



India Meteorological Department
(Ministry of Earth Sciences)

BULLETIN NO. 85 (ARB/01/2023)

TIME OF ISSUE: 2200 HOURS IST

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FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

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Sub: Cyclonic Storm "Biparjoy" (pronounced as "Biporjoy") over Southeast Pakistan adjoining Southwest Rajasthan and Kutch

The Cyclonic Storm "Biparjoy" (pronounced as "Biporjoy") over Kutch and adjoining Pakistan moved northeastwards with a speed of 16 kmph during past 6-hours and lay centered at 2030 hours IST of today, the 16th June, 2023 over Southeast Pakistan adjoining Southwest Rajasthan and Kutch near latitude 24.5°N and longitude 70.7°E, about 80 km northeast of Dholavira, 150 km west-northwest of Deesa and 150 km south-southwest of Barmer.

It is very likely to move nearly northeastwards and weaken further into a Deep Depression during next 03 hours and further into a Depression during subsequent 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
16.06.23/2030	24.5/70.7	60-70 Gusting To 80	Cyclonic Storm
16.06.23/2330	24.7/71.0	50-60 Gusting To 70	Deep Depression
17.06.23/0530	25.1/71.8	40-50 Gusting To 60	Depression

Warnings:

(i) Heavy Rainfall warning:

- 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 very likely over Saurashtra & Kutch, isolated heavy to extremely heavy rainfall is likely over north Gujarat region and south Rajasthan on 16th and over south Rajasthan & adjoining north Gujarat region on 17th June.

(ii) Wind warning:

Northeast Arabian Sea: Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail till 17th June morning.

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

- Gale wind speed reaching 60-70 kmph gusting to 80 kmph is prevailing over Kutch and northern districts of Saurashtra. It is likely to decrease becoming squally wind speed reaching 50-60 kmph gusting to 70 kmph during next 6 hours further decrease becoming 40-50 kmph gusting to 60 kmph from tomorrow morning till forenoon.
- Squally wind speed reaching 45-55 kmph gusting to 65 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 evening to night. It would decrease thereafter becoming 35-45 kmph gusting to 55 kmph on 17th June.

(iii) Sea condition

Very rough to rough sea condition prevailing over northeast Arabian Sea and along & off Saurashtra & Kutch coasts likely to become rough during next 06 hours and continue for subsequent 12 hours.

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

- Damage to thatched huts.
- Minor damage to power and communication lines due to breaking of branches.
- Major damage to Kutchha and minor damage to Pucca roads.
- Some damage to paddy crops, banana, papaya trees and orchards.

(v) Fishermen Warning & Action Suggested (Kachchh, Devbhumi Dwarka, Porbandar, Jamnagar, Rajkot, Junagarh and Morbi districts) and for Offshore & Onshore Industries on 16th June: (Graphics Attached)

- Total suspension of fishing operations over northeast and adjoining eastcentral 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 0230 hours IST of tomorrow, the 17th June, 2023.

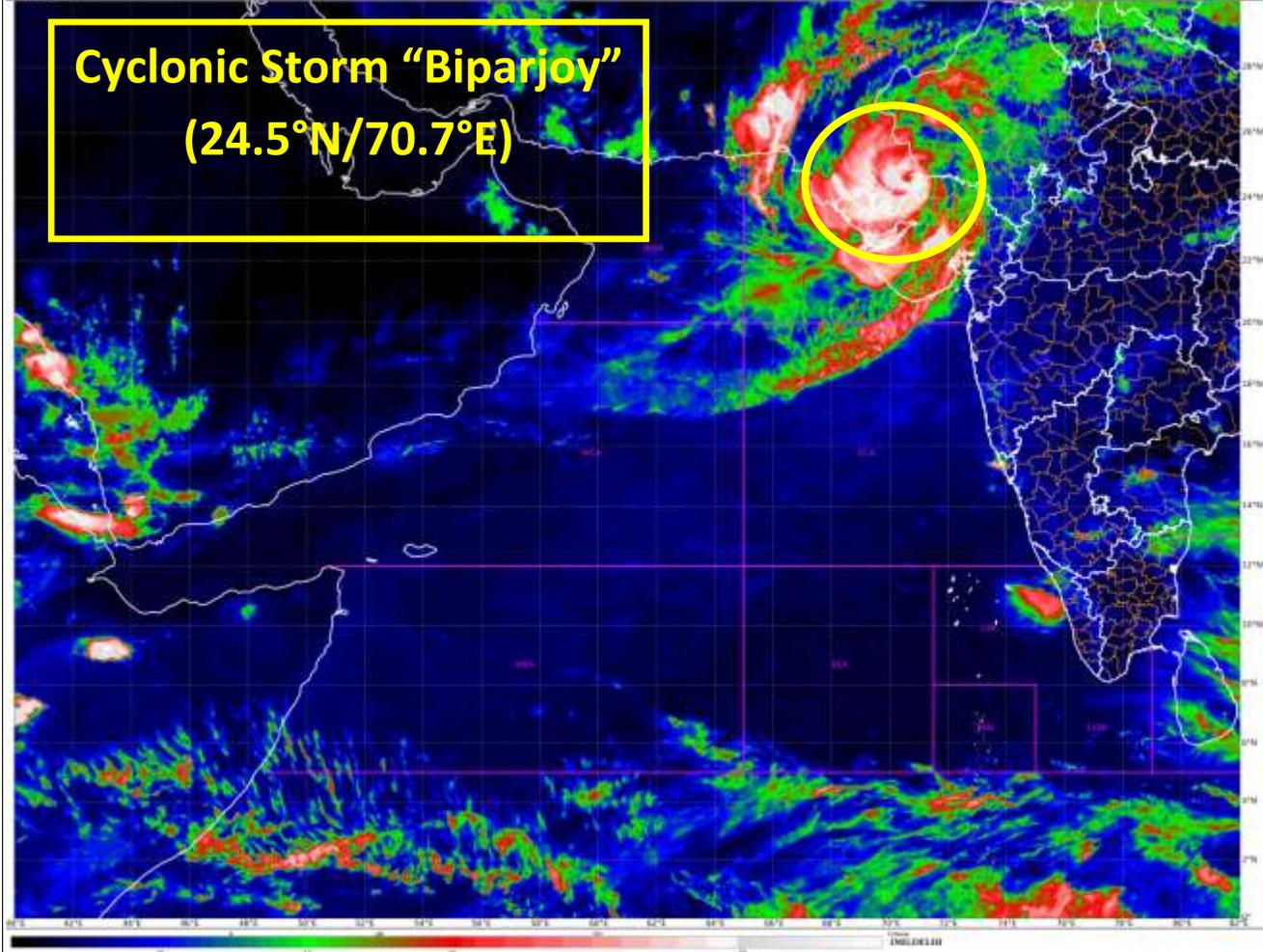
(Krishna Mishra)
Scientist C, Cyclone Warning Division, New Delhi

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

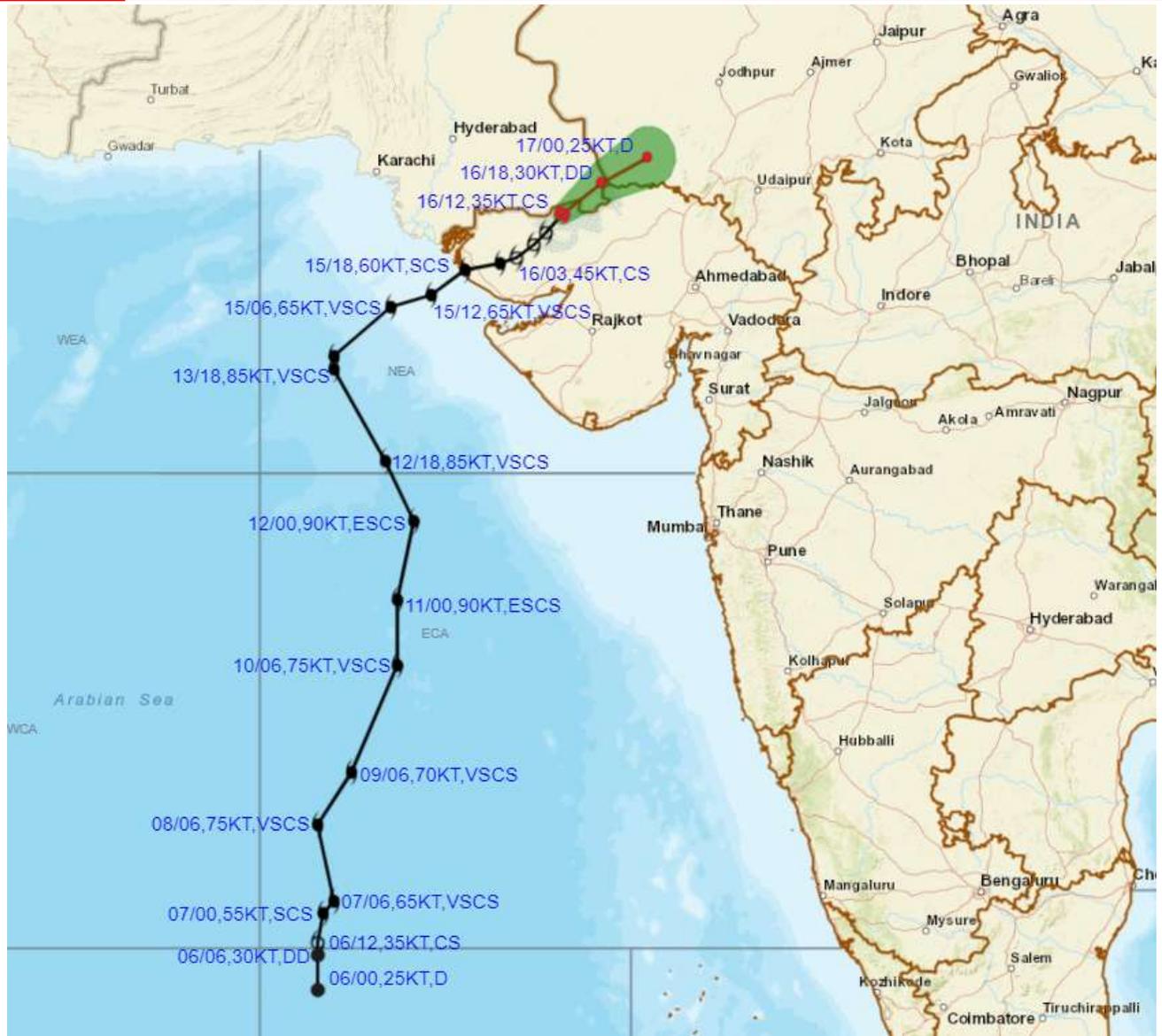


Cyclonic Storm "Biparjoy"
(24.5°N/70.7°E)





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONIC STORM "BIPARJOY" OVER KUTCH AND ADJOINING PAKISTAN BASED ON 1200 UTC (1730 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

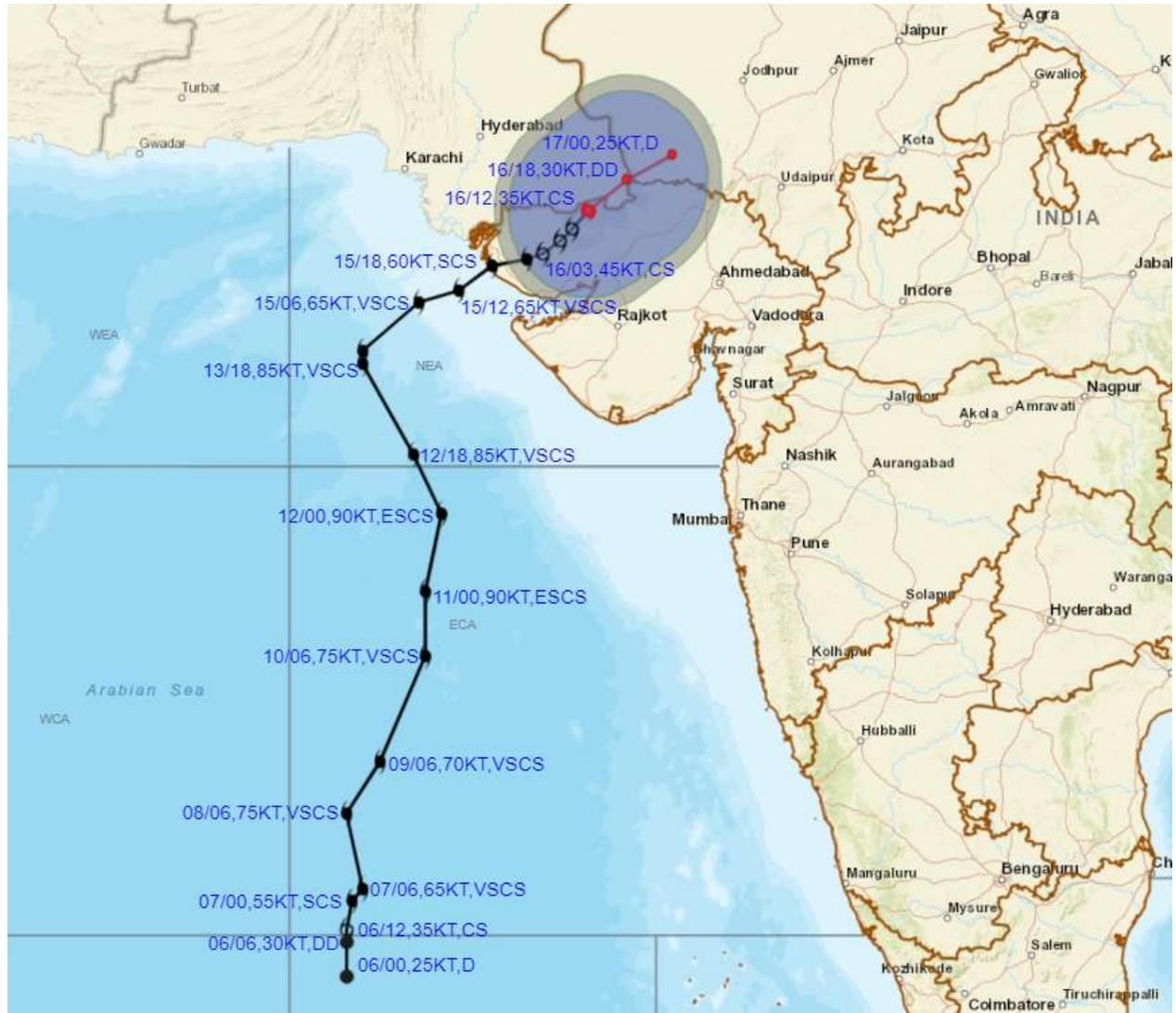
OBSERVED TRACK

FORECAST TRACK

CONE OF UNCERTAINTY



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM "BIPARJOY" OVER KUTCH AND ADJOINING PAKISTAN BASED ON 1200 UTC (1730 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)

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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)

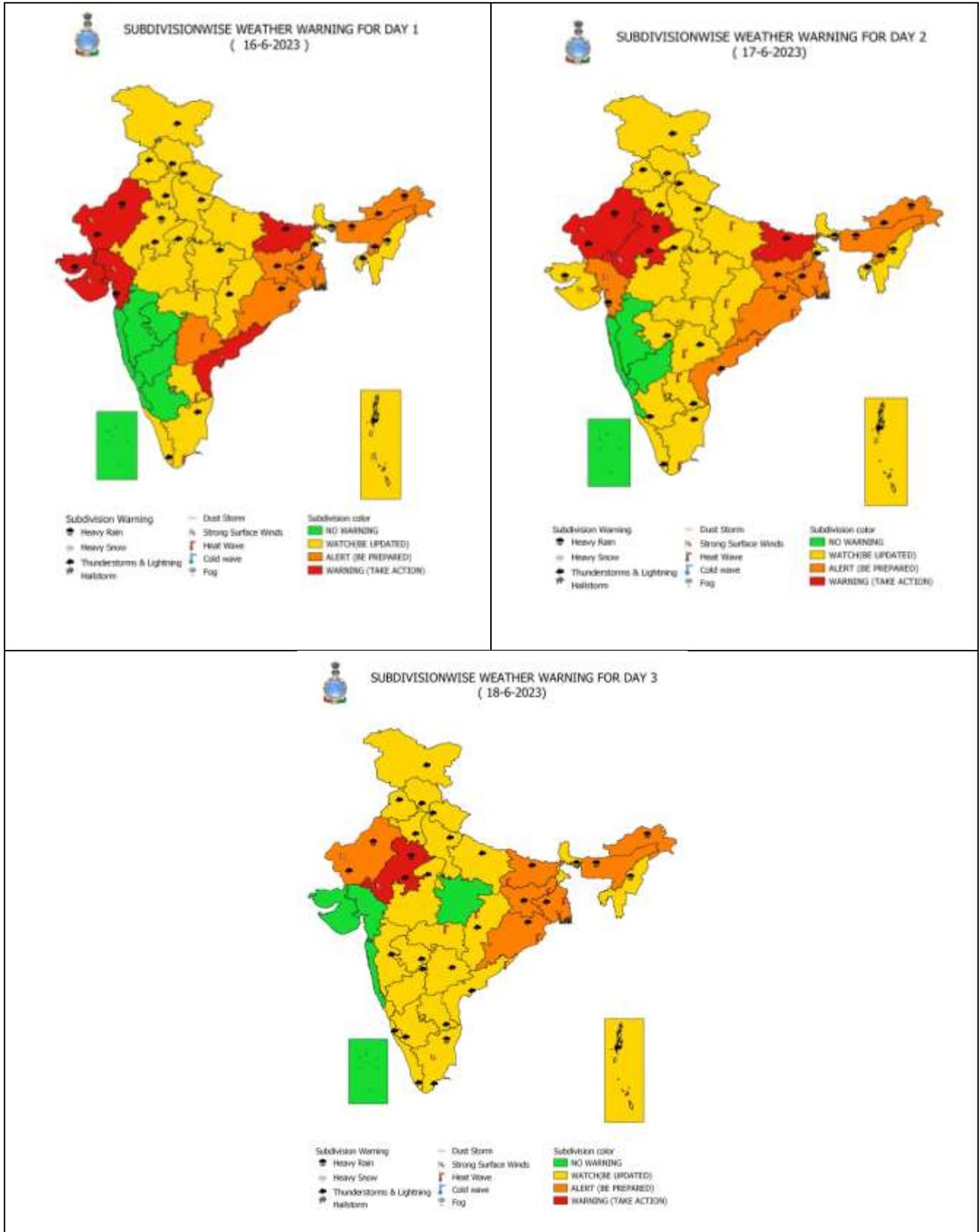
■ 50-63 KT (92-117 KMPH)

■ ≥ 64 KT (≥118 KMPH)

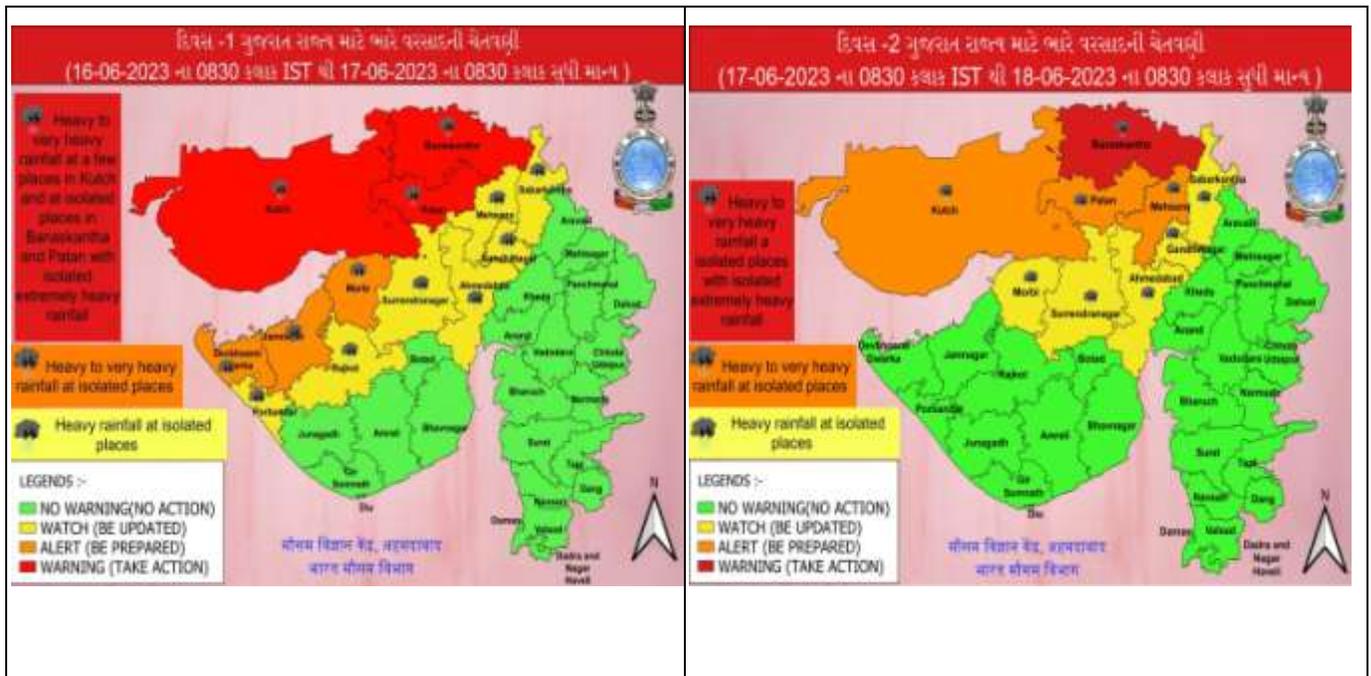
IMPACT OVER THE SEA

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 16th to 18th June 2023



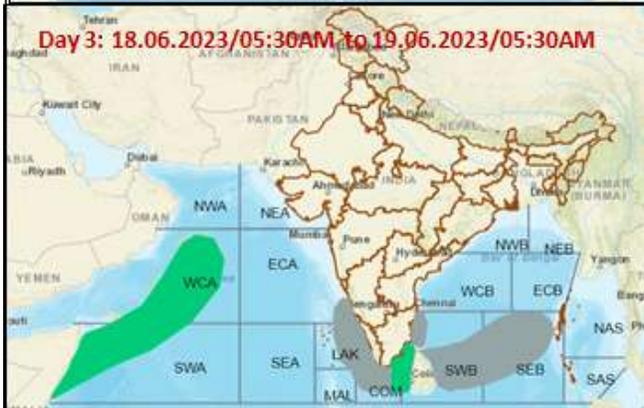
District-wise Heavy Rainfall Warning Maps for 16th to 17th June



District-wise Wind Warning Maps for 16th June



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
Fishermen are advised not to venture into the marked areas	