



**Government of India
Ministry of Earth Sciences
India Meteorological Department**

**Press Release
Date: 16th June, 2023
Time of Issue: 1330 hours IST**

**Subject: i) Cyclonic storm “Biparjoy” is over Saurashtra & Kutch and likely to weaken into a deep depression over same area around evening of today, the 16th June
ii) Heat wave to severe heat wave conditions likely to continue over East India and central India during next 4 days and abate thereafter.
iii) Widespread rainfall activity with isolated heavy to very heavy falls likely to continue over northeast India and Sub-Himalayan West Bengal & Sikkim during next 5 days.**

Weather observed during past 24 hours ending at 0830 hrs IST of today (Annexure I):

Advance of Southwest Monsoon (Annexure II)

- ❖ The Northern Limit of Monsoon (NLM) continues to pass through lat. 16.5°N/ Long. 55°E, lat. 17.0°N/ Long. 60°E, lat. 17°N/ Long. 65°E, lat. 17°N/ Long. 70°E, Ratnagiri, Koppal, Puttaparthi, Shriharikota, lat. 15.0°N/ Long. 83.0°E, 18.0°N/87.0°E, 22°N/89.0°E, Malda and Forbesganj, 28°N/86°E.
- ❖ Conditions are becoming favourable for further advance of Southwest Monsoon over some more parts of south Peninsular & East India and adjoining areas during 18th -21st June.

Cyclonic Storm “Biparjoy” over Saurashtra & Kutch

The **Very Severe Cyclonic Storm “Biparjoy” (pronounced as “Biporjoy”)** over Northeast Arabian Sea crossed the 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 hours IST and 2330 hours IST of 15th June 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** at 2330 hours IST of 15th June over Saurashtra & Kutch. It moved east-northeastwards with a speed of 10 kmph during past 6-hours, weakened into a **cyclonic storm** and lay centered at 0830 hours IST of today, the 16th June, 2023 over the same region near latitude 23.4°N and longitude 69.5°E, about 30 km west-northwest of Bhuj.

It is very likely to move nearly east-northeastwards and weaken further into a **deep depression** over Saurashtra & Kutch around evening of today, the 16th June.

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: 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.
- 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.

Weather forecast and warning over the rest parts of the country during next 5 days:

Northeast & adjoining East India:

- ❖ Widespread light/moderate rainfall at most places with isolated **Heavy to Very Heavy falls** very likely over Northeast India and Sub-Himalayan West Bengal & Sikkim during next 5 days. Isolated **extremely heavy rainfall** also likely over Assam & Meghalaya during 16th-18th June.

Northwest & adjoining Central India:

- ❖ Light/moderate scattered to fairly widespread rainfall with thunderstorm & lightning very likely in isolated places over Himachal Pradesh & Uttarakhand during next 5 days. **Thundersquall (60-70 kmph) and hailstorm** very likely at isolated places over Uttarakhand on 18th & 19th June.
- ❖ Light to moderate rainfall at many places with **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over southwest Rajasthan on 16th & 17th June; southeast Rajasthan on 17th & 18th June.
- ❖ **Isolated Heavy to very heavy rainfall** also likely over southwest Rajasthan on 18th; east Rajasthan on 19th and **heavy rainfall** over southeast Rajasthan on 16th & 20th June; Uttarakhand on 18th & 19th; northwest Madhya Pradesh and West Uttar Pradesh on 19th & 20th June.

South India:

- ❖ Light/moderate scattered to fairly widespread rainfall with thunderstorm & lightning very likely over the region during next 5 days. **Isolated Heavy rainfall** also likely over Kerala & Tamilnadu during 18th-20th; South Interior Karnataka & Rayalaseema on 19th & 20th June.

No significant weather likely over rest parts of the country during next 5 days.

Maximum Temperatures and Heat Wave warning (Graphics in Annexure III):

- ❖ Yesterday, Maximum Temperatures were in the range of 42-44°C over parts of Gangetic West Bengal, Bihar, Odisha and 40-42°C over parts of East Uttar Pradesh, Vidarbha, Chhattisgarh and Coastal Andhra Pradesh & Yanam, Telangana and Jharkhand.
- ❖ Yesterday, **Heat Wave to Severe Heat Wave conditions** prevailed over many parts of Coastal Andhra Pradesh & Yanam, in some pockets of Bihar; in isolated pockets of Jharkhand, Chhattisgarh, Odisha, Gangetic West Bengal and Heat wave conditions in isolated pockets of East Madhya Pradesh, East Uttar Pradesh and Telangana.
- ❖ No significant change in maximum temperatures very likely over Central India during next 2 days and fall by 2-4°C thereafter. Fall by 2-4°C over Northwest India during next 3 days and no significant change thereafter.
- ❖ **Heat Wave/Severe heat wave conditions** very likely to continue in isolated pockets over Odisha, Vidarbha during next 5 days; Gangetic West Bengal, Jharkhand during next 4 days, Coastal Andhra Pradesh & Yanam, East Madhya Pradesh, East Uttar Pradesh, Bihar during next 3 days; West Madhya Pradesh, Telangana, Rayalaseema and Tamil Nadu during next 2 days.
- ❖ **Warm night conditions** likely to prevail in isolated pockets over Vidarbha, East Uttar Pradesh on 16th & 17th; East Madhya Pradesh, Chhattisgarh during 16th-18th June.

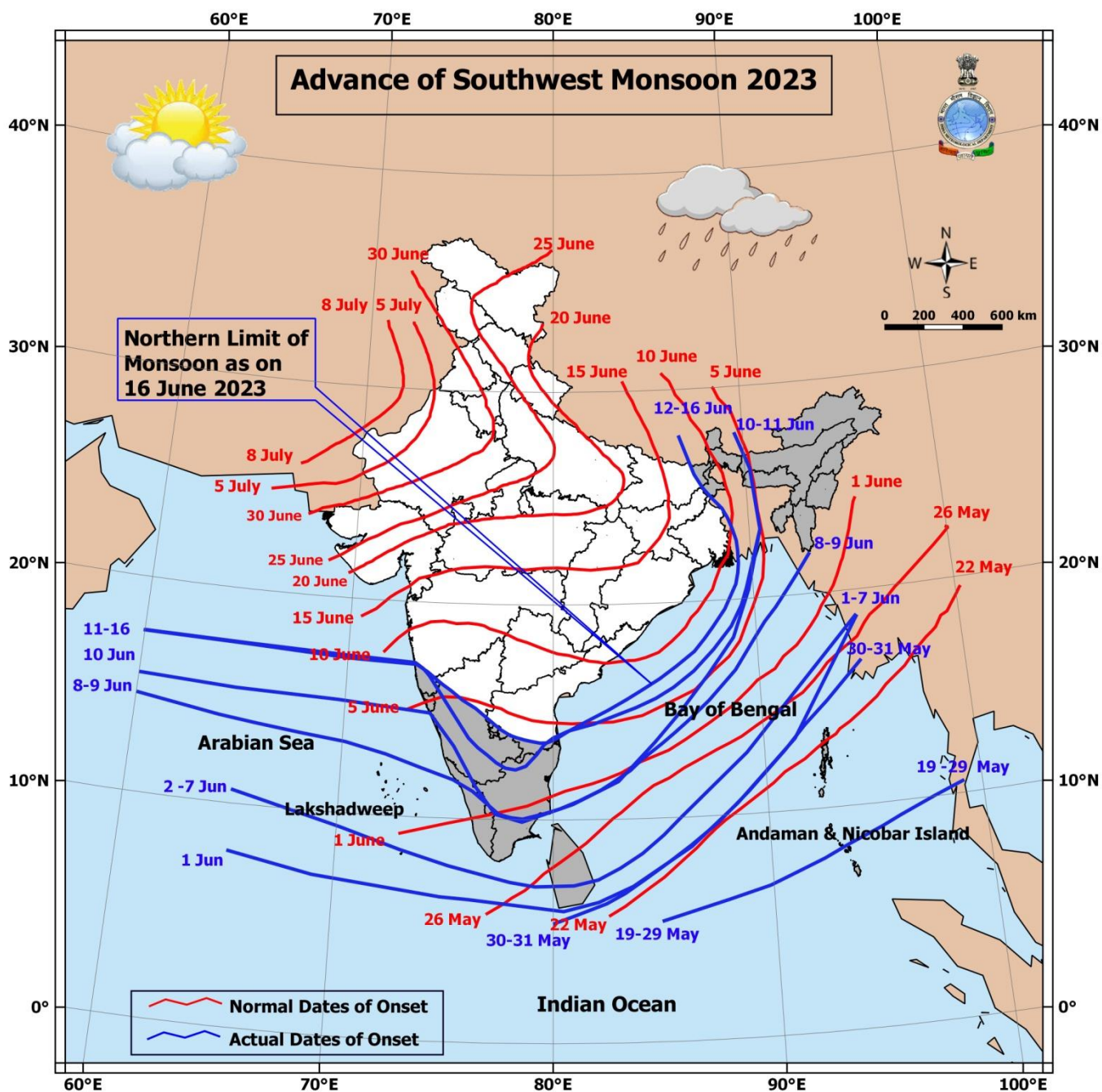
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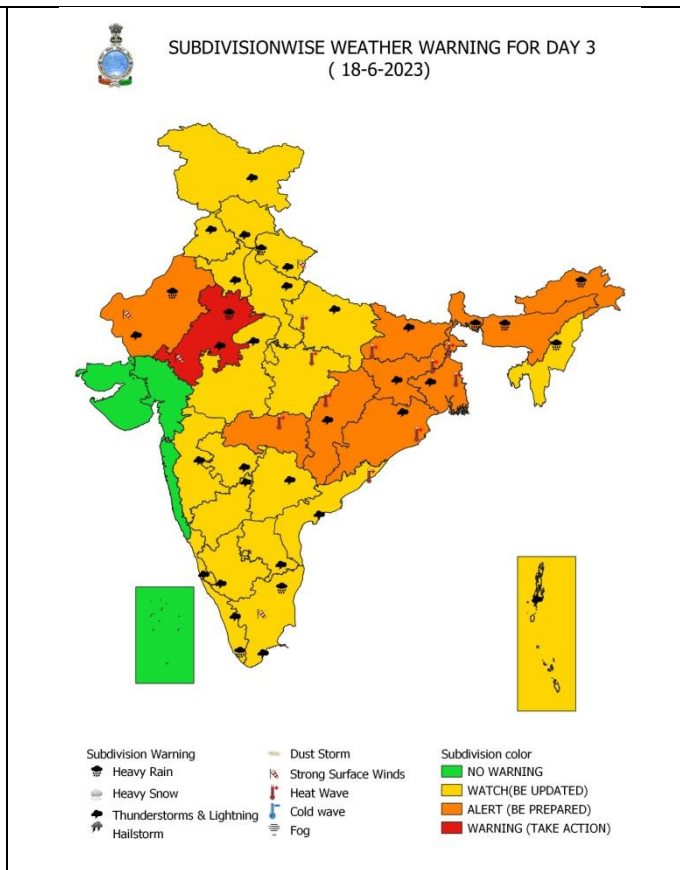
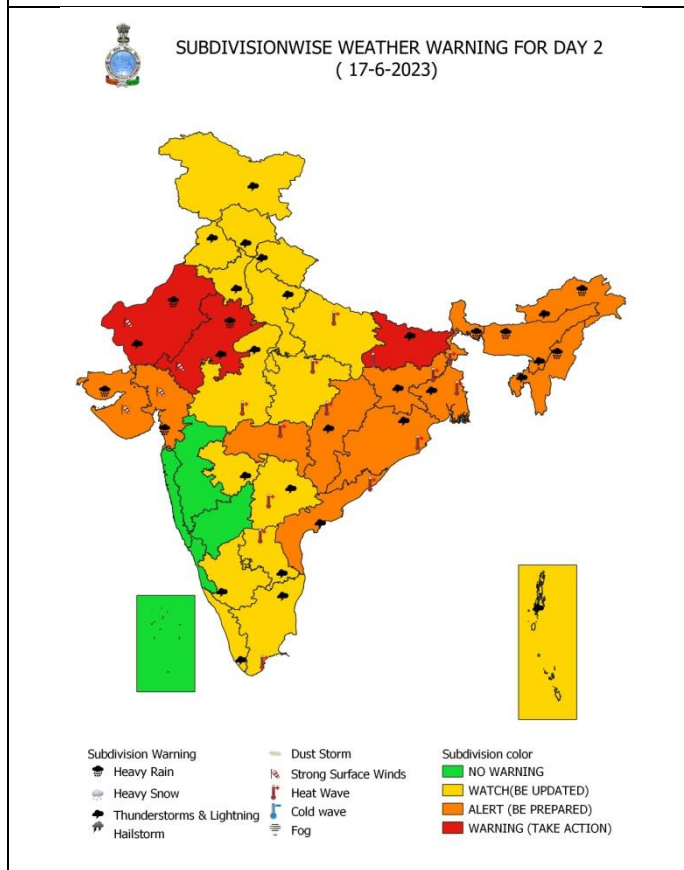
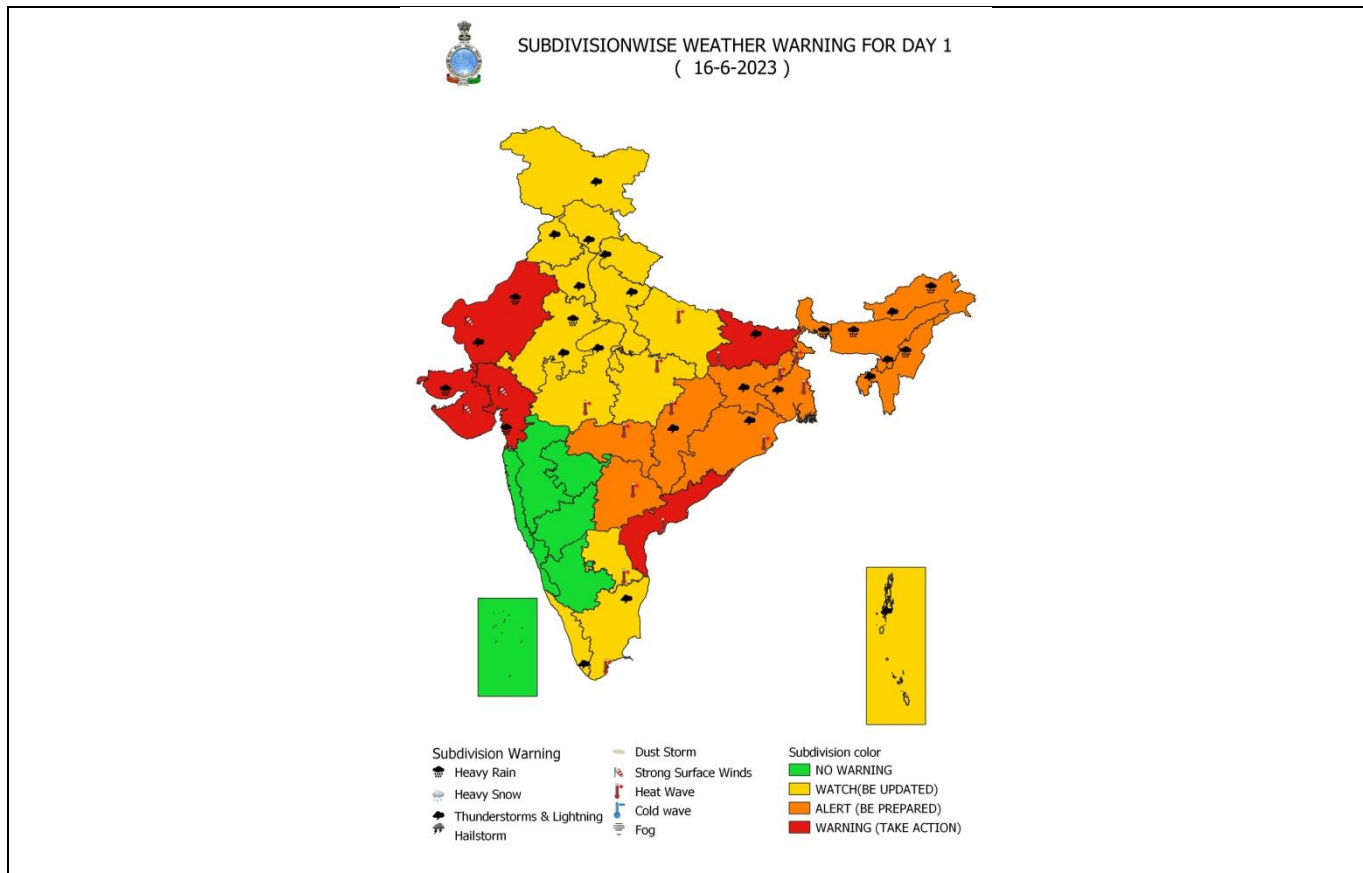
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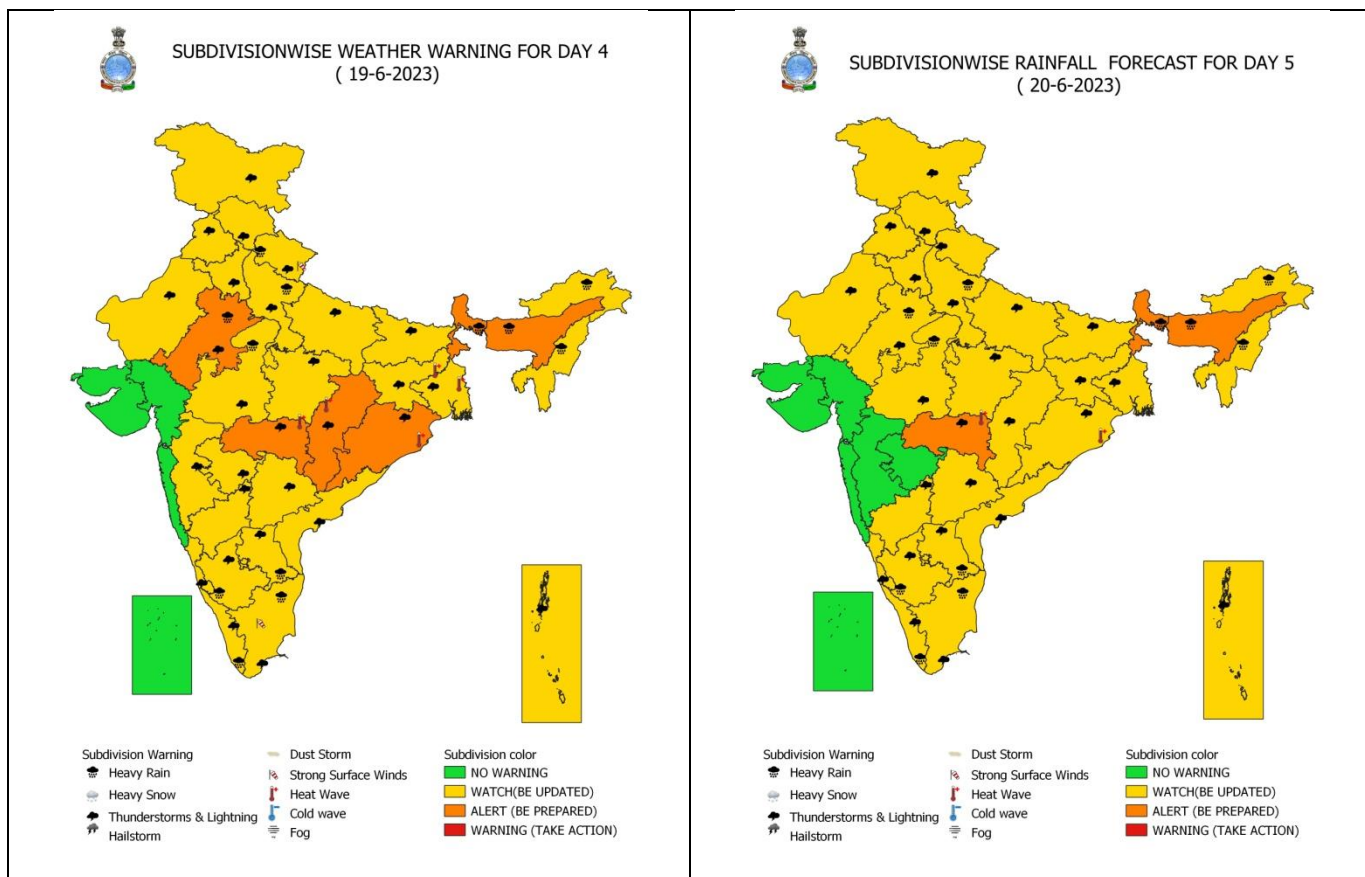
<https://mausam.imd.gov.in/responsive/districtWiseNowcast.php>

Weather Observations: (from 0830 hours IST of yesterday to 0830 hours IST of today):

- ❖ **Rainfall/thundershowers observed:** at most places over Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Saurashtra & Kutch; at many places over Gujarat Region; Kerala & Mahe and at a few places over Gujarat Region, Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Rajasthan, Konkan & Goa.
- ❖ **Heavy rainfall observed:** Extremely heavy rainfall at isolated places over Meghalaya; Very heavy rainfall at isolated places over Saurashtra & Kutch, Assam, Arunachal Pradesh, Tripura, Sub-Himalayan West Bengal & Sikkim,; Heavy rainfall at isolated places over Gujarat region, southwest Rajasthan, Mizoram.
- ❖ **Significant rainfall recorded (in cm):** **Arunachal Pradesh:** Naharlagun (dist Papumpara) 7, Itanagar (dist Papumpara) 7, **Assam & Meghalaya:** Mawsynram (dist East Khasi Hills) 26, Drf (dist Baksa) 17, Mawkyrwat_arg (dist South West Khasi Hills) 17, Shella (dist East Khasi Hills) 15, Goibargaon (dist Baksa) 15, Melabazar/matunga (dist Nalbari) 14, Mawkyrwat (dist South West Khasi Hills) 14, **Mizoram & Tripura:** Lembuchhera (dist West Tripura) 10, Lawngtlai (dist Lawngtlai) 7, Agartala Aero (dist West Tripura) 6, **Sub-Himalayan West Bengal & Sikkim:** gangtok-12, Jalpaiguri-9, Cooch Behar-7; **Saurashtra & Kutch:** Gandhidham (dist Kutch) 20, Kandla Airport (dist Kutch) 16, Dwarka (dist Devbhoomi Dwarka) 15, Anjar (dist Kutch) 13, Bhuj (dist Kutch) 13, Mundra (dist Kutch) 13, Okha (dist Devbhoomi Dwarka) 11, Kandla New (dist Kutch) 10, **Gujarat Region:** Wav (dist Banaskantha) 8, Tharad (dist Banaskantha) 4 **West Rajasthan:** Jjalore-7, Dorimanna Sr (dist Barmer) 6,

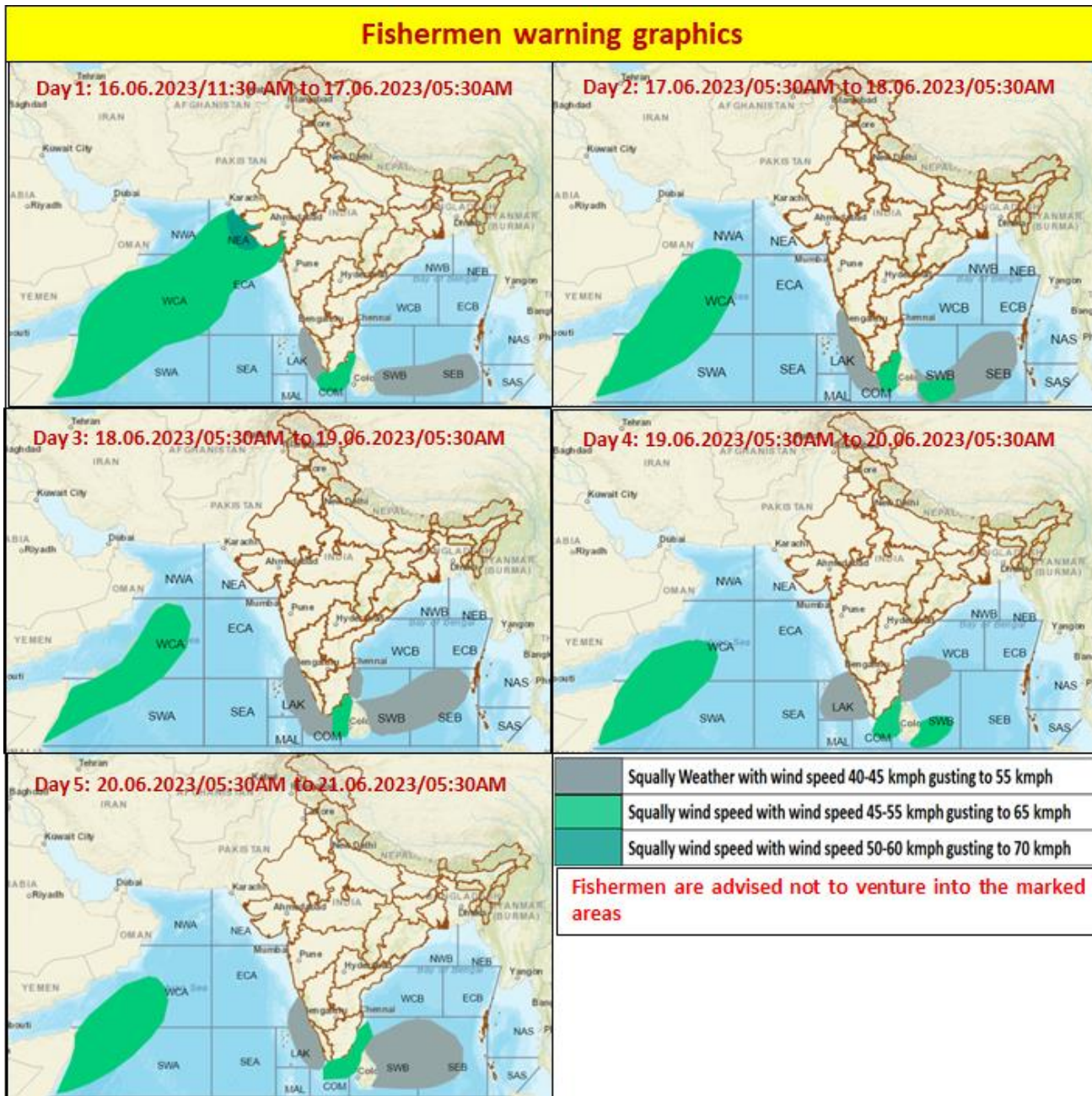




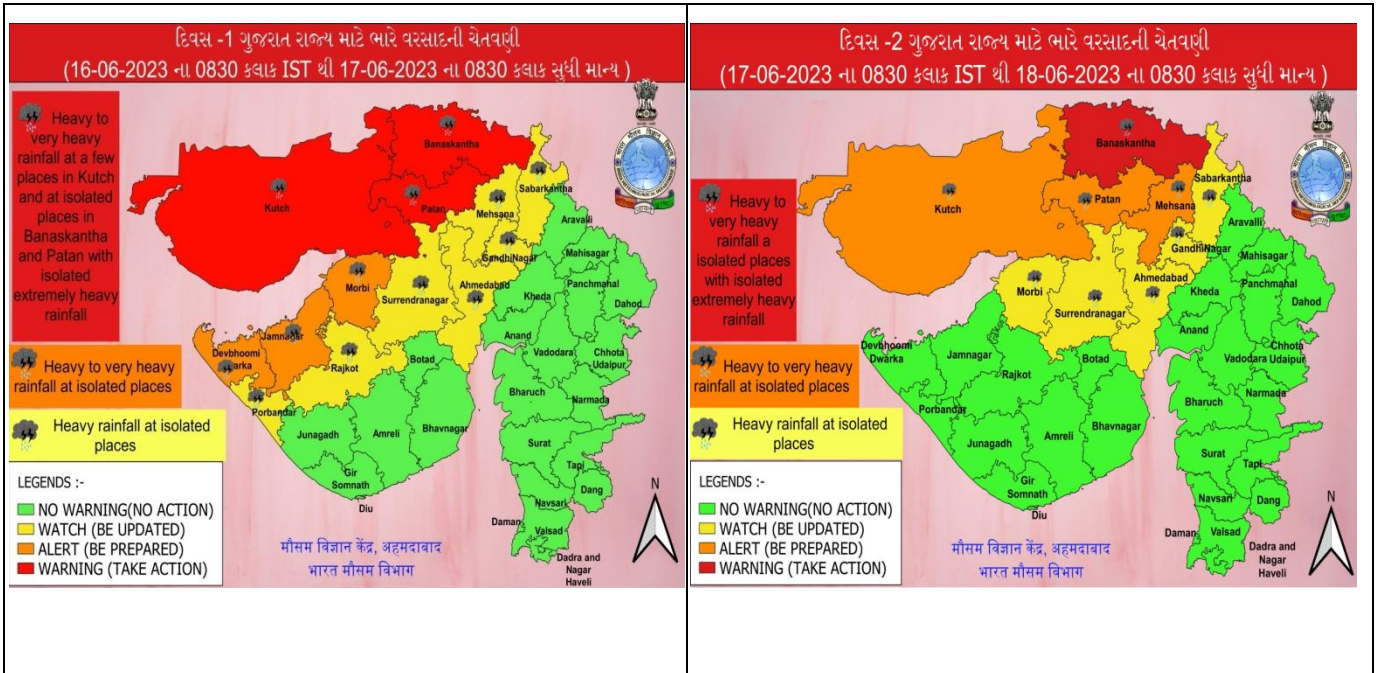


Agromet advisories for Gujarat and Rajasthan in view of Cyclonic storm “Biparjoy”

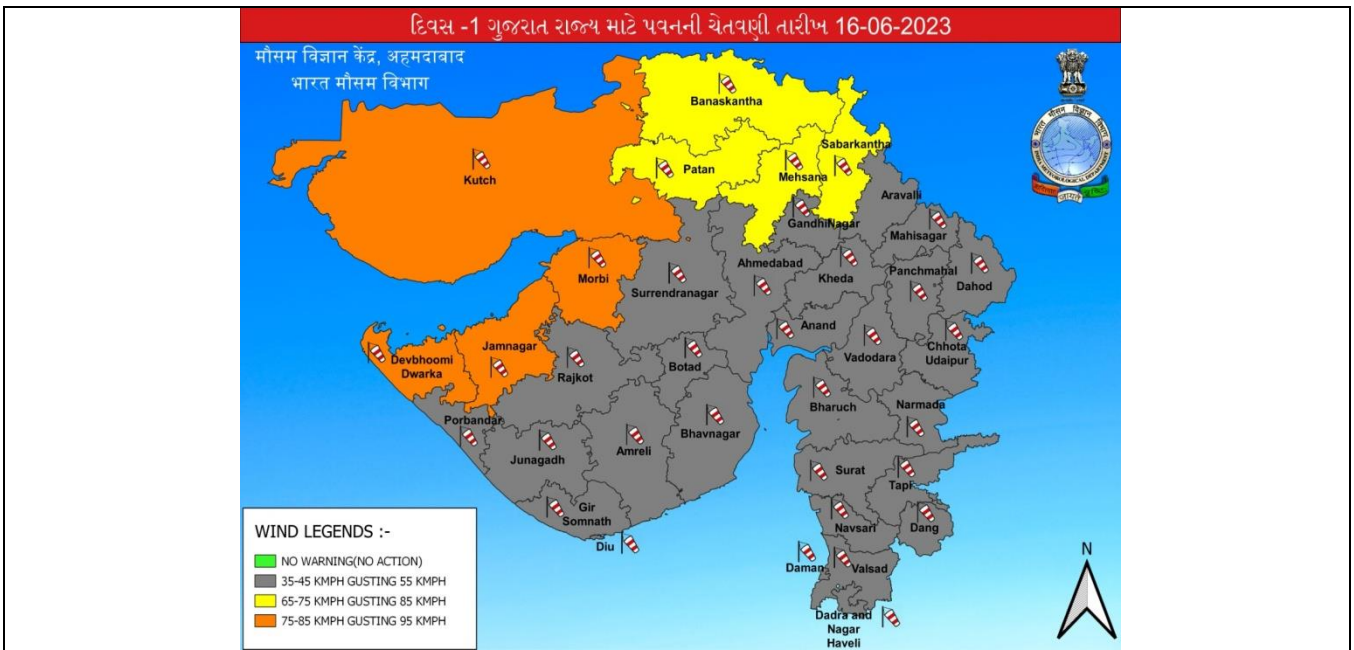
- Harvest matured vegetables and fruits such as mango, banana immediately and store them in safer places.
- Shift to safer places the harvested produce of crops like castor, groundnut, pearl millet and green gram in Gujarat and summer pearl millet in Rajasthan.
- Make arrangements for adequate drainage to avoid water logging in crop fields.
- Postpone sowing of cotton, groundnut and pigeon pea in Gujarat and cotton and groundnut in Rajasthan.
- Provide mechanical support to young fruit plants and staking in vegetables to avoid lodging.
- Keep the livestock indoors during the rainfall period.
- Provide a net around the fish pond to avoid escape of fish / spawn.



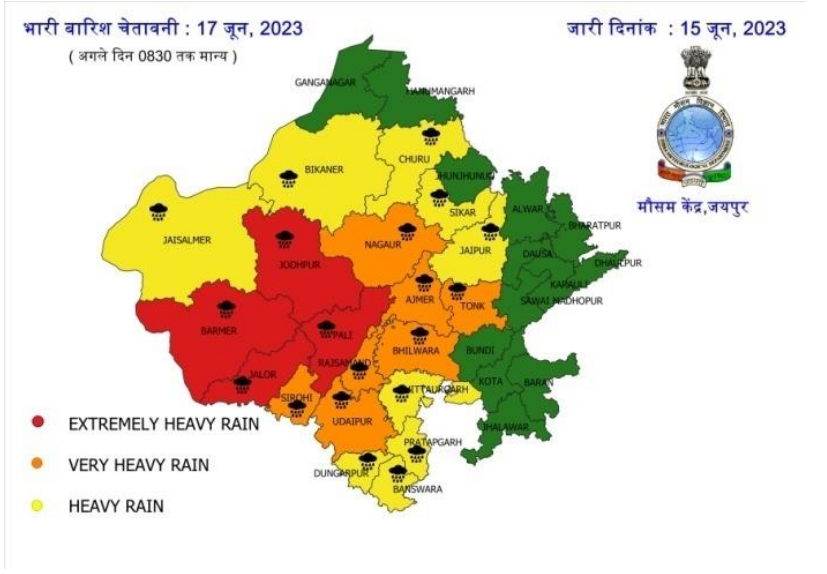
District-wise Heavy Rainfall Warning Maps for 16th to 17th June



District-wise Wind Warning Maps for 16th June



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
















Legends:

❖ **Heavy Rain:** 64.5 to 115.5 mm; **Very Heavy Rain:** 115.6 to 204.4 mm; **Extremely Heavy Rain:** >204.4mm.

❖ **Region wise classification of meteorological Sub-Divisions:**

- **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
- **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
- **East India:** Bihar, Jharkhand, Sub-Himalaya West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
- **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathwada.
- **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamilnadu, Puducherry & Karaikal and Lakshadweep.

SPATIAL DISTRIBUTION (% of Stations reporting)			
% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)

Subdivision Warning	 Dust Storm	Subdivision color
 Heavy Rain	 Strong Surface Winds	 NO WARNING
 Heavy Snow	 Heat Wave	 WATCH(BE UPDATED)
 Thunderstorms & Lightning	 Cold wave	 ALERT (BE PREPARED)
 Hailstorm	 Fog	 WARNING (TAKE ACTION)

Probabilistic Forecast	
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75