



Government of India
Ministry of Earth Sciences



India Meteorological Department

PRESS RELEASE – 5

Time of issue: 1330 hours IST

Dated: 16 June, 2023

Sub: Cyclonic Storm “Biparjoy” (pronounced as “Biporjoy”) over Saurashtra & Kutch

Yesterday’s very severe cyclonic storm “Biparjoy” pronounced as "BIPORJOY" over northeast Arabian Sea moved nearly northeastwards and crossed Saurashtra & Kutch and adjoining Pakistan coasts between Mandvi (Gujarat) and Karachi (Pakistan) close to Jakhau Port (Gujarat) near latitude 23.28°N and longitude 68.56°E between 2230 and 2330 hours IST of 15th June, 2023 as a very severe cyclonic storm with maximum sustained wind speed of 115-125 kmph gusting to 140 kmph. It weakened into a severe cyclonic storm and lay centered at 2330 hours IST of 15th June over Saurashtra & Kutch about 10 km north of Jakhau Port (Gujarat) and 30 km west-northwest of Naliya.

Thereafter, moving east-northeastwards, it further weakened into a cyclonic storm and lay centered at 0830 hours IST of today, the 16th June, 2023 over Saurashtra & Kutch near latitude 23.4°N and longitude 69.5°E, about 30 km west-northwest of Bhuj.

Related graphics based on 0830 hours IST of today, the 16th June are placed at annexure-1. Realised rainfall over Saurashtra and Kutch on 15th June (0830 hours IST of 15th to 0830 hours IST of 16th June) is placed at Annexure-2.

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
16.06.23/0830	23.4/69.5	80-90 Gusting To 100	Cyclonic Storm
16.06.23/1130	23.5/69.9	65-75 Gusting To 85	Cyclonic Storm
16.06.23/1730	23.7/70.6	50-60 Gusting To 70	Deep Depression
16.06.23/2330	24.1/71.5	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.

Contact: Cyclone Warning Division, Office of the Director General of Meteorology,
India Meteorological Department, Ministry of Earth Sciences.

Phone: (91) 11-24652484, FAX: (91) 11-24643128, 24623220, E-mail: cwdhq2008@gmail.com, Website: rsmcnewdelhi.imd.gov.in

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

(ii) Wind warning:

Northeast Arabian Sea: Gale wind speed reaching 55-65 kmph gusting to 75 kmph is prevailing and likely to become squally wind speed reaching 40-50 kmph gusting to 60 kmph by 16th June afternoon.

Adjoining areas of Eastcentral Arabian Sea: Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail till afternoon of 16th June.

Wind warning along & off Saurashtra & Kutch coasts and Gulf of Kutch:

- Gale wind speed reaching 75-85 kmph gusting to 95 kmph is likely to prevail over Kachchh, Gulf of Kutch and adjoining areas; 60-70 kmph gusting to 80 kmph is likely to prevail over northern districts of Saurashtra and 50-60 kmph gusting to 70 kmph over southern districts of Saurashtra during next six hours. It is likely to become squally wind speed reaching 50-60 kmph gusting to 70 kmph from 16th June evening till midnight over the above regions.
- Squally wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing along & off remaining districts of Saurashtra coast and likely to become 35-45 kmph gusting to 55 kmph by 16th June evening.

Wind Warning for South Rajasthan

- Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely over South Rajasthan during 16th afternoon and becoming 50-60 kmph gusting to 70 kmph during evening to night. It would decrease thereafter becoming 35-45 kmph gusting to 55 kmph on 17th June.

(iii) Sea condition

high to very rough sea condition is prevailing over northeast Arabian Sea and it is likely to become rough by 16th June evening and improve thereafter.

Along & off Saurashtra & Kutch coasts:

High to very rough Sea condition is prevailing over the region. It is likely to become rough by 16th June evening and improve thereafter.

(iv) Damage expected over Kachchh and North Saurashtra districts during next 3 hours:

- Damage to thatched huts.
- Minor damage to power and communication lines due to breaking of branches.
- Major damage to Kutcha 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 till 16th June afternoon: (Graphics Attached)

- Total suspension of fishing operations over northeast and adjoining eastcentral Arabian Sea.
- Judicious regulation of offshore and onshore activities.
- Ports along the west coast of India may take necessary precautions.

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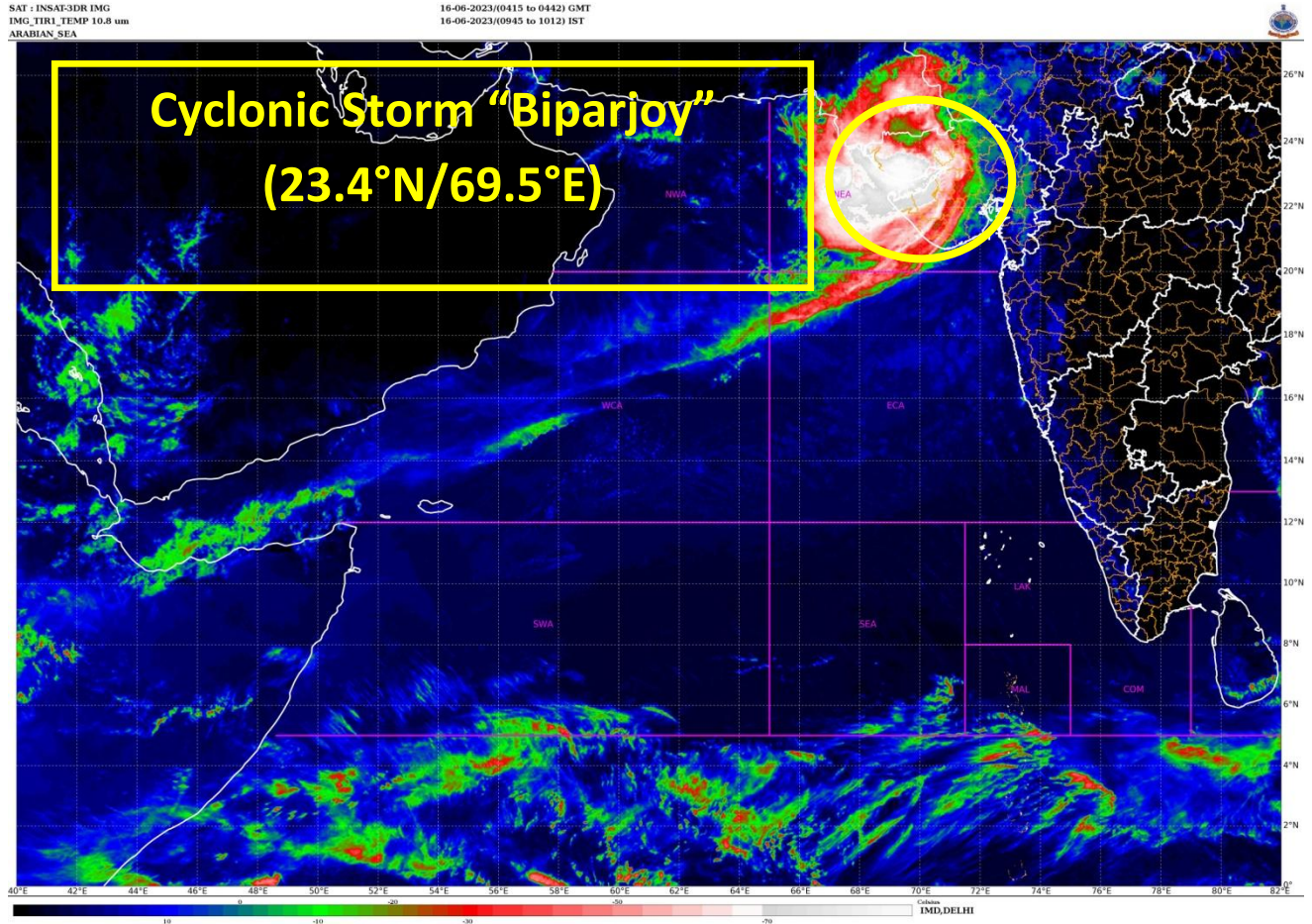
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Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

- 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 1430 hours IST of the 17th June, 2023.

For regular updates kindly visit www.rsmcnewdelhi.imd.gov.in and www.mausam.imd.gov.in



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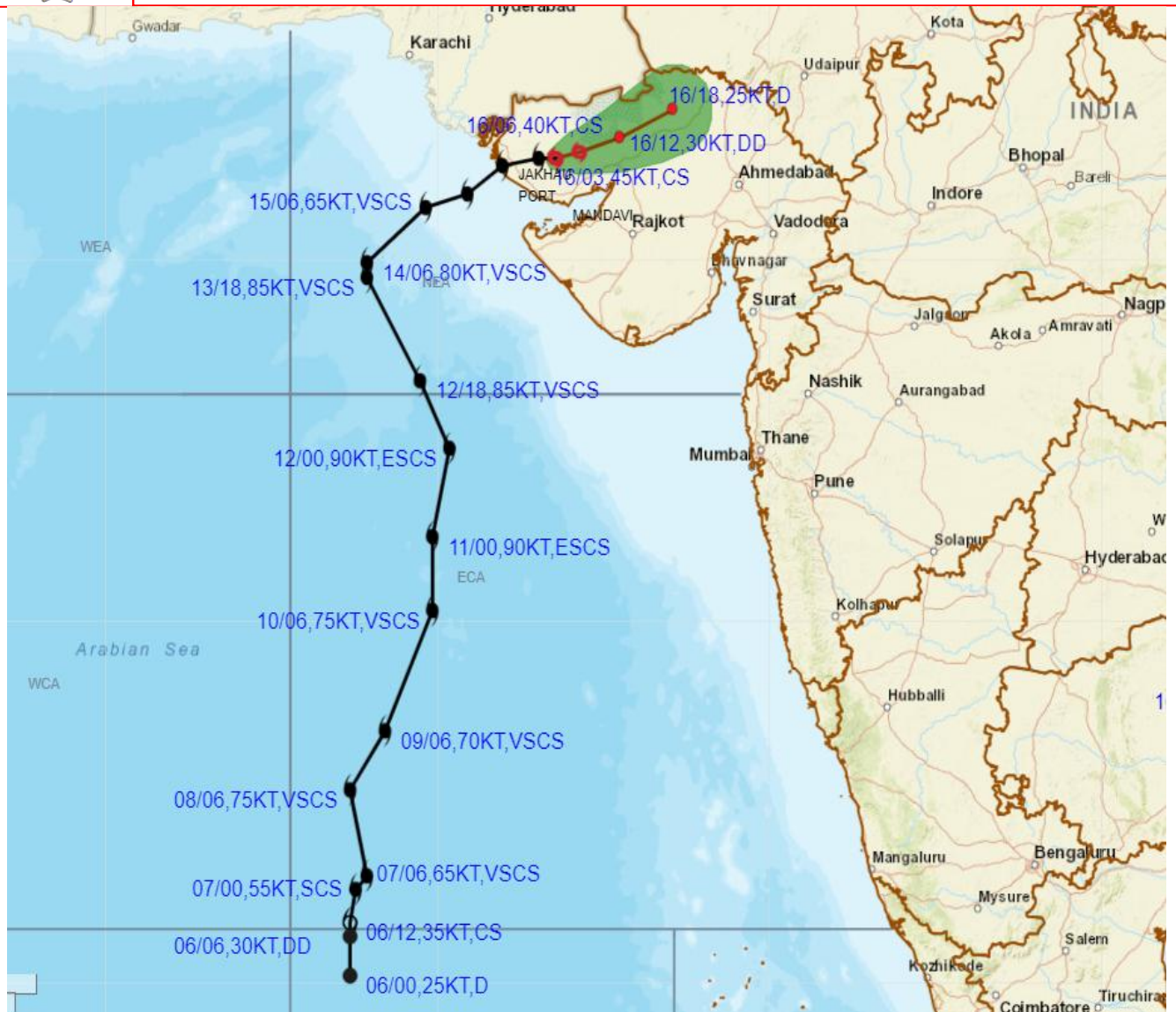
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Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY OF CYCLONIC STORM "BIPARJOY" OVER SAURASHTRA & KUTCH BASED ON 0300 UTC (0830 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

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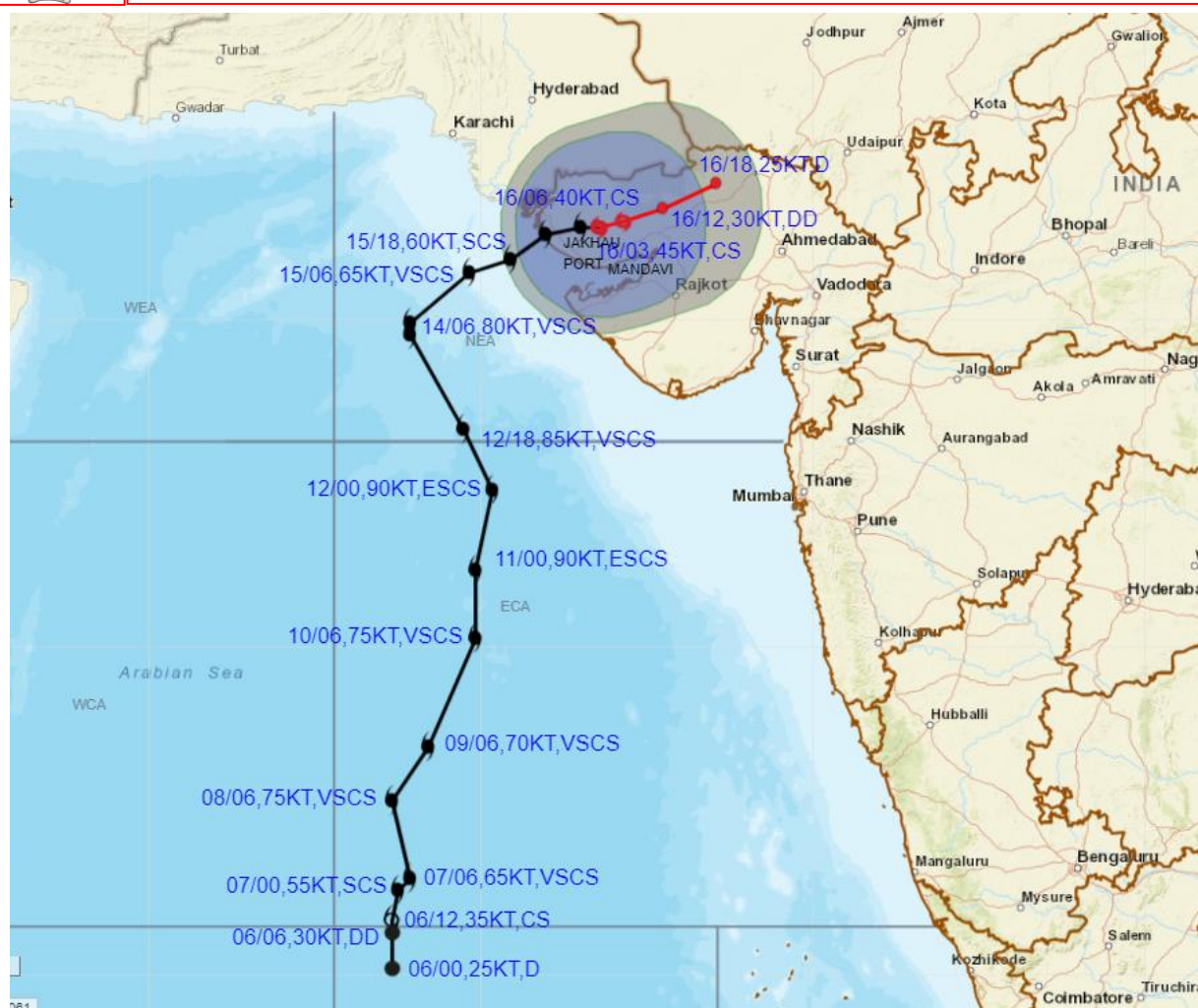
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Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM "BIPARJOY" OVER SAURASHTRA & KUTCH BASED ON 0300 UTC (0830 IST) OF 16TH JUNE 2023.



DATE/TIME IN UTC
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● 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

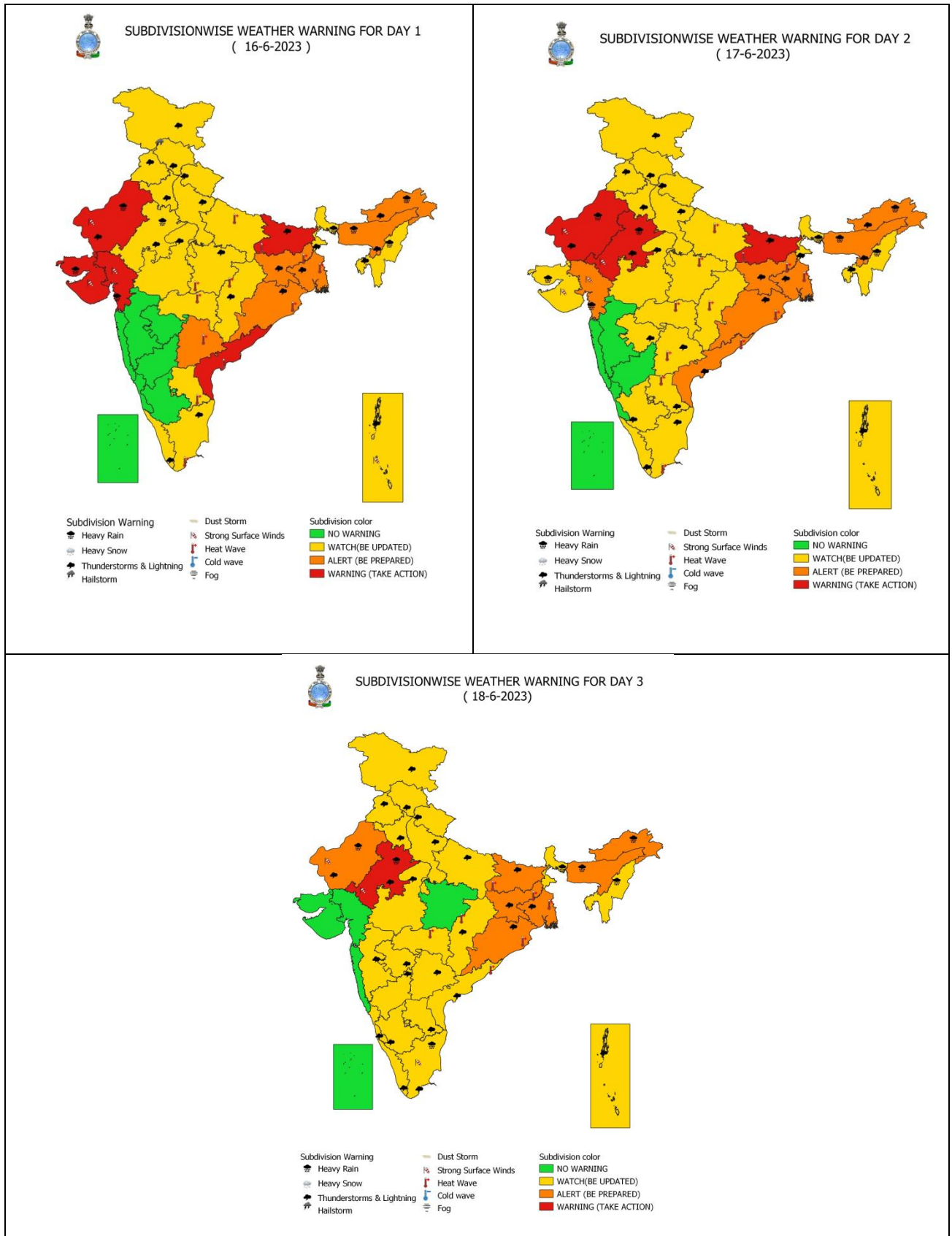
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All India Heavy Rainfall Warning for 16th to 18th June 2023



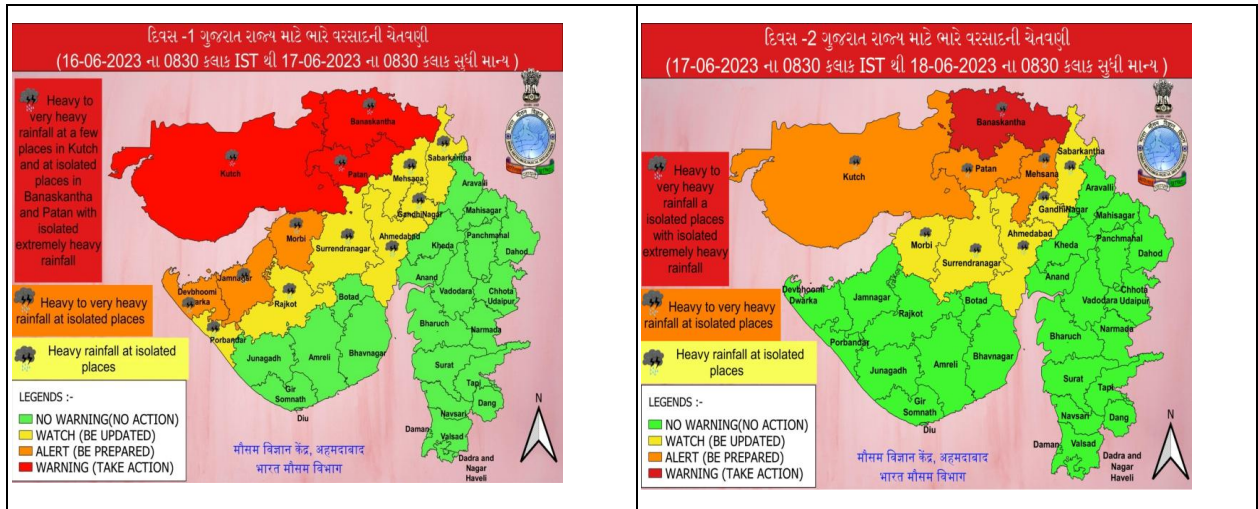
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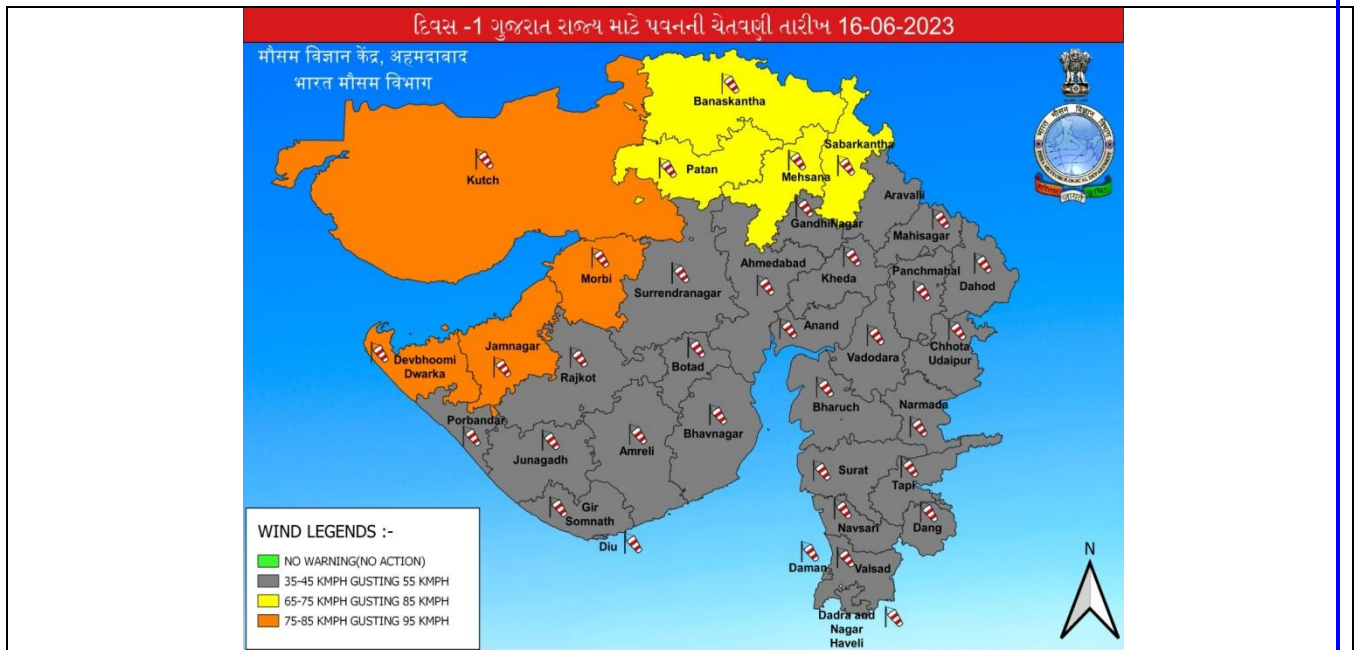
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District-wise Heavy Rainfall Warning Maps for 16th to 17th June



District-wise Wind Warning Maps for 16th June



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District-wise Heavy Rainfall Warning Maps for 16th, 17th and 18th June for Rajasthan

चेतावनी : 16 जून, 2023

(अगले दिन 0830 तक मान्य)

जारी दिनांक : 16 जून, 2023



मौसम केंद्र, जयपुर



- EXTREMELY HEAVY RAIN
- VERY HEAVY RAIN
- HEAVY RAIN

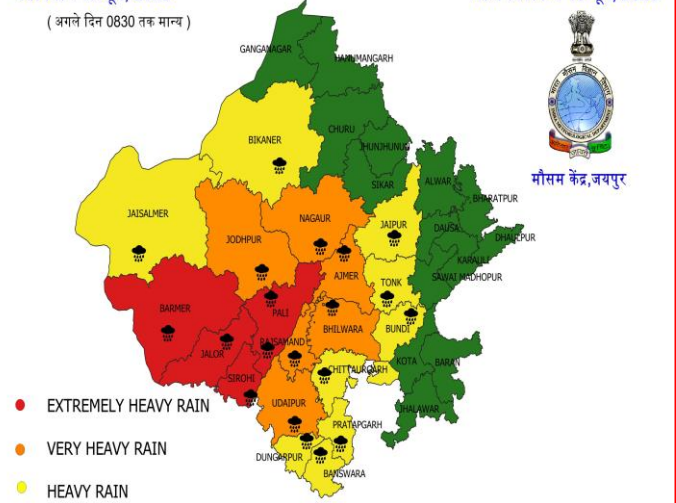
चेतावनी : 17 जून, 2023

(अगले दिन 0830 तक मान्य)

जारी दिनांक : 16 जून, 2023



मौसम केंद्र, जयपुर



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- HEAVY RAIN

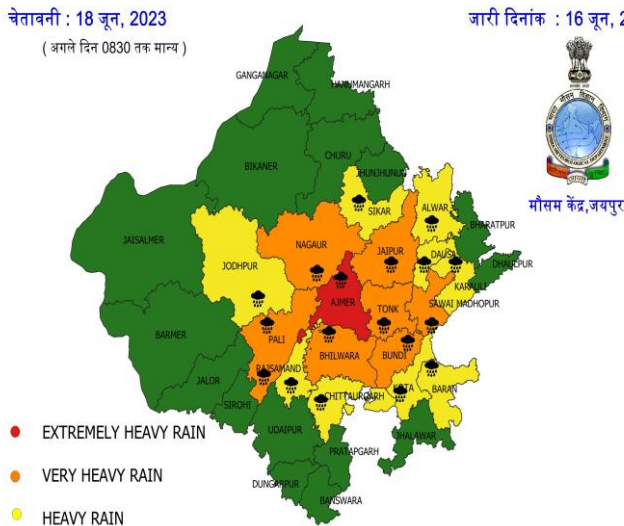
चेतावनी : 18 जून, 2023

(अगले दिन 0830 तक मान्य)

जारी दिनांक : 16 जून, 2023



मौसम केंद्र, जयपुर



- EXTREMELY HEAVY RAIN
- VERY HEAVY RAIN
- HEAVY RAIN

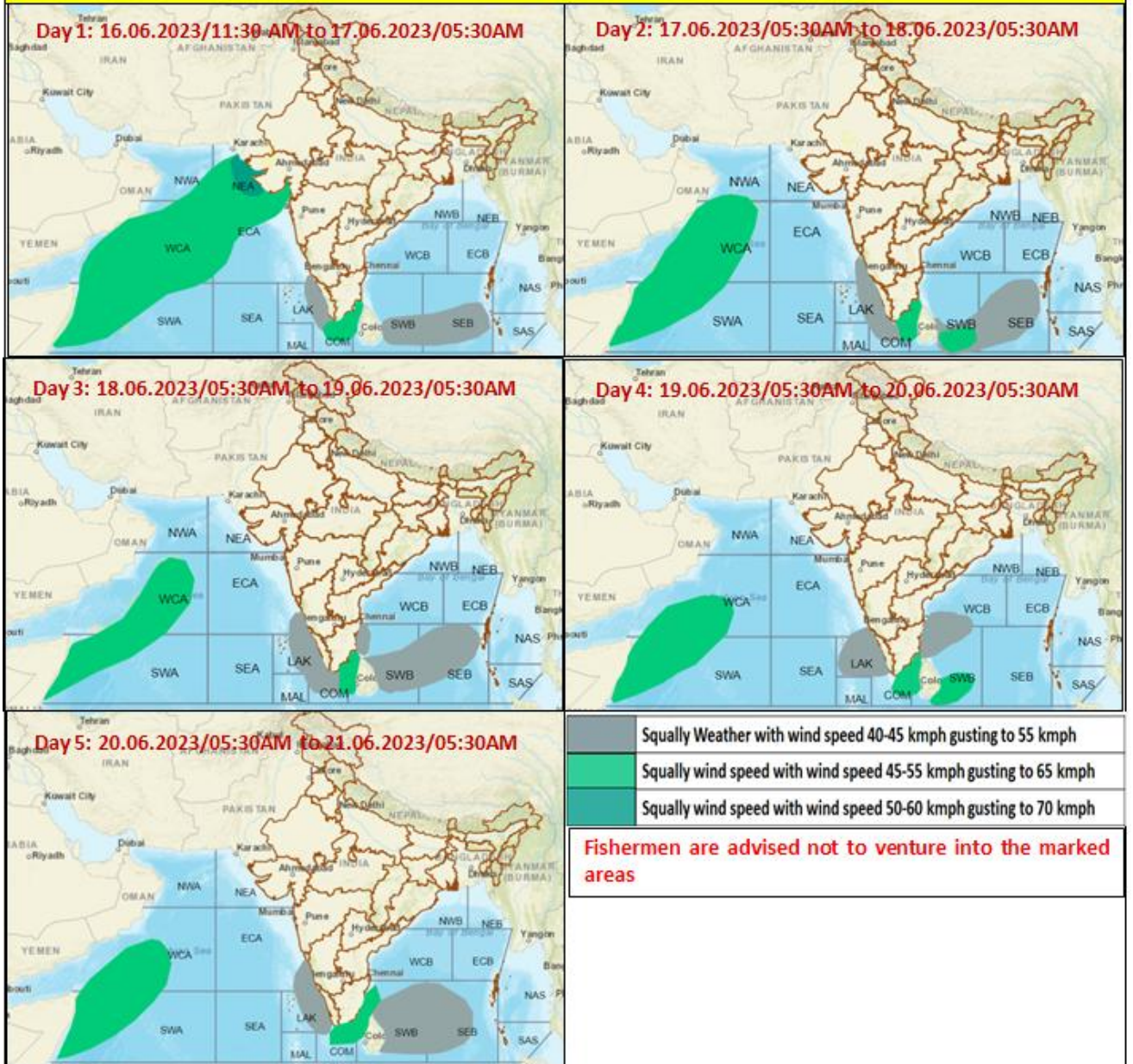
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Fishermen warning graphics



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24 hours cumulative heavy rainfall (≥ 7 cm) in cm ending at 0830 hours IST of today, the 16th June in association with cyclone “BIPARJOY”

GUJARAT REGION

Wav (dist Banaskantha) 8

SAURASHTRA & KUTCH

Gandhidham (dist Kutch) 20, Kandla Airport (dist Kutch) 16, Dwarka (dist Devbhoomi Dwarka) 15, Anjar (dist Kutch), Bhuj (dist Kutch) & Mundra (dist Kutch) 13 each, Okha (dist Devbhoomi Dwarka) 11, Kandla New (dist Kutch) & Khambhalia (dist Devbhoomi Dwarka) 10 each, Jamjodhpur (dist Jamnagar) 9, Kalyanpur (dist Devbhoomi Dwarka) 8, Jamnagar (dist Jamnagar), Naliya (dist Kutch) & Kalavad (dist Jamnagar) 7 each.

(dist: District)