



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 05th June, 2024

Time of Issue: 1245 hours IST

Subject:

- i. **Rainfall/thunderstorm likely at a few places over Northwest India till 07th June, 2024.**
- ii. **Heat wave conditions likely to continue in isolated pockets over parts of east India, Uttar Pradesh and north Madhya Pradesh during next 5 days.**
- iii. **Rainfall activity is likely to increase over Konkan-Karnataka coasts with heavy to very heavy rainfall from 08th June, 2024.**

Realised weather during past 24 hours till 0830 hours IST of today: (details in Annexure I)

- ❖ **Heat wave conditions** prevailed in isolated pockets of Rajasthan, Haryana, Punjab, Uttar Pradesh & northwest Madhya Pradesh. **Heat wave conditions** have been prevailing over Haryana since 17th and over Madhya Pradesh & Uttar Pradesh since 18th May, 2024.
- ❖ Yesterday, Maximum temperatures were in the range of 43-46°C over many parts of Northwest Indian plains & adjoining Central India. These were above normal by 2-4°C over these areas.
- ❖ Yesterday, **the highest maximum temperature of 46.8°C** was reported at Jhansi (**West Uttar Pradesh**) over the country.
- ❖ **Heavy to very heavy rainfall** observed at isolated places over Sub-Himalayan West Bengal & Sikkim, Tamil Nadu, Telangana; **heavy rainfall** at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh, Rayalaseema, West Madhya Pradesh, North Interior Karnataka and Madhya Maharashtra.
- ❖ **Duststorm** observed at isolated places over Madhya Pradesh.
- ❖ **Hailstorm** observed at isolated places over Uttarakhand and West Madhya Pradesh.
- ❖ **Gusty winds/squally winds** data reported over the country is attached in **Annexure II**.

Advance of Southwest Monsoon:

- ❖ The Northern Limit of Monsoon continues to pass through 16.5°N/60°E, 16.5°N/65°E, 16°N/70°E, Goa (Mormugao), Gadag, Narayanpet, Narsapur, 17°N/85°E, 19.5°N/88°E, 21.5°N/90°E, 23°N/89.5°E and Islampur. (**Annexure III**)
- ❖ Conditions are favourable for further advance of Southwest Monsoon into remaining parts of central Arabian Sea, remaining parts of Karnataka, some parts of south Maharashtra, some more parts Telangana & Coastal Andhra Pradesh, some parts of south Chhattisgarh and South Odisha, some more parts of Westcentral and Northwest Bay of Bengal during next 3-4 days.

Weather Systems and Forecast & Warnings: (Annexure IV)

- ❖ A cyclonic circulation lies over Nagaland & neighbourhood in lower tropospheric levels. Strong southwesterly/southerly winds are prevailing from Bay of Bengal to northeastern States in lower tropospheric levels. Under their influence:

- ✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm, lightning & gusty winds (30-40 kmph) likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim during next 7 days.
 - ✓ Isolated **heavy rainfall** very likely over Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim during 05th-09th; Arunachal Pradesh during 06th-09th June.
 - ✓ Isolated **very heavy rainfall** very likely over Assam & Meghalaya on 07th & 08th June, 2024.
- ❖ A cyclonic circulation lies over Rayalaseema & neighbourhood in lower tropospheric levels and another over Coastal Karnataka & neighbourhood in middle tropospheric levels. Under their influence:
- ✓ Fairly widespread to widespread light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** likely over Kerala & Mahe, Lakshadweep, Andaman & Nicobar Islands, Karnataka; isolated to scattered light to moderate rainfall over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh, Telangana, Rayalaseema during next 5 days.
 - ✓ *Isolated **heavy rainfall** very likely over Kerala & Mahe during 05th-09th; Coastal Karnataka on 05th; 08th & 09th; North Interior Karnataka during 05th-07th; Tamil Nadu, South Interior Karnataka on 05th & 06th and Coastal Andhra Pradesh, Telangana and Rayalaseema on 05th June, 2024.*
 - ✓ Scattered light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Marathwada during next 5 days; Konkan & Goa, Madhya Maharashtra on 05th & 06th June.
 - ✓ Fairly widespread to widespread light to moderate rainfall with **thunderstorm, lightning & gusty winds (40-50 kmph)** very likely over Konkan & Goa and Madhya Maharashtra during 07th-10th June, 2024.
 - ✓ Isolated **heavy rainfall** very likely over Konkan & Goa during 06th-09th; Madhya Maharashtra during 05th-09th and Marathwada during 05th-07th June.
 - ✓ Isolated **very heavy rainfall** very likely over Konkan & Goa on 08th & 09th and over south Madhya Maharashtra and Coastal Karnataka on 09th June.
- ❖ A cyclonic circulation lies over West Uttar Pradesh and a trough runs from this cyclonic circulation to east Bangladesh in lower tropospheric levels. Under their influence:
- ✓ Isolated to scattered light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Bihar, Jharkhand, Gangetic West Bengal, Chhattisgarh, Odisha, Vidarbha, Madhya Pradesh during next 5 days.
 - ✓ Isolated **hailstorm and squally winds (50-60 kmph)** very likely over south Madhya Pradesh on 05th & 06th June.
- ❖ A Western Disturbance seen as a cyclonic circulation over Afghanistan in lower tropospheric levels. Prevailing southwesterly winds from Arabian Sea over the plains of Northwest India are likely to continue during next 3 days. Under their influence:
- ✓ Isolated to scattered light rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand during next 3-4 days.
 - ✓ Isolated **hailstorm** very likely over Himachal Pradesh on 05th June.

- ✓ Isolated very light to light rainfall with **thunderstorm, lightning & gusty winds (30-50 kmph)** very likely over Punjab, Haryana-Chandigarh-Delhi during 05th-07th; Uttar Pradesh on 05th & 06th and Rajasthan during 05th-08th June.
- ✓ **Duststorm** very likely over Punjab, Haryana-Chandigarh-Delhi on 05th & 06th and Rajasthan during 06th-08th June, 2024.

Maximum temperature observation and forecast for next 5 days:

- ❖ Rise in maximum temperatures by 2-3°C very likely over East India during next 2 days and no significant change thereafter.
- ❖ No significant change in maximum temperatures very likely over Uttar Pradesh during next 2 days and rise by about 2°C thereafter.
- ❖ No significant change in maximum temperatures very likely over rest parts of the country.

Heat Wave, Warm Night and Hot & Humid weather warning for next 5 days:

- ❖ **Heat wave conditions** very likely in isolated pockets of northeast Madhya Pradesh, Jharkhand during 05th-09th; Punjab, Haryana, Rajasthan on 05th; Bihar during 06th-09th; northwest Madhya Pradesh & Odisha during 07th-09th June, 2024.
- ❖ **Heat wave conditions** very likely in isolated pockets of Uttar Pradesh on 05th & 06th and **heat wave to severe heat wave conditions** in some parts over the region during 07th-09th June.
- ❖ **Hot and humid weather** very likely to prevail over isolated pockets of Bihar on 05th; Odisha on 05th & 06th; Gangetic West Bengal during 06th-09th June, 2024.

For more details, kindly refer: https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

Realised Rainfall during past 24 hours till 0830 hours IST of today:

- ❖ Light to moderate rainfall accompanied with thunderstorm & lightning observed **at most places** over Sub-Himalayan West Bengal & Sikkim; **at many places** over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, Kerala & Mahe; **at a few places** over West Madhya Pradesh, Vidarbha, Chhattisgarh, Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Lakshadweep, Coastal Karnataka, Andaman & Nicobar Islands, Odisha; **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Haryana-Chandigarh, Uttar Pradesh, East Rajasthan, East Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat Region, South Interior Karnataka and Coastal Andhra Pradesh & Yanam.

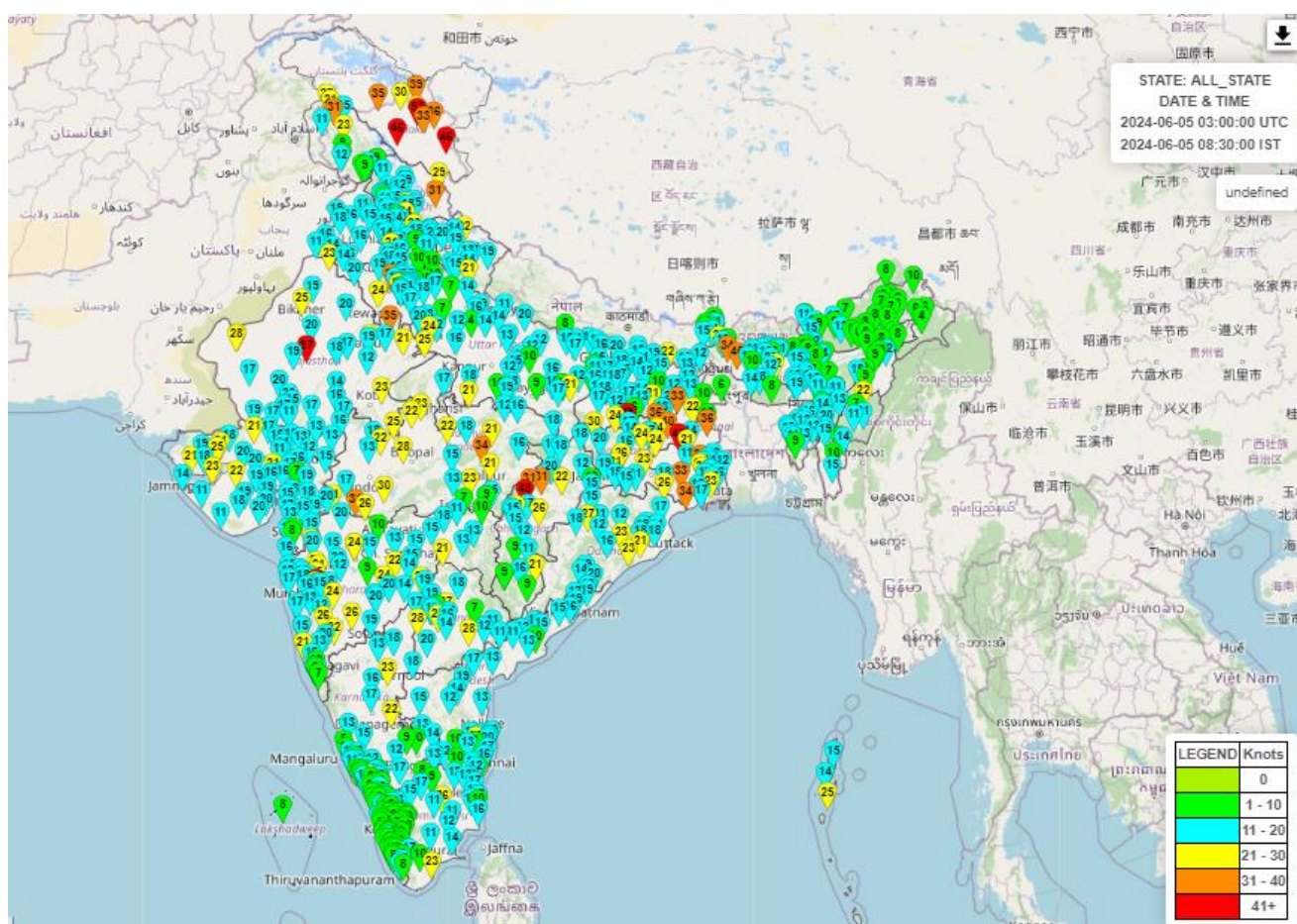
Significant amount of rainfall (in cm):

- ❖ **Tamil Nadu, Puducherry & Karaikal:** Nedungal (dist Krishnagiri) 13, Paiyur AWS (dist Krishnagiri) 11, Sirugamani KVK AWS (dist Thiruchirappalli), Natrampalli (dist Tirupathur), Barur (dist Krishnagiri), Kolapakkam ARG (dist Kancheepuram) 7 each,
- ❖ **Telangana:** Sarangapur (dist Jagtial) 12, Kodangal (dist Vikarabad) 8, Sadasivanagar (dist Kamareddy) 5, Vangoor (dist Nagarkurnool) 5, Bazarhathnoor (dist Adilabad) 4,
- ❖ **Sub-Himalayan West Bengal & Sikkim:** Sevoke (dist Darjeeling) 12, Rongo (dist Kalimpong) 9, Neora (dist Jalpaiguri) 9, Jhallong (dist Kalimpong) 7, Murti (dist Jalpaiguri) 7, Cooch Behar (dist Cooch Behar) 7, Dhupguri (dist Jalpaiguri) 7, Amfu Pundibari (dist Cooch Behar) 7,
- ❖ **Rayalaseema:** Tada (dist Tirupati) 9, Kamalapuram (dist Ysr District) 7, Pattikanda (dist Kurnool) 5, Vallur (dist Ysr District) 5, Sambepalle (dist Annamayya District) 5,
- ❖ **West Madhya Pradesh:** Khandwa (dist Khandwa) 9, Nepanagar (dist Burhanpur) 5, Lateri (dist Vidisha) 4,
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Dharmanagar/ Panisagar (dist North Tripura) 9, Kamalpur (dist Dhalai) 9, Kadamtala Arg (dist North Tripura) 8, Kailashahar Aero (dist Unakoti) 6, Dm Office Arg (dist West Tripura) 4, Arundhutinagar (dist West Tripura) 4,
- ❖ **Assam & Meghalaya:** Shella (dist East Khasi Hills) 7, B P Ghat (dist Karimganj) 6, Badarpur Arg (dist Karimganj) 6, Williamnagar (dist East Garo Hills) 6, Umiam_arg (dist Ri Bhoi) 5, Goalpara_pto (dist Goalpara) 4, Bhaghmara (dist South Garo Hills) 4, Goalpara_aws (dist Goalpara) 4, Kokrajhar (dist Kokrajhar) 4, Gharmura (dist Hailakandi) 4, Kalakshetra Arg (dist Kamrup Metropolitan) 4,
- ❖ **Coastal Andhra Pradesh & Yanam:** Pathapatnam (dist Srikakulam) 7, Parvathipuram (dist Parvathipuram Manyam) 5,
- ❖ **North Interior Karnataka:** Kamalapur (dist Kalaburgi) 7, Sedbal (dist Belagavi) 7, Shirahatti (dist Gadag) 6, Chikodi (dist Belagavi) 5, Kalaburgi Obsy (dist Kalaburgi) 5,
- ❖ **South Interior Karnataka:** Doddaballapura (dist Bengaluru Rural) 6, Chintamani Pto (dist Chikaballapura) 4,
- ❖ **Kerala & Mahe:** Thennala AWS (Malappuram district) 5, Kanjirappally (Kottayam district), Kunnamangalam AWS (Kozhikode district) & Neryamangalam ARG (Ernakulam district) 4 each, Aryankavu (Kollam district), Kumarakom (Kottayam district), Mahe (Puducherry UT), Enadimangalam AWS (Pathanamthitta district), Athirappalli AWS (Thrissur district) & Cheruthazham ARG (Kannur district) 3 each
- ❖ **Gangetic West Bengal:** Lalgah (dist Jhargram) 5, Berhampore (dist Murshidabad) 2, Contai (dist East Midnapore) 2, Panagarh (iaf) (dist Paschim Bardhaman) 2, Jhargram (pto) (dist Jhargram) 2, Kalaikunda (iaf) (dist West Midnapore) 2, Purulia (dist Purulia) 2, Murarai (dist Birbhum) 2,
- ❖ **Konkan & Goa:** Panjim - Imd Obsy (dist North Goa) 5, Mulde_Agri (dist Sindhudurg) 4,
- ❖ **Arunachal Pradesh:** Nachu Arg (dist Upper Subansiri) 3, Kalaktang (dist West Kameng) 2,
- ❖ **East Madhya Pradesh:** Nainpur (dist Mandla) 3, Baihar (dist Balaghat) 2.

Reported maximum wind speed (kmph) during past 24 hours till 0830 hours IST of today:

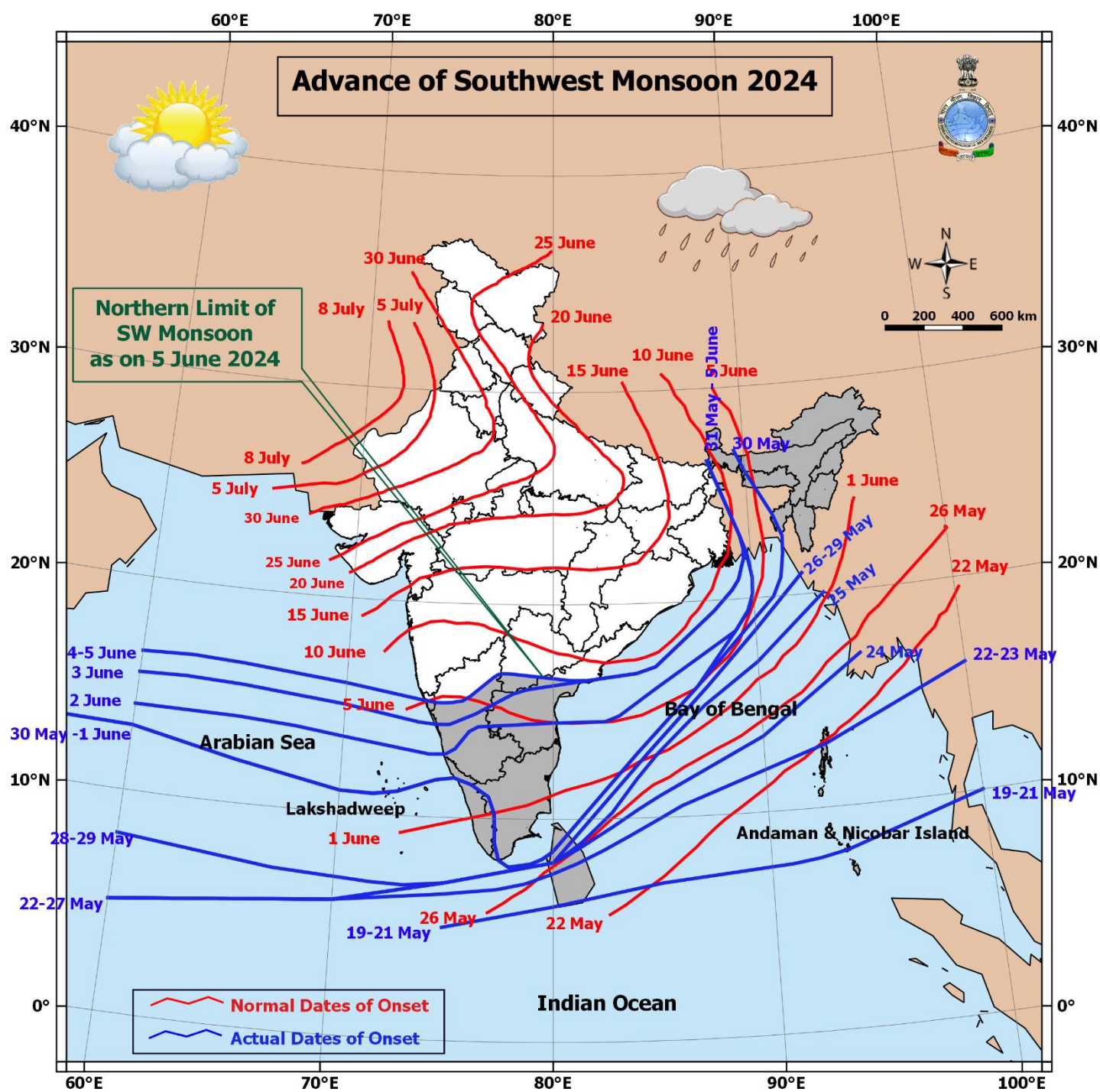
- ❖ **Jharkhand:** Jamtara 74, Giridih 66, Godda 61;
- ❖ **Chhattisgarh:** Bemetara 89, Bilaspur, Mungeli 57, Mahasamund 48;
- ❖ **Madhya Maharashtra:** Pune 78, Jalgaon 57, Solapur, Satara 48, Rajgurunagar 46, Aurangabad 44;
- ❖ **West Bengal:** Durgapur 77, Cooch_Behar 74, Murshidabad 66, Purba_Mednipur, Hooghly 63, West_Medinipur 61;
- ❖ **Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad:** Leh 72, Kargil 65, Baramulla 57;
- ❖ **Haryana-Chandigarh-Delhi:** Rohtak 72, South_West_Delhi 46, Mahendragarh 44, Kaithal 39;
- ❖ **Rajasthan:** Alwar 65, Jaisalmer 52, Bikaner, Dholpur 46, Baran 42;
- ❖ **Madhya Pradesh:** Jabalpur 63, Khanwa 55, Sehore 52, Rajgar 46;
- ❖ **Himachal Pradesh:** Kinnaur 57, Lahual_And_Spiti 54;
- ❖ **Telangana:** Vikarabad, Nalgonda 52, Siddipet 50, Ranga_Reddy 46;
- ❖ **Odisha:** Sonapur 50, Mayurbhanj 48;
- ❖ **Tamil Nadu, Puducherry & Karaikal:** Tiruchirappalli 48, Ranipet, Thoothukudi 42;
- ❖ **Gujarat State:** Kachchh 46, Jamnagar 42, Rajkot 40;
- ❖ **Uttar Pradesh:** Agra 44;
- ❖ **Bihar:** Supaul 41;

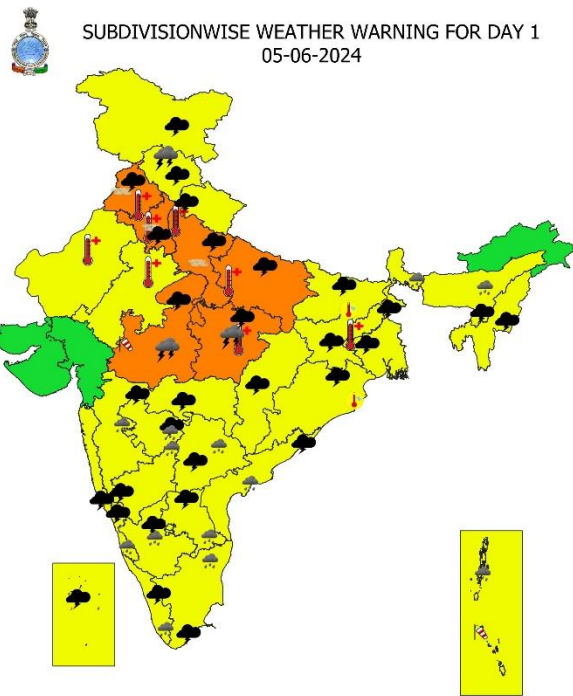
Fig.: Gusty winds reported over the country (in knots, 1 Knot = 1.85 kmph) from 0830 hrs IST of 04.06.2024 to 0830 hrs IST of 05.06.2024



For more details, kindly refer: <http://aws.imd.gov.in:8091/>

Advance of Southwest Monsoon 2024

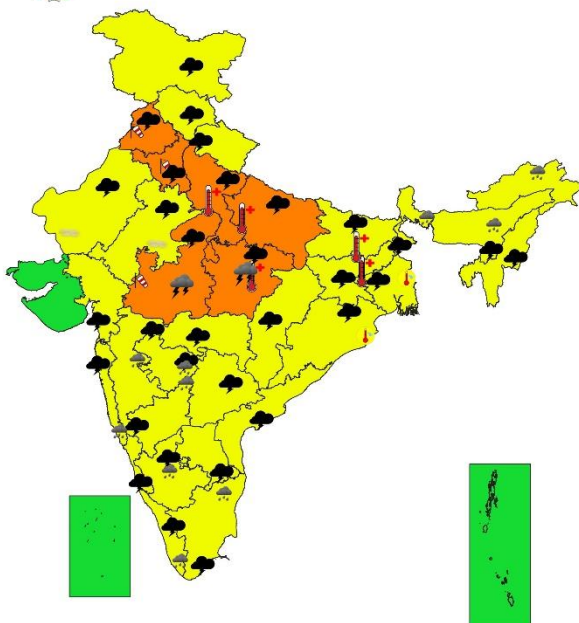




Subdivision Warning



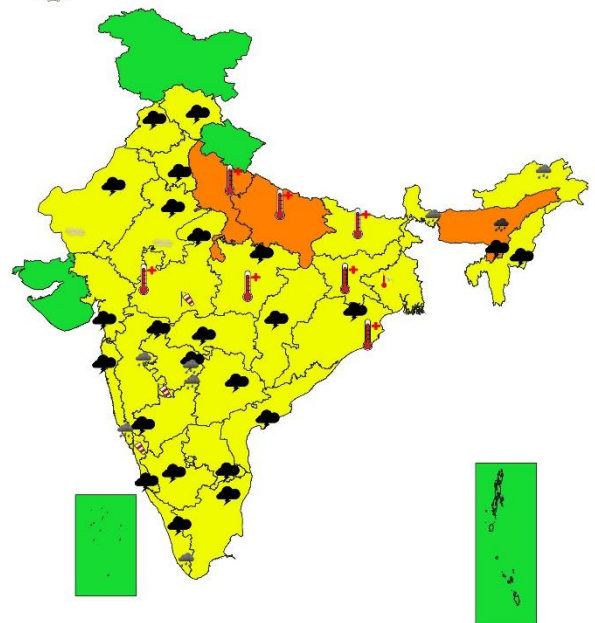
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2
06-06-2024



Subdivision Warning

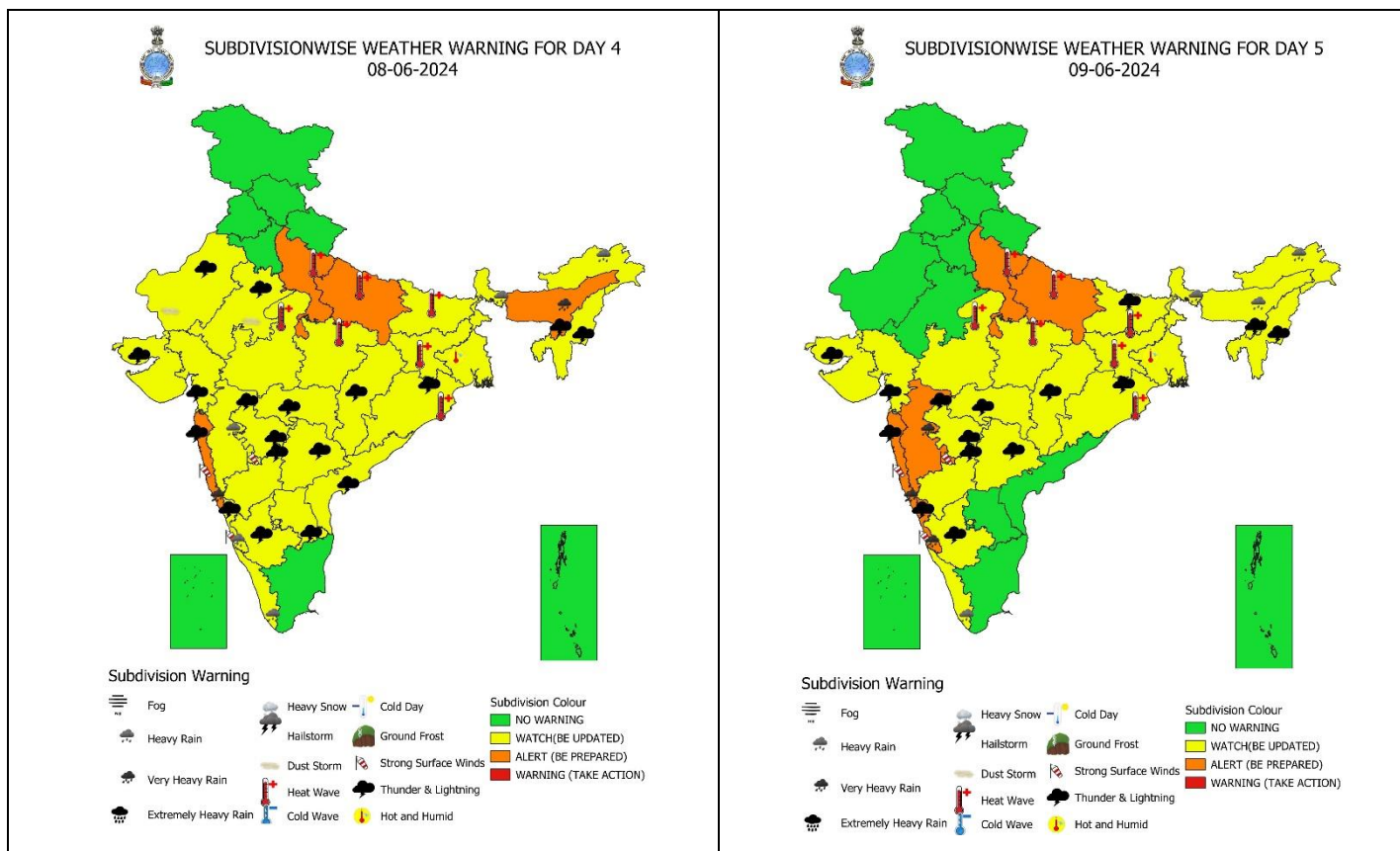


SUBDIVISIONWISE WEATHER WARNING FOR DAY 3
07-06-2024



Subdivision Warning





IMPACT & ACTION SUGGESTED due to very heavy rainfall over Assam & Meghalaya on 07th & 08th; Konkan & Goa on 08th & 09th; south Madhya Maharashtra and Coastal Karnataka on 09th June, 2024.

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.
- Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- Minor damage to kutchha roads.
- Possibilities of damage to vulnerable structure.
- Localized Landslides/Mudslides/landslips/mudslips/landsinks/mudsinks.
- 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)

A. Action Suggested

- 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.

IMPACT & ACTION SUGGESTED due to Heat Wave Conditions:

Orange alert Areas:

- High temperature & increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work.
- High health concern for vulnerable people e.g. infants, elderly, people with chronic diseases.
- Avoid heat exposure– keep cool. Avoid dehydration.
- Drink sufficient water- even if not thirsty.
- Use ORS, homemade drinks like lassi, torani (rice water), lemon water, buttermilk, etc. to keep yourself hydrated.

Yellow alert Areas:

- Moderate temperature & heat is tolerable for general public but moderate health concern likely for vulnerable people e.g. infants, elderly, people with chronic diseases.
- Avoid heat exposure.
- Wear lightweight, light colour, loose, cotton clothes.
- Cover your head, use a cloth, hat or umbrella.

Impact expected and action suggested due to thunderstorms, lightning/squall/gusty winds over Madhya Pradesh, Punjab, Haryana-Chandigarh-Delhi on 05th & 06th June, 2024.

Impact expected:

- Strong wind/hail may damage plantation, horticulture and standing crops.
- Hail may injure people and cattle at open places.
- Partial damage to vulnerable structures due to strong winds.
- Minor damage to kutcha houses/walls and huts.
- Loose objects may fly.

Action suggested:

- Stay indoors, close windows & doors and avoid travel if possible.
- Take safe shelters; do not take shelter under trees.
- Do not lie on concrete floors and do not lean against concrete walls.
- Unplug electrical/ electronic appliances.
- Immediately get out of water bodies.
- Keep away from all the objects that conduct electricity.

Agromet advisories for Heavy Rainfall, Gusty winds and Heat Wave likely over various parts of the country:

- Drain out excess water from crop fields to avoid water stagnation in Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Telangana, Maharashtra, Arunachal Pradesh, Assam & Meghalaya, Andaman & Nicobar Islands and Sub Himalayan West Bengal.
- Apply light and frequent irrigation to standing crops to avoid heat stress; provide mulching to conserve soil moisture and minimise evaporation in Punjab, Haryana, Uttar Pradesh, Rajasthan, Bihar, Jharkhand, Odisha and East Madhya Pradesh.
- Use hail nets or hail caps in fruit orchards to prevent mechanical damage and provide mechanical support to horticultural crops & staking to vegetables in Himachal Pradesh and West Madhya Pradesh.
- Provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds.

Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office.
- ❖ **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-Himalayan 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 Marathawada.
 - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, 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)



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

LEGENDS

WARNING

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

Probabilistic Forecast

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



Rain/ Snow *

Heavy: 64.5 to 115.5 mm/cm *
Very Heavy: 115.6 to 204.4 mm/cm*
Extremely Heavy: > 204.4 mm/cm *



Heat Wave

When maximum temperature of a station reaches $\geq 40^{\circ}\text{C}$ for plains and $\geq 30^{\circ}\text{C}$ for hilly regions

(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C .

Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^{\circ}\text{C}$

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature $\geq 45^{\circ}\text{C}$.

Severe Heat Wave: When actual maximum temperature $\geq 47^{\circ}\text{C}$

(c). Criteria for heat wave for coastal stations

When maximum temperature departure is $> 4.5^{\circ}\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^{\circ}\text{C}$



Warm Night

When maximum temperature remains 40°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°C .

Severe Warm Night: When minimum temperature departure $> 6.4^{\circ}\text{C}$.



Cold Wave

When minimum temperature of a station $\leq 10^{\circ}\text{C}$ for plains and $\leq 0^{\circ}\text{C}$ for hilly regions.

(a). Based on departure

Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C .

Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^{\circ}\text{C}$

(b) Based on actual Minimum Temperature (for Plains only)

Cold Wave : When Minimum Temperature is $\leq 4.0^{\circ}\text{C}$

Severe Cold Wave: When Minimum Temperature is $\leq 2.0^{\circ}\text{C}$

(c) For Coastal Stations

When Minimum Temperature departure is $\leq -4.5^{\circ}\text{C}$ & actual Minimum Temperature is $\leq 15^{\circ}\text{C}$



Cold Day

When minimum temperature of a station $\leq 10^{\circ}\text{C}$ for plains and $\leq 0^{\circ}\text{C}$ for hilly regions
Based on departure

Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C .

Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^{\circ}\text{C}$



Fog

Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$

Moderate Fog: When the visibility between 500-200 metres

Dense Fog: when the visibility between 50- 200 metres

Very Dense Fog: when the visibility < 50 metres



Thunderstorm

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)



Dust/Sand Storm

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.



Frost

Ice deposits on ground

Air temperature $\leq 4^{\circ}\text{C}$ (over Plains)



Squall

A strong wind that rises suddenly, lasts for atleast 1 minute.

Moderate: Wind speed 52-61 kmph

Severe: Wind speed 62-87 kmph

Very Severe: Wind speed > 87 kmph



Sea State

Effect of various waves in the sea over specific area

Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre

High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre

Phenomenal: Wind speed > 117 kmph (> 63 knots) & Wave height > 14 metre



Cyclone

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)

Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)

Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)

Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)

Super Cyclone Storm: Wind speed > 220 kmph (> 119 knots)