



India Meteorological Department  
(Ministry of Earth Sciences)

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**Sub: Deep Depression (Remnant of Cyclonic Storm 'Biparjoy') over Southeast Pakistan adjoining Southwest Rajasthan and Kutch**

The Cyclonic Storm "Biparjoy" (pronounced as "Biporjoy") over Southeast Pakistan adjoining Southwest Rajasthan and Kutch moved nearly northeastwards with a speed of 12 kmph during past 6-hours, weakened into a Deep Depression and lay centered at 2330 hours IST of yesterday, the 16<sup>th</sup> June, 2023 over Southeast Pakistan adjoining Southwest Rajasthan and Kutch near latitude 24.6°N and longitude 70.9°E, about 100 km northeast of Dholavira, 140 km west-northwest of Deesa and 130 km south-southwest of Barmer.

It is very likely to move nearly northeastwards and weaken further into a Depression during next 12 hours.

**Forecast track and intensity are given below:**

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
16.06.23/2330	24.6/70.9	50-60 Gusting To 70	Deep Depression
17.06.23/0530	25.1/71.8	50-60 Gusting To 70	Deep Depression
17.06.23/1130	25.6/72.7	40-50 Gusting To 60	Depression
17.06.23/1730	26.1/73.6	30-40 Gusting To 50	Depression

**Warnings:**

**(i) Heavy Rainfall warning:**

- Light to moderate rainfall at most places with isolated heavy to extremely heavy rainfall is likely over south Rajasthan & adjoining north Gujarat & Kutch on 17<sup>th</sup> June.

**(ii) Wind warning:**

**Northeast Arabian Sea:** Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely to prevail during next 12 hours.

**Wind warning for along & off Saurashtra & Kutch coasts, interior districts and Gulf of Kutch:**

- Squally wind speed reaching 50-60 kmph gusting to 70 kmph is prevailing over Kutch and northern districts of Saurashtra. It is likely to further decrease becoming 40-50 kmph gusting to 60 kmph from the forenoon.
- Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to prevail over southern districts of Saurashtra, Gulf of Kutch and adjoining areas during next 06 hours.

**Wind Warning for South Rajasthan**

- Squally wind speed reaching 45-55 kmph gusting to 65 kmph during next 12 hours and decrease thereafter becoming 35-45 kmph gusting to 55 kmph.

**(iii) Sea condition**

Rough to very rough sea condition prevailing over northeast Arabian Sea and along & off Saurashtra & Kutch coasts likely to continue for next 12 hours.

**(iv) Damage expected over Kachchh and North Saurashtra districts during next 06 hours:**

- Minor damage to loose / unsecured structures.
- Some breaches in Kutcha road due to flooding.
- Minor damage to Banana trees and near coastal agriculture due to salt spray. Damage to ripe paddy crops.
- Minor damage to Kutcha embankments.

**(v) Fishermen Warning & Action Suggested (Kachchh, Devbhumi Dwarka, Porbandar, Jamnagar, Rajkot, Junagarh and Morbi districts) and for Offshore & Onshore Industries till noon of 17<sup>th</sup> June: (Graphics Attached)**

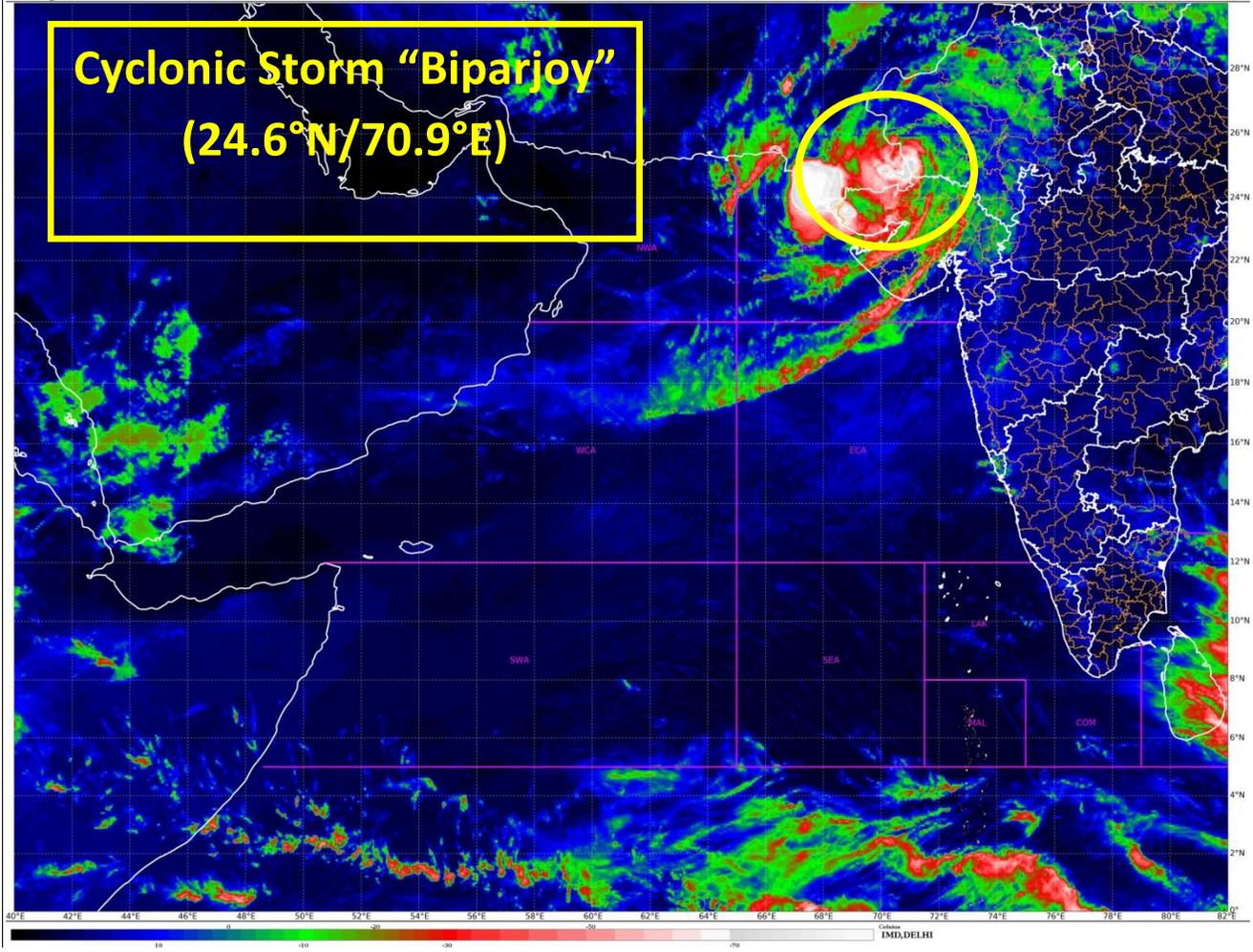
- Total suspension of fishing operations over northeast Arabian Sea.
- Ports along the Saurashtra & Kutch coasts may take necessary precautions.
- Naval base operations may maintain necessary precautions.
- Movement in motor boats unsafe.
- Judicious regulation of rail and road traffic.
- Tourism activities may be regulated over these areas.
- People in affected areas to remain indoors.

**The system is under continuous surveillance and the next message will be issued at 0830 hours IST of today, the 17<sup>th</sup> June, 2023.**

**(Krishna Mishra)**  
**Scientist C, Cyclone Warning Division, New Delhi**

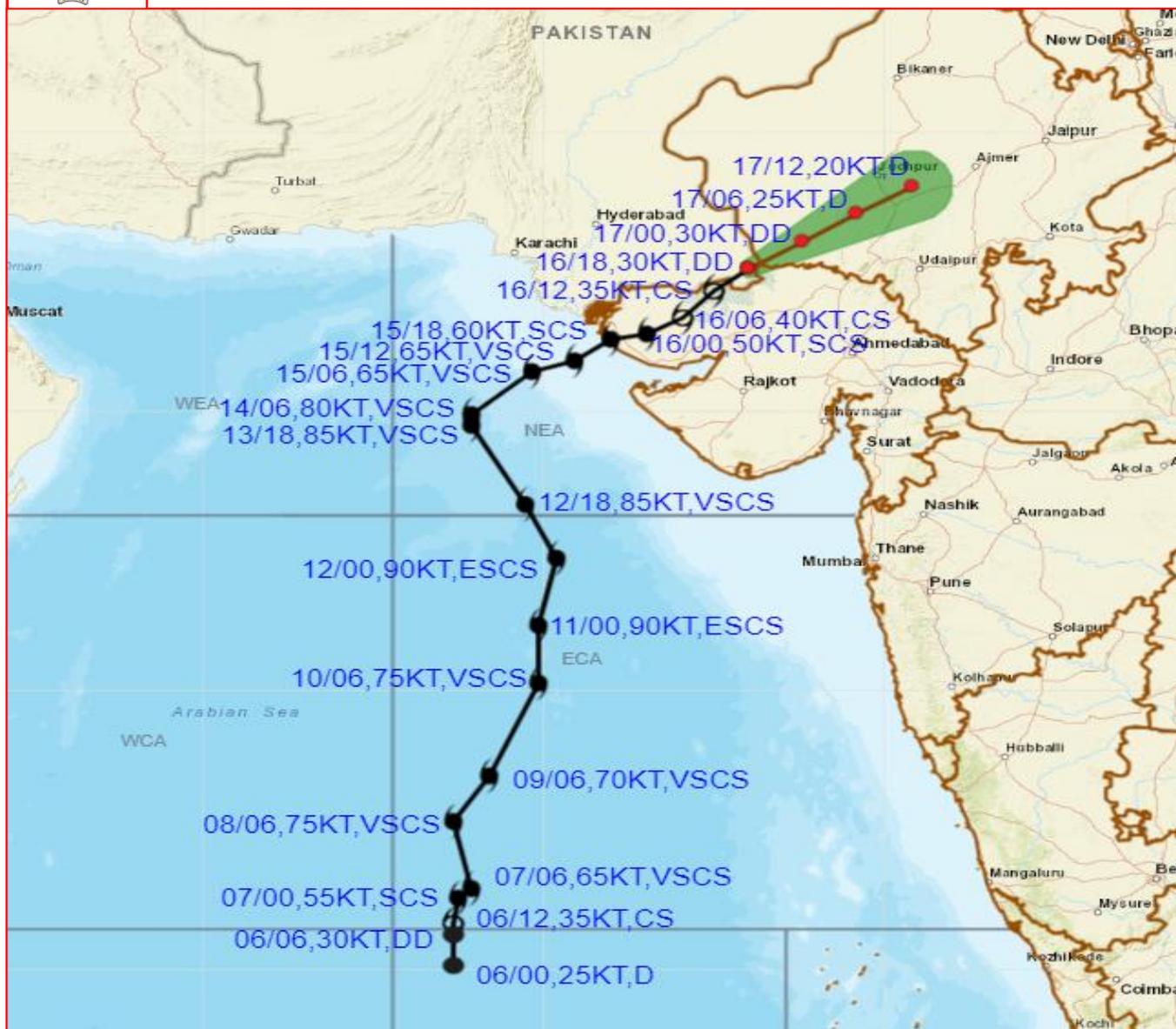
*Copy to: ACWC Kolkata/ ACWC Chennai/ CWC Bhubaneswar/CWC Visakhapatnam/CWC Ahmedabad/ MO Port Blair/MC Raipur/MC Bhopal/MC Hyderabad/RMC Nagpur*

**LEGEND: Heavy Rainfall:** 64.5 to 115.5mm, **Very Heavy Rainfall:** 115.6 to 204.4mm **Most Places:** more than 76% of total stations, **Isolated Places:** Less than 25% of total





**OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF DEEP DEPRESSION (REMANANT OF CYCLONIC STORM BIPARJOY) OVER SOUTHEAST PAKISTAN ADJOINING SOUTHWEST RAJASTHAN & KUTCH BASED ON 1800 UTC (2330 IST) OF 16<sup>TH</sup> JUNE 2023.**



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

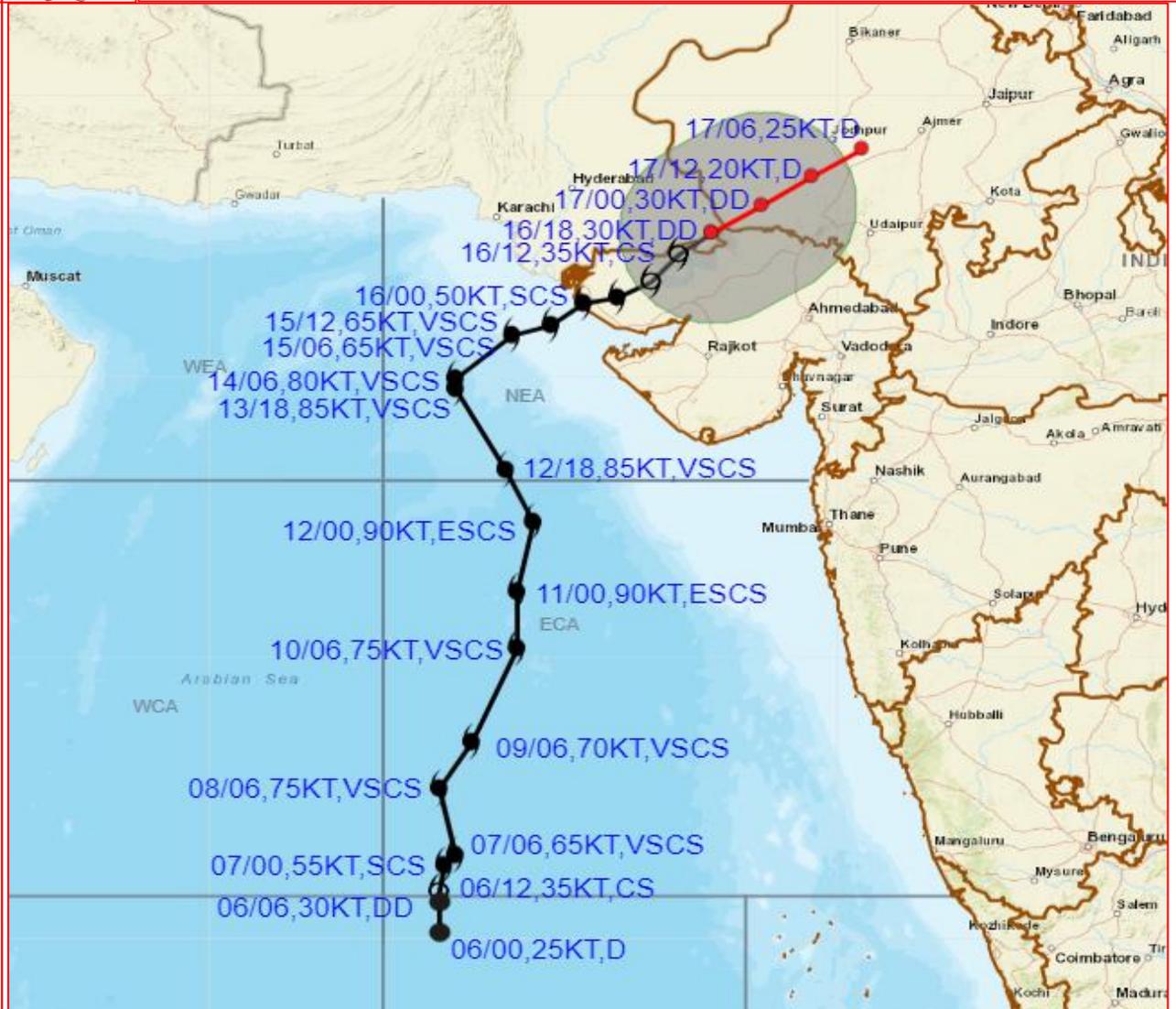
— OBSERVED TRACK

— FORECAST TRACK

▲ CONE OF UNCERTAINTY



**OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION (REMANANT OF CYCLONIC STORM BIPARJOY) OVER SOUTHEAST PAKISTAN ADJOINING SOUTHWEST RAJASTHAN & KUTCH BASED ON 1800 UTC (2330 IST) OF 16TH JUNE 2023.**



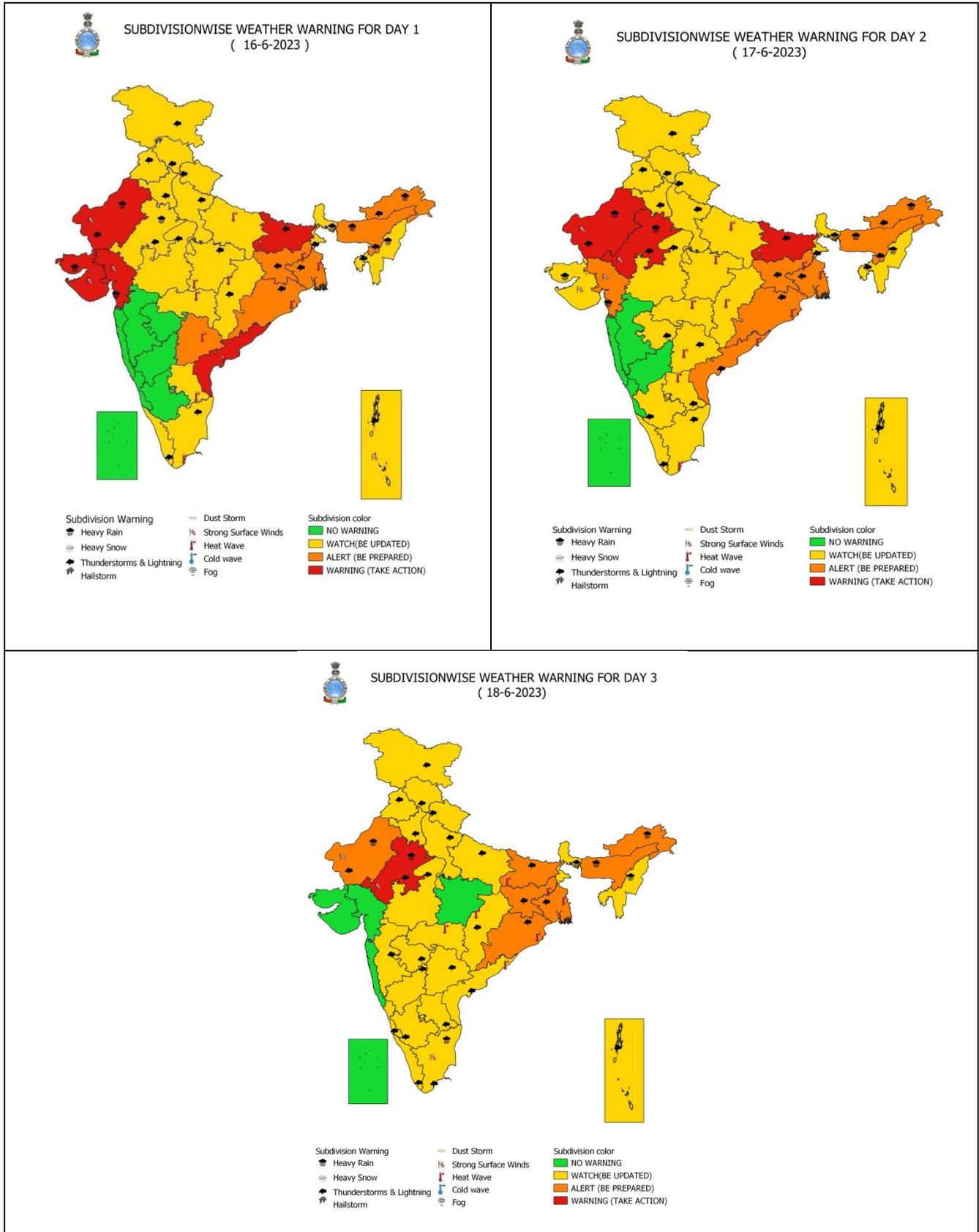
DATE/TIME IN UTC  
 IST=UTC + 0530  
 L: LOW PRESSURE AREA  
 WML: WELL MARKED LOW PRESSURE AREA  
 D: DEPRESSION (17-27 KT)  
 DD: DEEP DEPRESSION (28-33 KT)  
 CS: CYCLONIC STORM (34-47 KT)  
 SCS: SEVERE CYCLONIC STORM (48-63KT)  
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)  
 ESCS: EXTREMELY SEVERE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

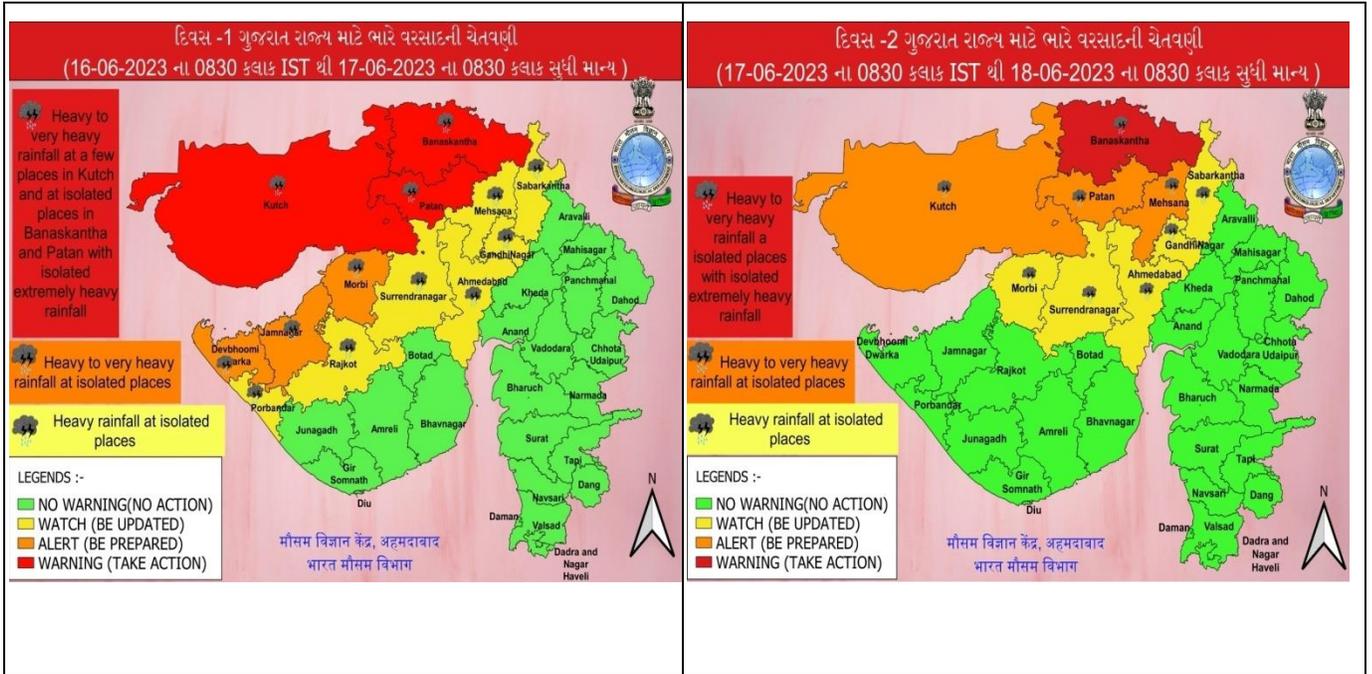
**IMPACT OVER THE SEA**

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

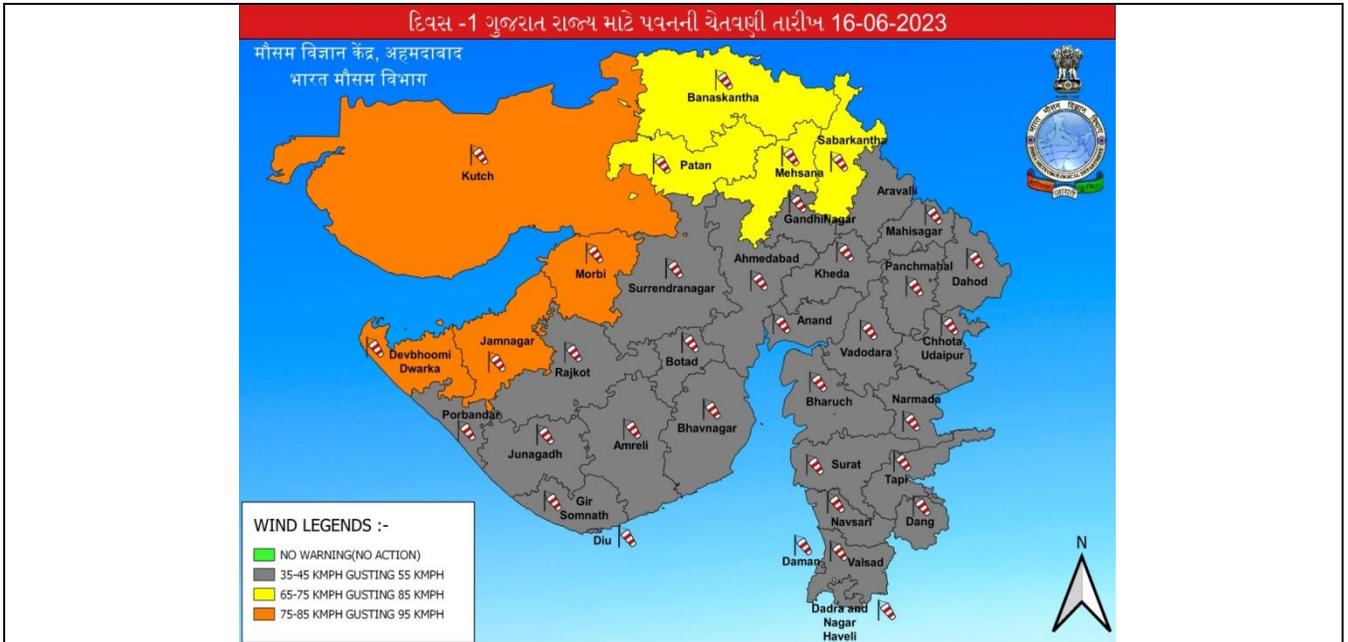
# All India Heavy Rainfall Warning for 16<sup>th</sup> to 18<sup>th</sup> June 2023



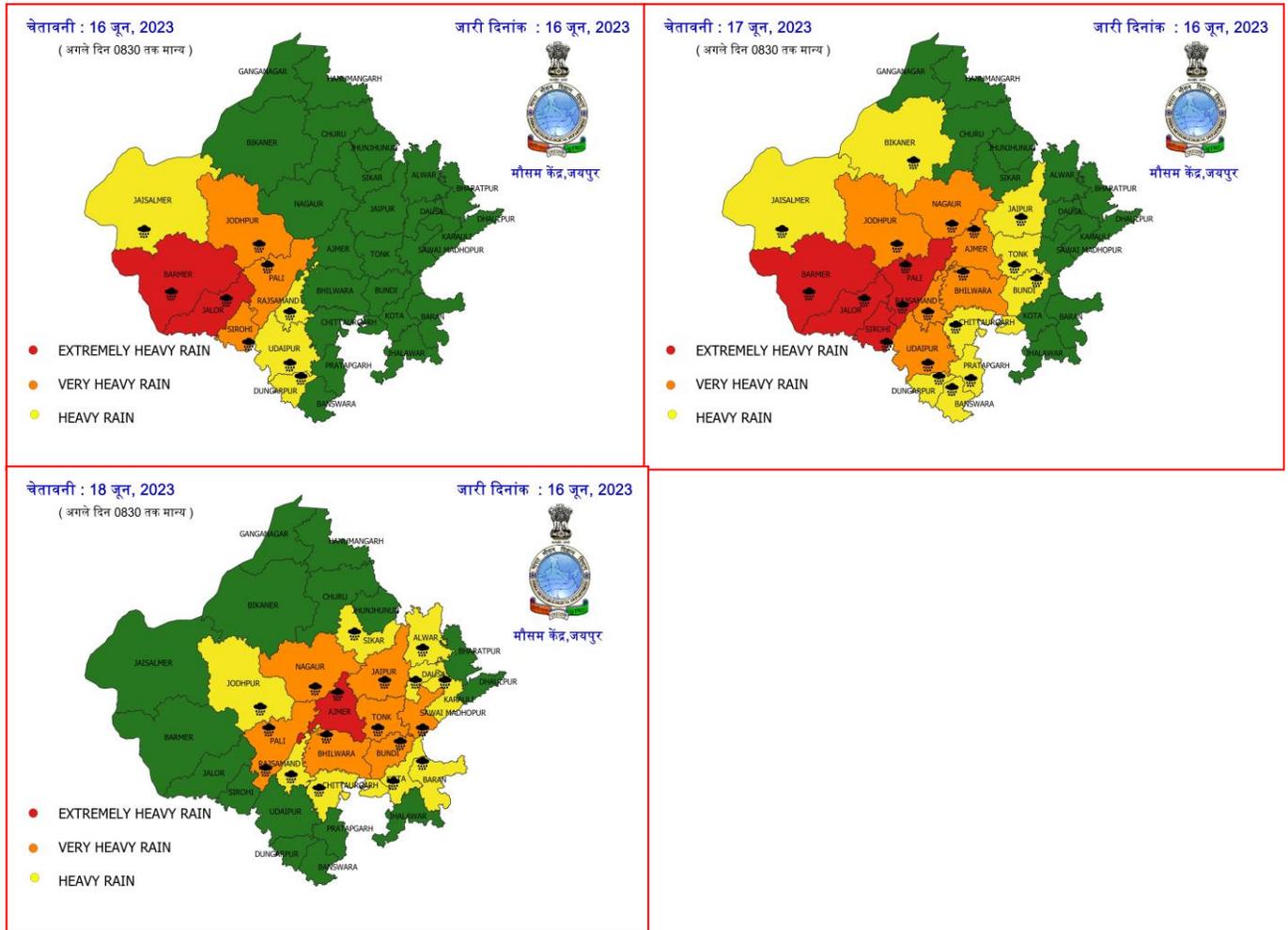
## District-wise Heavy Rainfall Warning Maps for 16<sup>th</sup> to 17<sup>th</sup> June



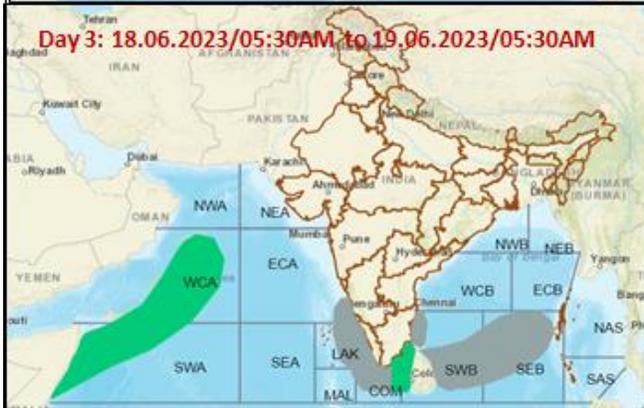
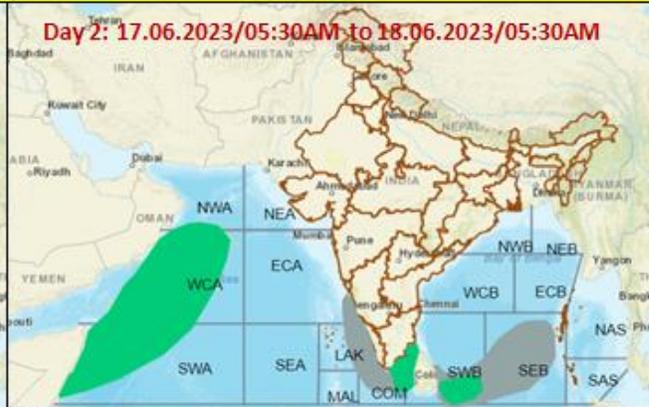
## District-wise Wind Warning Maps for 16<sup>th</sup> June



# District-wise Heavy Rainfall Warning Maps for 16<sup>th</sup> to 18<sup>th</sup> June for Rajasthan



## Fishermen warning graphics



	Squally Weather with wind speed 40-45 kmph gusting to 55 kmph
	Squally wind speed with wind speed 45-55 kmph gusting to 65 kmph
	Squally wind speed with wind speed 50-60 kmph gusting to 70 kmph
<b>Fishermen are advised not to venture into the marked areas</b>	