Arabian Sea and along & off Pakistan and southeast Iran coasts from 31<sup>st</sup> August till 2<sup>nd</sup> September.
- Westcentral & adjoining northwest Bay of Bengal from 29<sup>th</sup> till 31<sup>st</sup> August and along & off south Odisha and north Andhra Pradesh Coasts on 31<sup>st</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.

❖ **Agromet Advisories for Heavy Rainfall** likely over Gujarat, Odisha and Andhra Pradesh due to both systems

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

❖ **Significant Rainfall (in cm) recorded during 0830 to 1730 hours IST of 29<sup>th</sup> August:**

**Saurashtra & Kachchh:** Naliya- 11, Dwarka – 5, New Kandla – 4, Jamnagar – 3, Bhuj – 2

**Odisha:** Koraput-4, Malkangiri – 4, Phulbani -4, Navarangpur -3, Titlagarh – 3, Bolangir – 2

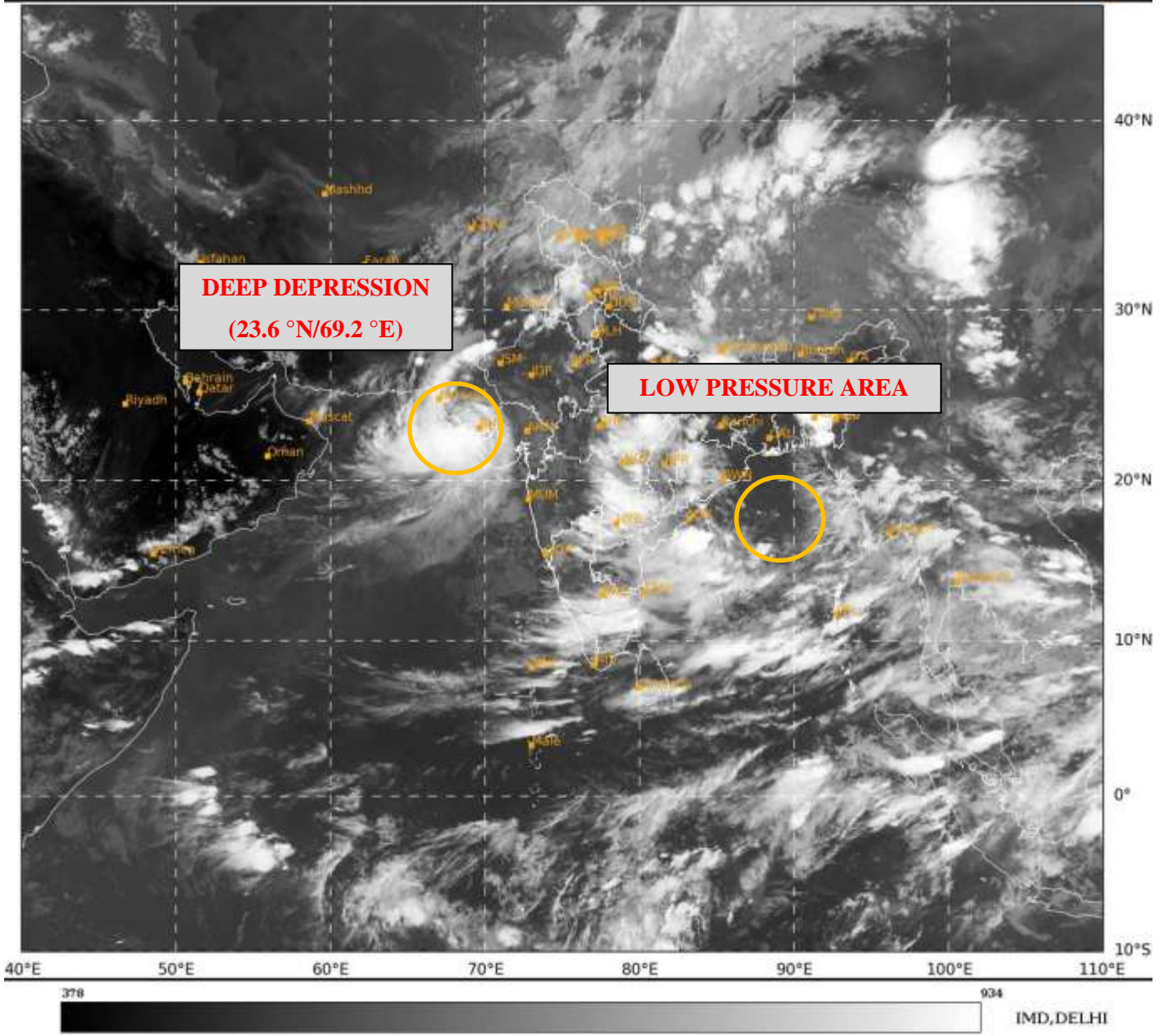
**Costal Andhra Pradesh:** Kalingapatnam-5

**Next bulletin will be issued at 0230 hours IST of tomorrow, the 30<sup>th</sup> August, 2024.**

**(Dr. Ananda Kumar Das)**

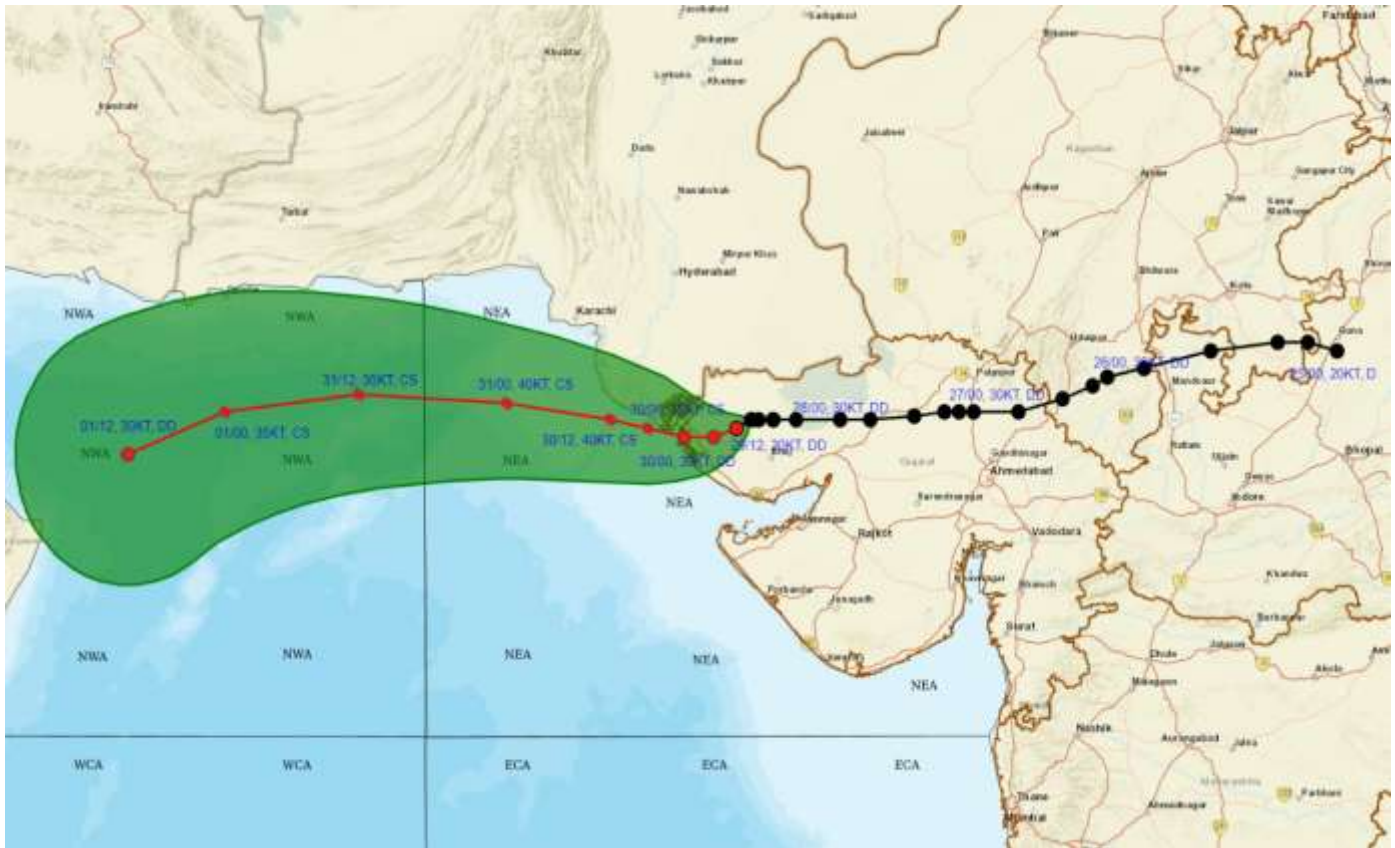
**Scientist-F, Cyclone Warning Division, IMD, New Delhi**

*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 SAURASHTRA & KACHCHH BASED ON 1200 UTC (1730 IST) OF 29<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



## OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER SAURASHTRA & KACHCHH BASED ON 1200 UTC(1730 IST) OF 29<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 (≥ 120 KT)

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

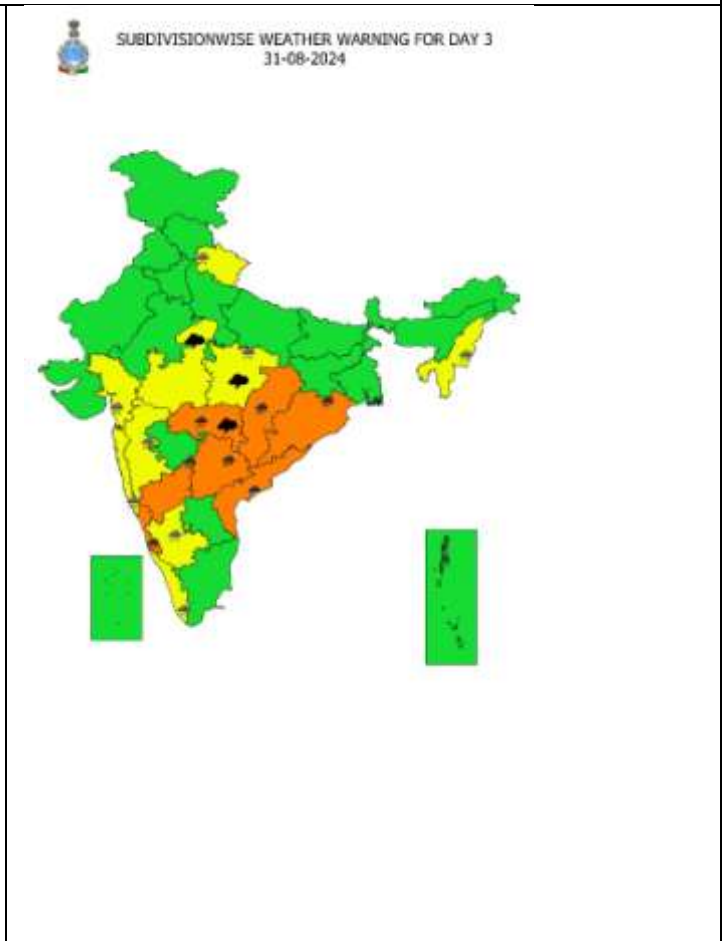
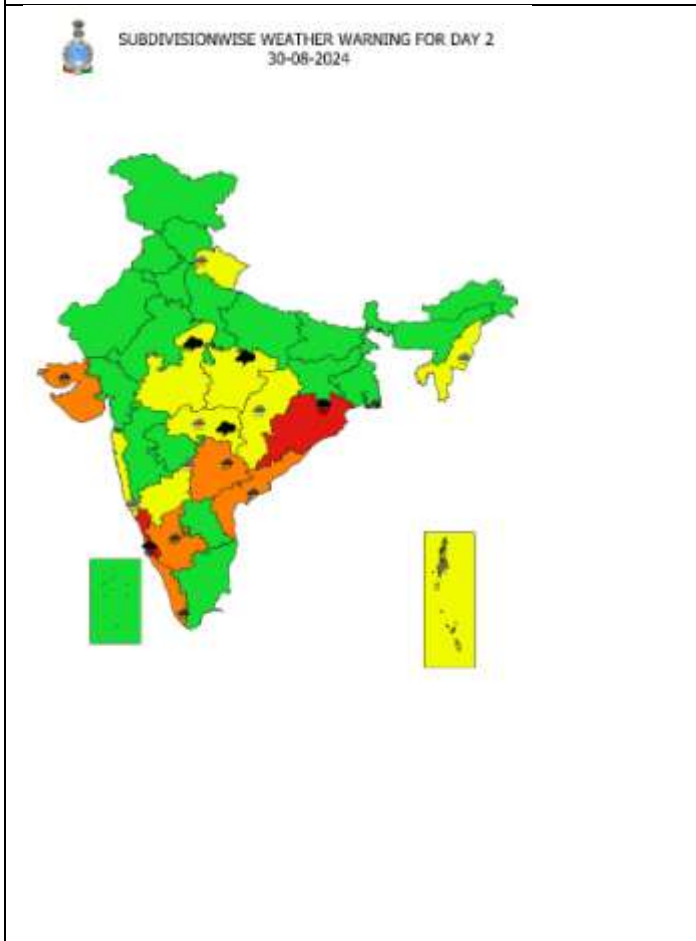
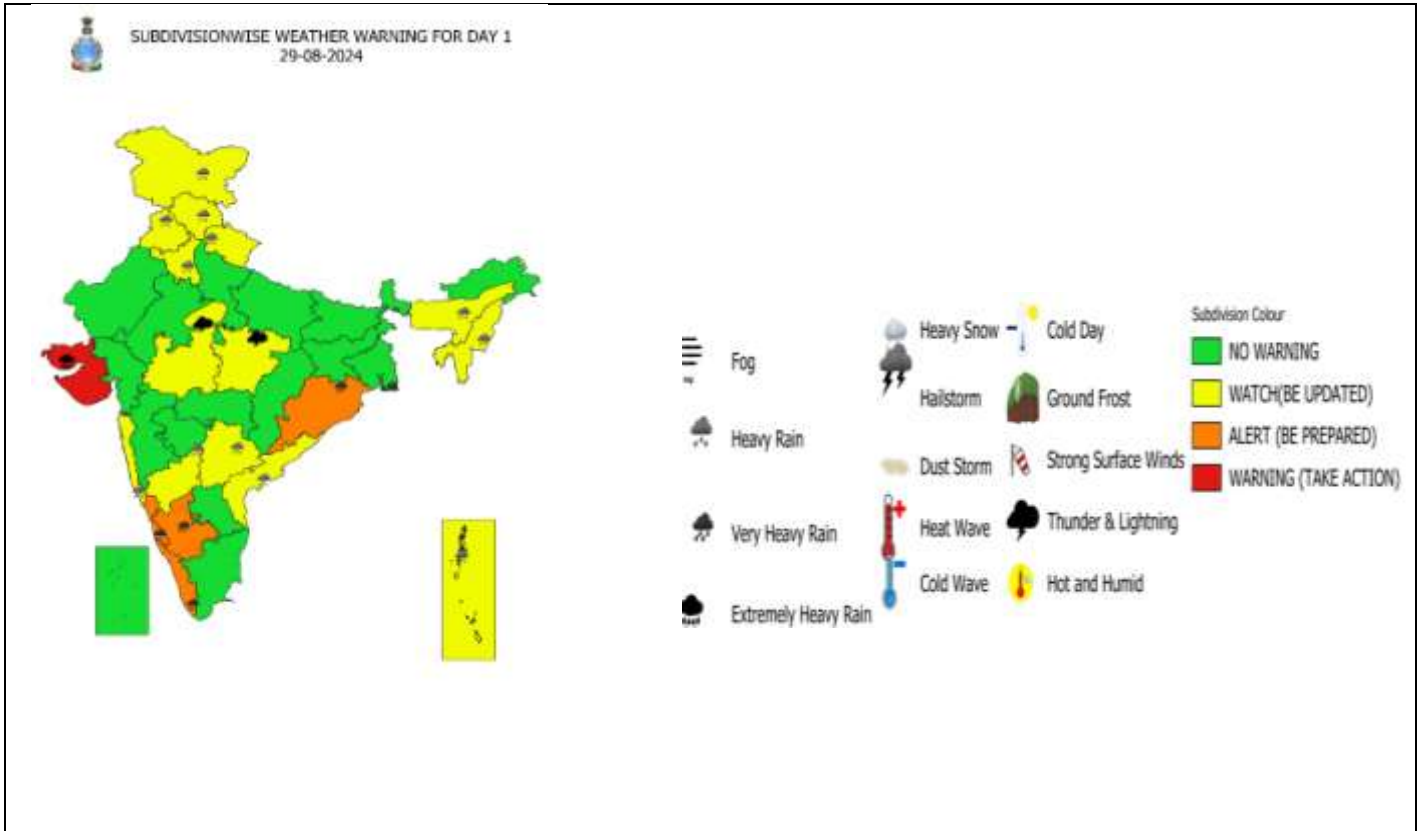
AREA OF MAXIMUM SUSTAINED WIND SPEED:

- 28-33 KT (52-61 KMPH)
- 34-49 KT (62-91 KMPH)
- 50-63 KT (92-117 KMPH)
- ≥ 64 KT (≥ 118 KMPH)

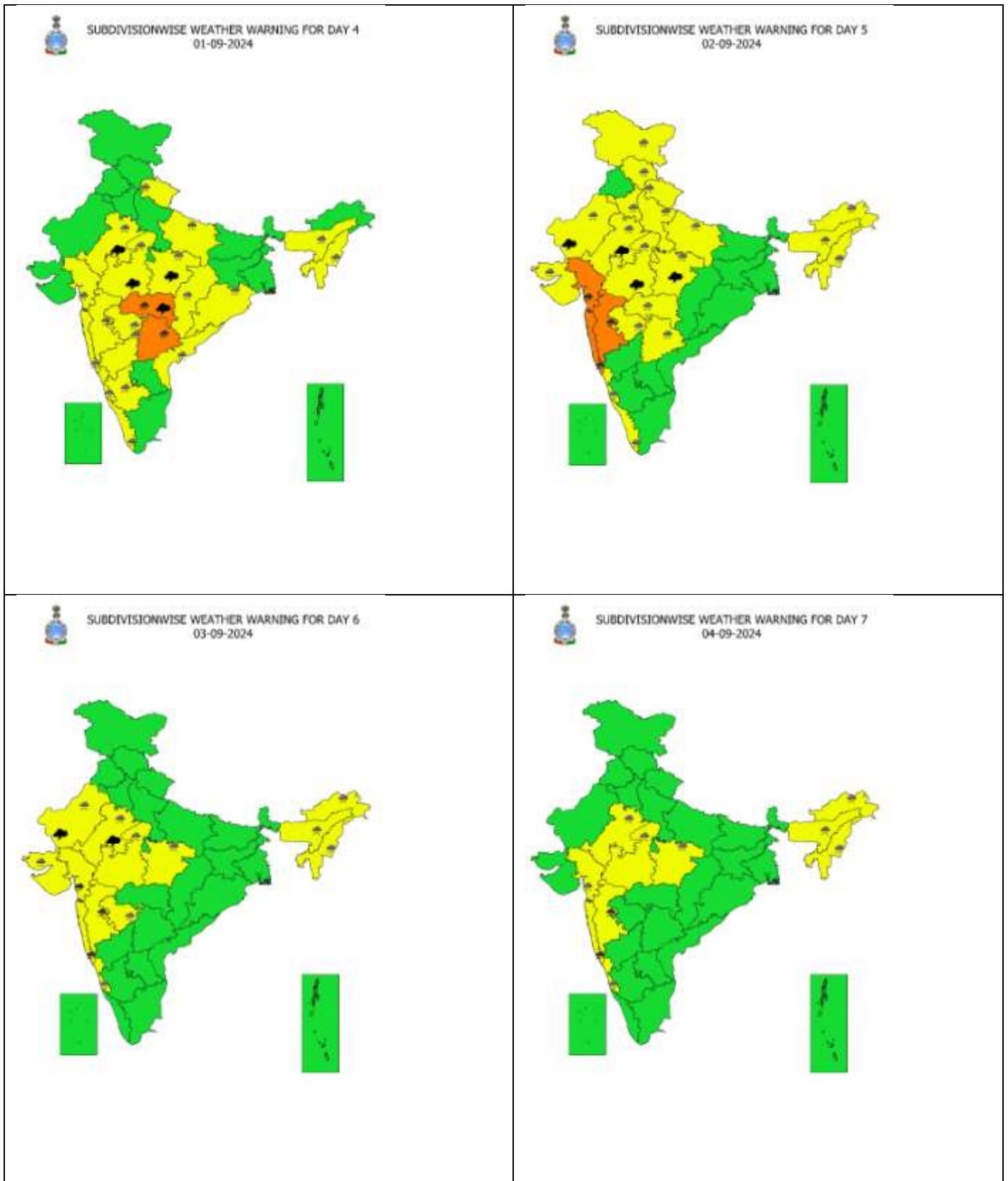
### IMPACT OVER THE SEA

MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥ 118)	Phenomenal	Total suspension of fishing operations

# Weather Warning Graphics

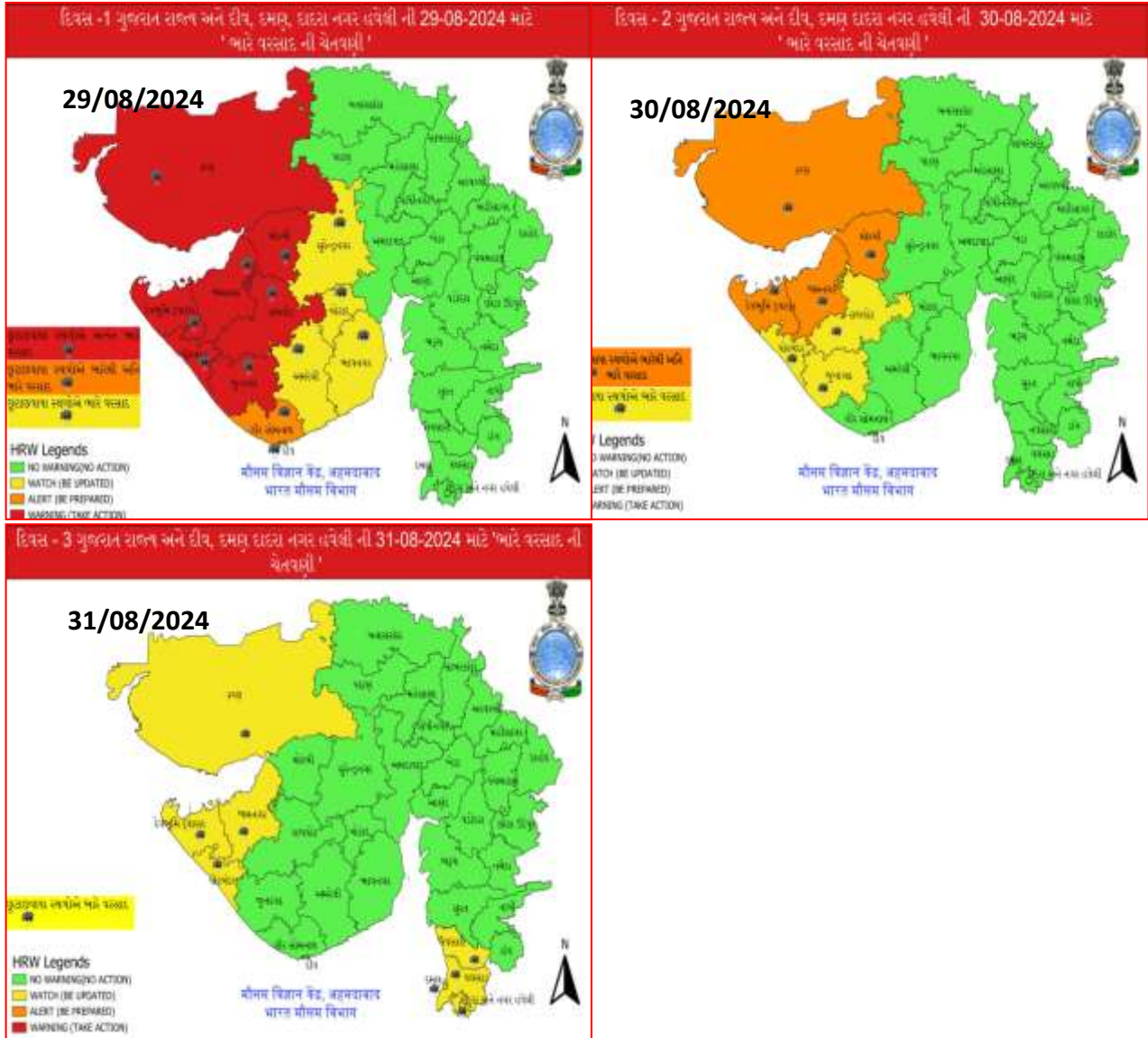




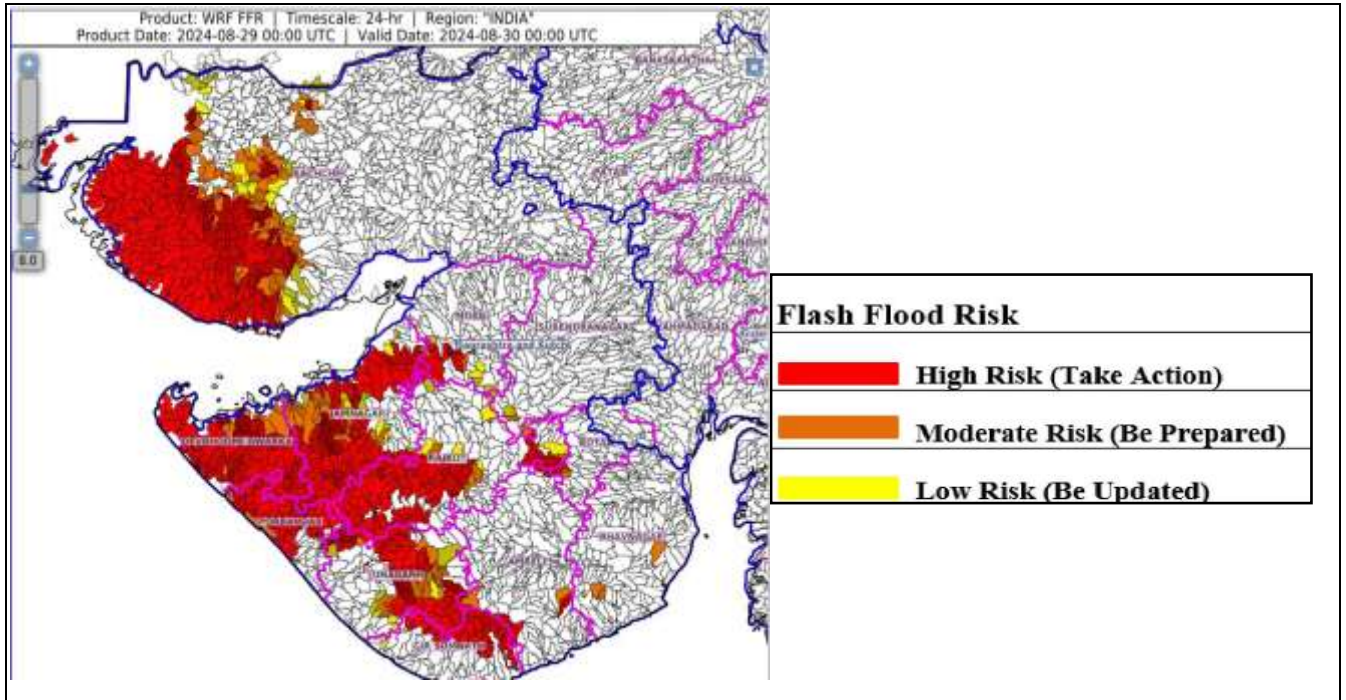


- Action may be taken based on **ORANGE AND RED** COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

## District wise Warning Graphics Gujarat



## Flash Flood Guidance



### 24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 30-08-2024 :

Moderate flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours.

**Saurashtra & Kutch** - Amreli, Bhavnagar, Botad, Devbhoomi Dwarka, 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

