

Friday 03 June 2022 MORNING

Time of Issue: 0745 hours IST

#### ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

#### **Significant Weather Features**

#### **Advancement of Southwest Monsoon:**

- ♦ The Northern Limit of Monsoon (NLM) continue to pass through Lat.15°N/Long.60°E, Lat.15°N/Long.70°E, Karwar, Chikmagaluru, Bengaluru, Dharmapuri, Lat.10°N/ Long. 80°E, Lat. 11.0°N/ Long. 83°E, Lat.14.0°N/ Long.86°E, Lat.21.0°N/91°E, Aizwal, Kohima and 26.50°N/95°E.
- ♦ Conditions are favourable for further advance of Southwest monsoon into some more parts of Central & North Bay of Bengal, remaining parts of northeastern states and some parts of Sub-Himalayan West Bengal & Sikkim during next 2 days.

#### Rainfall/thunderstorm Forecast & Warnings:

- ♦ A cyclonic circulation lies over Northwest Bay of Bengal in mid-tropospheric levels; the eastwest trough from the cyclonic over Southeast Uttar Pradesh to Nagaland, north-south trough roughly along Long.88°E & to north of Lat.20°N and strong southwesterly winds from Bay of Bengal to Northeast India at lower tropospheric levels; Under their influence:
- i) Fairly widespread/ widespread light/moderate rainfall with isolated **heavy falls** very likely over Northeast India and Sub-Himalayan West Bengal & Sikkim during next 5 days.
- ii) Isolated **heavy to very heavy rainfal**l very likely over Assam & Meghalaya on 03rd & 04th and over Sub-Himalayan West Bengal & Sikkim during 03rd-06th June. Isolated **extremely heavy falls** also likely over Meghalaya on 03rd June.
- iii) Isolated/scattered rainfall with **thunderstorm/lightning/gusty winds** very likely over Bihar, Jharkhand, Odisha and Gangetic West Bengal next 5 days.
- ♦ Under the influence of monsoonal westerly winds from Arabian Sea over the south peninsular India and shear zone runs along Lat.10 ☐ N across South Peninsular India in lower tropospheric levels:
- i) Fairly widespread/ widespread light/moderate rainfall with **thunderstorm/lightning** very likely over Coastal & South Interior Karnataka, Kerala & Mahe and Lakshadweep and isolated to scattered over Andhra Pradesh, Telangana, North Interior Karnataka & Tamilnadu, Puducherry & Karaikal during next 5 days. Isolated **heavy rainfall** also likely over Tamilnadu & South Interior Karnataka during 03rd & 04th and over Kerala & Mahe on 03rd & 05th & 06th June, 2022.
- ♦ **Heat wave conditions** in isolated places very likely over Rajasthan on 03rd; over south Punjab, south Haryana, south Uttar Pradesh & north Madhya Pradesh on 03rd & 04th and over Vidarbha during 03rd-05th June, 2022.

#### **Main Weather Observations**

- ♦ Rainfall/thundershower observed (from 0830 hours IST to 1730 hours IST of yesterday): at a few places over Assam & Meghalaya and Lakshadweep and at isolated places over Jammu & Kashmir, West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Karnataka, Telangana, Coastal Andhra Pradesh & Yanam, Rayalaseema, Kerala & Mahe and Tamilnadu, Puducherry & Karaikal.
- ♦ Thunderstorm observed (from 0830 hours IST to 1730 hours IST of yesterday): at isolated places over Jammu & Kashmir, Bihar, Assam & Meghalaya, Tripura, West Bengal & Sikkim, Odisha, Konkan & Goa, Madhya Maharashtra, Rayalaseema, Kerala and Coastal & North Interior Karnataka.
- ♦ Heavy Rainfall observed (at 1730 hrs IST of yesterday): Heavy rainfall in isolated places over Assam.
- ♦ Chief amount of Rainfall observed: (from 0830 hours IST to 1730 hours IST of yesterday): (2 cm or more): ASSAM: North Lakhimpur-7, Guwahati-2; North Interior Karnataka: Belgaum-3, Dharwad-2; Madhya Maharashtra: Kolhapur-2.
- Heat wave condition (from 0830 hours IST to 1730 hours IST of yesterday) observed at isolated places over West Rajasthan and Vidarbha.
- ♦ Maximum Temperature Departures (as on 02-06-2022): Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at a few places Vidharbha; at isolated places over Rajasthan, Punjab, Madhya Pradesh, Odisha, Coastal Andhra Pradesh & Yanam; above normal (1.6°C to 3.0°C) at a few places over Assam & Meghalaya, Madhya Maharashtra and at isolated places over Gujarat State, Marathwada, Rayalaseema and Tamilnadu, Puducherry & Karaikal. They were below normal (-1.6°C to -3.0°C) at isolated places over Gangetic West Bengal, Mizoram, Tripura and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 46.8°C was reported at Chandrapur (Vidharbha).

Minimum Temperature Departures (as on 02-06-2022): Minimum temperatures were above normal (1.6°C to 3.0°C) at most places over Punjab; at many places over Sub-Himalayan West Bengal & Sikkim, Uttarakhand, Marathawada and Coastal Andhra Pradesh & Yanam; at a few places over Jammu & Kashmir Ladakh-Gilgit-Baltistan-Muzaffarabad, Rajasthan, Madhya Maharashtra and Telangana and at isolated places over Assam & Meghalaya, Gangetic West Bengal, Himachal Pradesh and Madhya Pradesh; They were below normal (-1.6°C to -3.0°C) at isolated places over Tamilnadu, Puducherry & Karaikal and near normal over rest parts of the country. Yesterday, the lowest minimum temperature of 20.0°C was reported at Udgir (North Interior Karnataka) over the plains of the country.



#### Meteorological Analysis (Based on 0530 hours IST)

- ◆The **Northern Limit of Monsoon** (NLM) continues to pass through Lat. 15°N/ Long. 60°E, Lat. 15°N/ Long. 70°E, Karwar, Chikmagaluru, Bengaluru, Dharmapuri, Lat. 10°N/ Long. 80°E, Lat. 11.0°N/ Long. 83°E, Lat.14.0°N/ Long.86°E, Lat.21.0°N/91°E, Aizwal, Kohima and 26.50°N/95°E.
- ♦ Conditions are favourable for further advance of Southwest monsoon into some more parts of Central & North Bay of Bengal, remaining parts of northeastern states and some parts of Sub-Himalayan West Bengal & Sikkim during next 2 days.
- ♦ The cyclonic circulation over southeast Uttar Pradesh & neighbourhood extending upto 1.5 km above mean sea level persists.
- ♦ The east-west trough from the cyclonic circulation over Southeast Uttar Pradesh to Nagaland across Bihar, Sub-Himalayan West Bengal and Assam at 0.9 km above mean sea level persists.
- $\blacklozenge$  The cyclonic circulation over northwest Bay of Bengal at 5.8 km above mean sea level persists.
- ullet The shear zone roughly along Lat.10°N across South Peninsular India between 3.1 km & 4.5 km above mean sea level persists.
- ♦ The trough from Gangetic West Bengal to north Coastal Andhra Pradesh extending upto 0.9 km above mean sea level persists.
- ♦ The north-south trough at 3.1 km above mean sea level roughly along Long. 88°E & to north of Lat. 20°N persists.
- ♦ The cyclonic circulation over southeast Bay of Bengal & adjoining Andaman Sea between 5.8 km & 7.6 km above mean sea level persists.
- ♦ The Western Disturbance as a trough with its axis at 5.8 km above mean sea level roughly along Long. 73°E & to north of Lat. 32°N persists.

#### Weather Forecast for next 5 days \* upto 0830 hours IST of 08th June, 2022

- Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ♦ Gradual rise in maximum temperatures by about 2°C very likely over most parts of Northwest India during next 24 hours and thereafter fall by 2-3°C.
- ♦ No significant change in maximum temperatures very likely over rest parts of the country during next 5 days.

#### Weather Outlook for subsequent 2 days during 08th June-10th June, 2022

- ♦ Fairly widespread to widespread light/moderate rainfall likely over Sub-Himalayan West Bengal & Sikkim, Northeast India and Islands.
- ♦ Scattered to fairly widespread light/moderate rainfall likely over parts of Peninsular India. Isolated rainfall/snowfall also likely over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad.
- ♦ Dry weather likely over rest parts of the country.



#### Weather Warning during next 5 days \*

**03** June (Day 1): ♦ Heavy to very heavy rainfall with extremely heavy falls at isolated places very likely over Assam & Meghalaya; Heavy to very heavy rainfall at isolated places likely over Sub-Himalayan West Bengal & Sikkim and heavy rainfall at isolated places very likely over Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, South Interior Karnataka, Tamilnadu, Puducherry & Karaikal and Kerala & Mahe.

- ♦Thunderstorm accompanied with lightning/gusty winds (speed 40-50 kmph) at isolated places very likely over Jharkhand, Coastal Andhra Pradesh & Yanam, Gangetic West Bengal and Rayalaseema and with lightning at isolated places over Bihar, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Chhattisgarh, Assam & Meghalaya , Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Karnataka, Tamilnadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ♦ Heat wave condition at isolated places very likely over South Punjab, South Haryana, Uttar Pradesh, North Madhya Pradesh, Vidarbha and Rajasthan.
- ♦ Strong winds (wind speed 40-50 kmph gusting to 60 kmph) very likely over south east Bay of Bengal and adjoining Andaman Sea. Strong winds of 40-50 kmph gusting to 60 kmph likely over south west Arabian Sea, Comorin area, gulf of Mannar, south Tamil Nadu coast. Fishermen are advised not to venture into these areas.
- **04** June (Day 2): ◆Heavy to very heavy rainfall at isolated places very likely over Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya and heavy rainfall at isolated places very likely over Andaman & Nicobar Islands, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, South Interior Karnataka and Tamilnadu, Puducherry & Karaikal.
- ♦ Thunderstorm accompanied with lightning/gusty winds (speed 30-40 kmph) at isolated places very likely over Andaman & Nicobar Island, Jharkhand and Gangetic West Bengal and with lightning at isolated places over Bihar, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamilnadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ♦ Heat wave condition at isolated places very likely over South Punjab, South Haryana, Uttar Pradesh, North Madhya Pradesh and Vidarbha.
- ◆ Strong winds (wind speed 40-50 kmph gusting to 60 kmph) very likely over south east Bay of Bengal. Strong winds of 40-50 kmph gusting to 60 kmph likely over south west Arabian Sea. Fishermen are advised not to venture into these areas.
- **05** June (Day 3): ♦ Heavy to very heavy rainfall at isolated places likely over Sub-Himalayan West Bengal & Sikkim and heavy rainfall at isolated places over Arunachal Pradesh, Andaman & Nicobar Islands, Kerala & Mahe and Assam & Meghalaya.
- ♦ Thunderstorm accompanied with lightning at isolated places likely over Jharkhand, Chhattisgarh, Odisha, Madhya Maharashtra, Marathawada, Kerala & Mahe and Lakshadweep.
- ♦ Heat wave condition at isolated places likely over Vidarbha.
- ◆ Strong winds (wind speed 40-50 kmph gusting to 60 kmph) likely over southwest Arabian Sea. Fishermen are advised not to venture into these areas.
- **06** June (Day 4): ♦ Heavy to very heavy rainfall at isolated places likely over Sub-Himalayan West Bengal & Sikkim and heavy rainfall at isolated places over Arunachal Pradesh, Andaman & Nicobar Islands, Kerala & Mahe and Assam & Meghalaya.
- ◆ Thunderstorm accompanied with lightning at isolated places likely over Chhattisgarh, Odisha, Madhya Maharashtra, Marathawada, Kerala & Mahe and Lakshadweep.
- ♦ Squally weather (wind speed 40-50 kmph gusting to 60 kmph) likely over south west Bay of Bengal and adjoining west central Bay of Bengal. Strong winds (wind speed 40-50 kmph gusting to 60 kmph) over southwest Arabian Sea. Fishermen are advised not to venture into these areas.
- **07 June (Day 5): ♦ Heavy to very heavy rainfall** at isolated places likely over Sub-Himalayan West Bengal & Sikkim and **heavy rainfall** at isolated places over Arunachal Pradesh, Andaman & Nicobar Islands, Kerala & Mahe, Tamilnadu, Puducherry & Karaikal and Assam & Meghalaya.
- ◆ Thunderstorm accompanied with lightning at isolated places likely over Chhattisgarh, Odisha, Madhya Maharashtra, Marathawada, Kerala & Mahe and Lakshadween.
- Squally weather (wind speed 40-50 kmph gusting to 60 kmph) likely over south west Bay of Bengal and adjoining west central Bay of Bengal. Strong winds (wind speed 40-50 kmph gusting to 60 kmph) over southwest Arabian Sea. Fishermen are advised not to venture into these areas.



# Table-1 5 Day Rainfall Forecast (MORNING)

03-June-2022

Met-Sub-Division	03-Jun Today	04Jun Sat	05Jun Sun	06Jun Mon	07Jun Tue
1. Andaman & Nicobar Islands	WS	WS	WS	WS	WS
2. Arunachal Pradesh	WS	FWS	FWS	WS	WS
3. Assam & Meghalaya	WS	WS	WS	WS	WS
4. N. M. M. & T.	WS	FWS	FWS	FWS	FWS
5. S.H. West Bengal & Sikkim	WS	WS	WS	WS	WS
6. Gangetic West Bengal	SCT	SCT	SCT	SCT	SCT
7. Odisha	ISOL	ISOL	ISOL	ISOL	ISOL
8. Jharkhand	ISOL	ISOL	ISOL	ISOL	ISOL
9. Bihar	SCT	SCT	SCT	ISOL	ISOL
10. East Uttar Pradesh	DRY	DRY	DRY	DRY	DRY
11. West Uttar Pradesh	DRY	DRY	DRY	DRY	DRY
12. Uttarakhand	DRY	DRY	DRY	DRY	DRY
13. Haryana, Chd & Delhi	DRY	DRY	DRY	DRY	DRY
14. Punjab	DRY	DRY	DRY	DRY	DRY
15. Himachal Pradesh	DRY	DRY	DRY	DRY	DRY
16. J & K and Ladakh	DRY	DRY	DRY	DRY	ISOL
17. West Rajsthan	DRY	DRY	DRY	DRY	DRY
18. East Rajasthan	DRY	DRY	DRY	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
21. Gujarat Region	ISOL	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	ISOL	DRY	DRY	DRY	DRY
23. Konkan & Goa	ISOL	ISOL	ISOL	ISOL	ISOL
24. Madhya Maharashtra	ISOL	ISOL	ISOL	ISOL	ISOL
25. Marathawada	ISOL	DRY	ISOL	ISOL	ISOL
26. Vidharbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	ISOL	DRY	ISOL	ISOL	ISOL
28. Coastal A. P. & Yanam	ISOL	ISOL	ISOL	ISOL	ISOL
29. Telangana	ISOL	ISOL	ISOL	ISOL	ISOL
30. Rayalaseema	ISOL	ISOL	ISOL	ISOL	SCT
31. T.N., Puducherry & Karaikal	SCT	SCT	ISOL	ISOL	SCT
32. Coastal Karnataka	FWS	FWS	FWS	FWS	WS
33. North Interior Karnataka	SCT	ISOL	ISOL	SCT	WS
34. South Interior Karnataka	FWS	FWS	FWS	FWS	WS
35. Kerala & Mahe	WS	WS	WS	FWS	WS
36. Lakshadweep	WS	WS	WS	FWS	WS

#### % Station Reporting Rainfall

% Stations	Category	% Stations	Category		
76-100		26-50	Scattered (SCT/ A Few Places)		
51-75	Fairly Widespred (FWS/ Many Places)	1-25	Isolated (ISOL)		
No Rain	Dry				



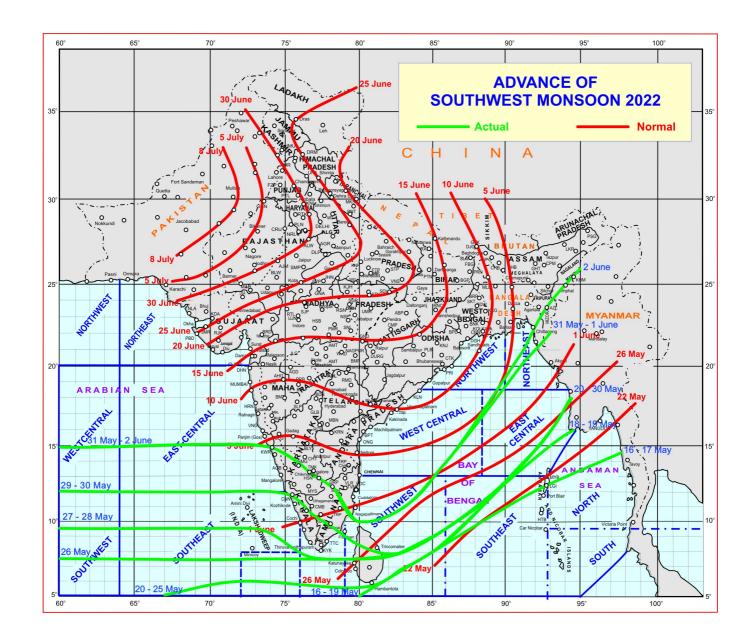




Fig. 1: Accumulated Rainfall (mm) during past 24 hours

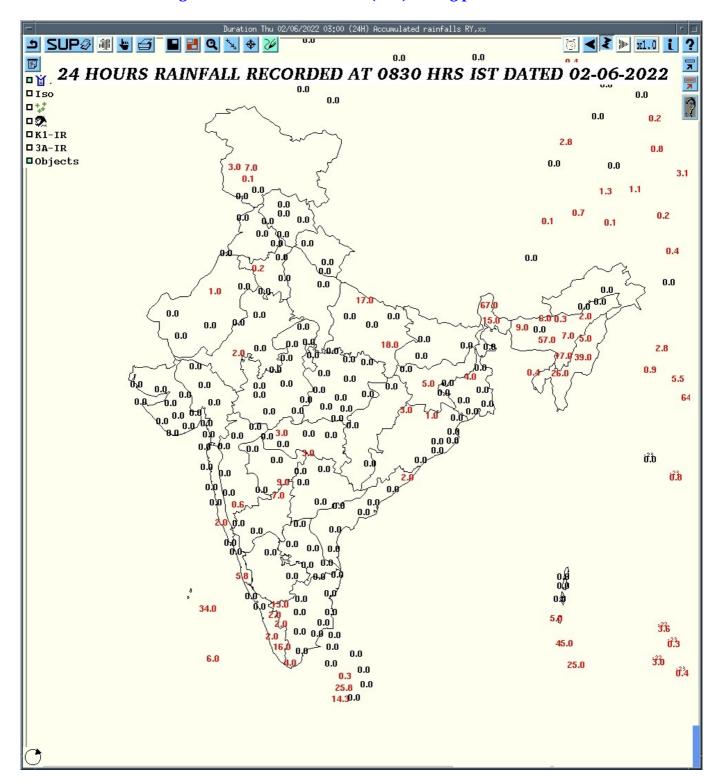




Fig. 2: Maximum Temperature during past 24 hours

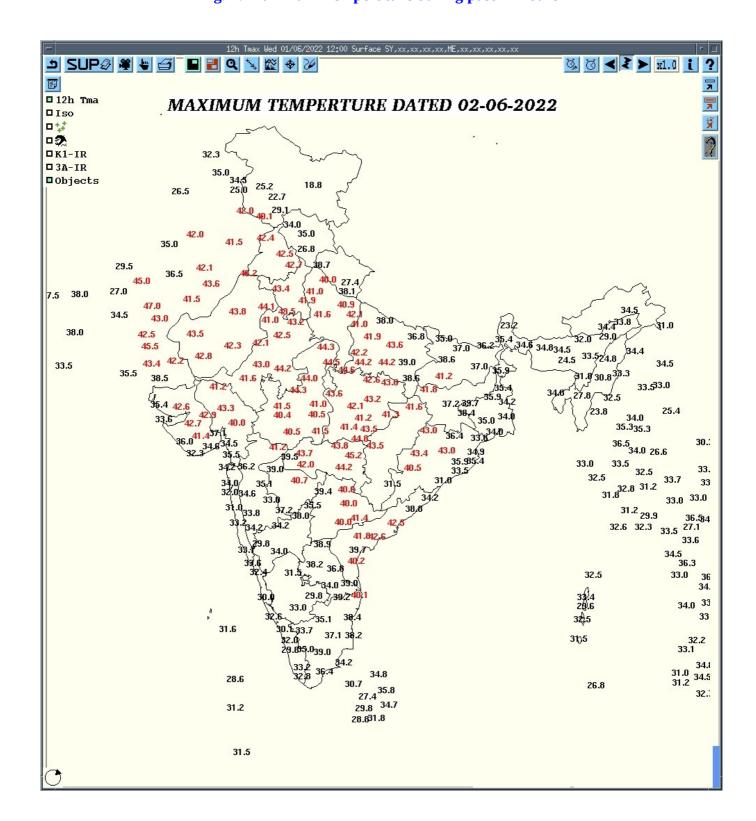




Fig. 3: Minimum Temperature during past 24 hours

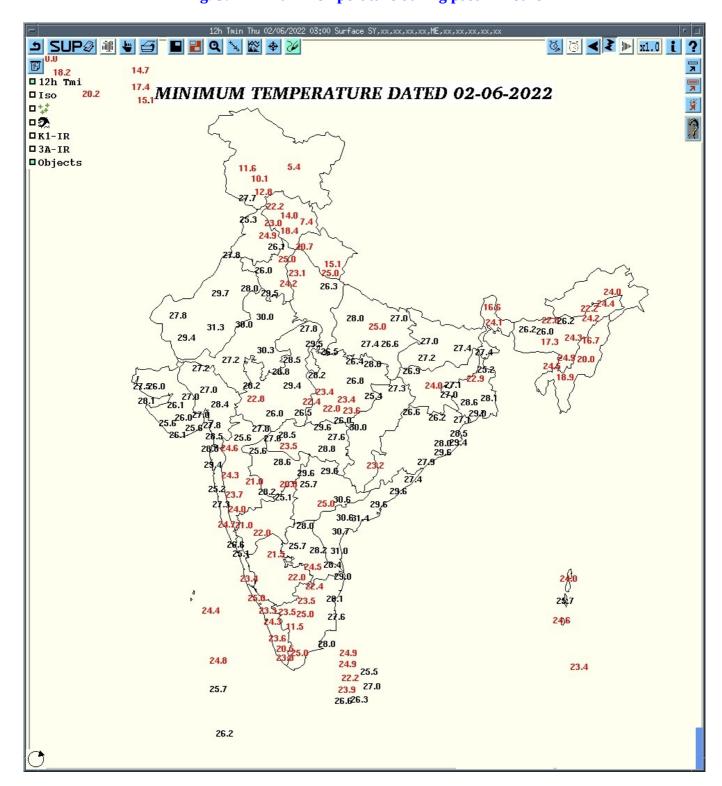




Fig. 4: Departure from Normal of Maximum Temperatures

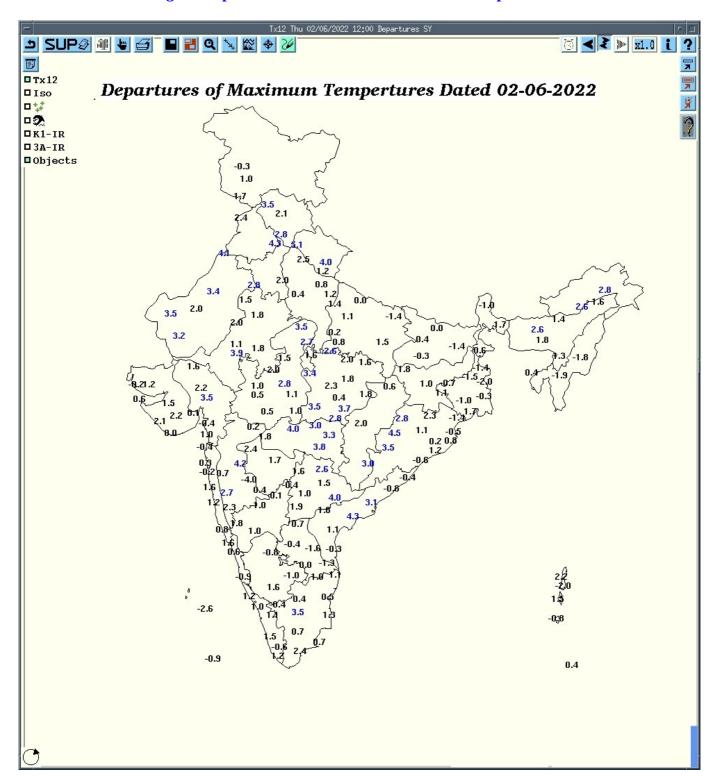
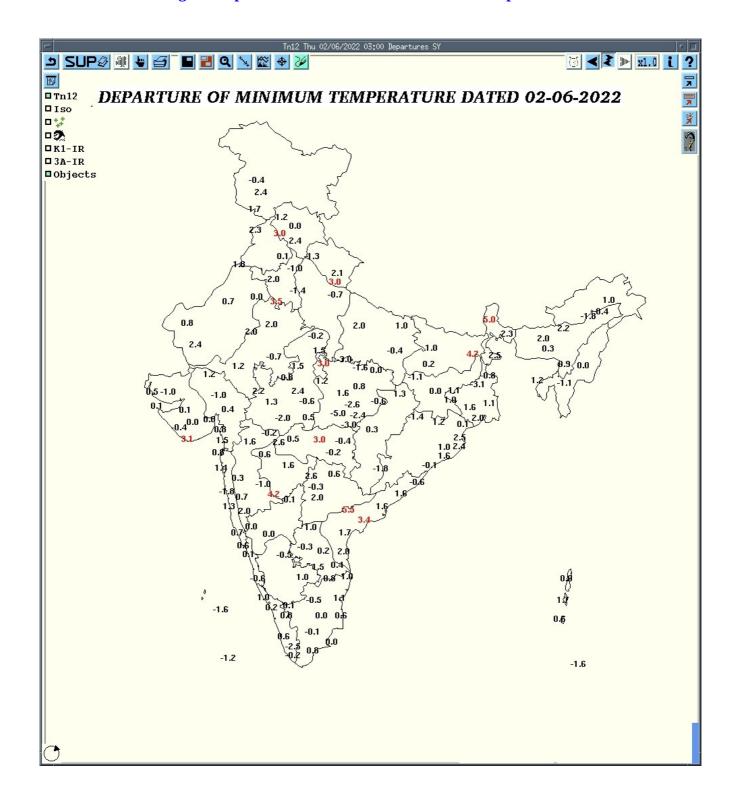


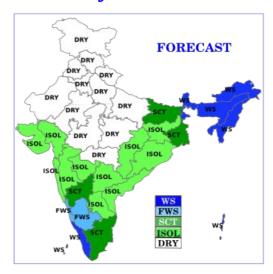


Fig. 5: Departure from Normal of Minimum Temperatures





### Friday 03 June 2022



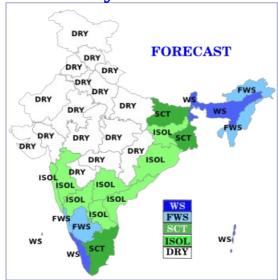


**03** June (Day 1): ♦ Heavy to very heavy rainfall with extremely heavy falls at isolated places very likely over Assam & Meghalaya; Heavy to very heavy rainfall at isolated places likely over Sub-Himalayan West Bengal & Sikkim and heavy rainfall at isolated places very likely over Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, South Interior Karnataka, Tamilnadu, Puducherry & Karaikal and Kerala & Mahe.

- ♦Thunderstorm accompanied with lightning/gusty winds (speed 40-50 kmph) at isolated places very likely over Jharkhand, Coastal Andhra Pradesh & Yanam, Gangetic West Bengal and Rayalaseema and with lightning at isolated places over Bihar, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Chhattisgarh, Assam & Meghalaya , Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Karnataka, Tamilnadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ♦ Heat wave condition at isolated places very likely over South Punjab, South Haryana, Uttar Pradesh, North Madhya Pradesh, Vidarbha and Rajasthan.
- ◆ Strong winds (wind speed 40-50 kmph gusting to 60 kmph) very likely over south east Bay of Bengal and adjoining Andaman Sea. Strong winds of 40-50 kmph gusting to 60 kmph likely over south west Arabian Sea, Comorin area, gulf of Mannar, south Tamil Nadu coast. Fishermen are advised not to venture into these areas.



### Saturday 04 June 2022

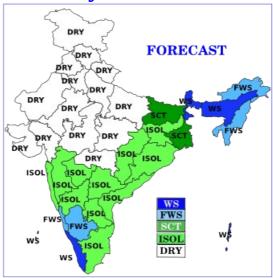




- ♦ Thunderstorm accompanied with lightning/gusty winds (speed 30-40 kmph) at isolated places very likely over Andaman & Nicobar Island, Jharkhand and Gangetic West Bengal and with lightning at isolated places over Bihar, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamilnadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ♦ Heat wave condition at isolated places very likely over South Punjab, South Haryana, Uttar Pradesh, North Madhya Pradesh and Vidarbha.
- ◆ Strong winds (wind speed 40-50 kmph gusting to 60 kmph) very likely over south east Bay of Bengal. Strong winds of 40-50 kmph gusting to 60 kmph likely over south west Arabian Sea. Fishermen are advised not to venture into these areas.



# **Sunday 05 June 2022**



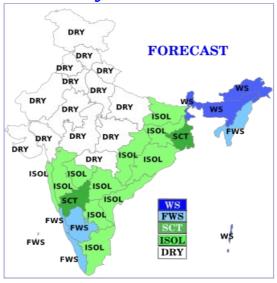


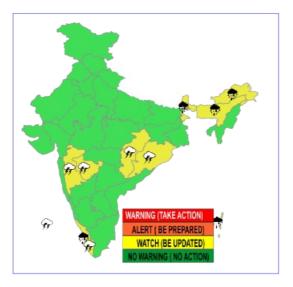
**05 June (Day 3): ♦ Heavy to very heavy rainfall** at isolated places likely over Sub-Himalayan West Bengal & Sikkim and **heavy rainfall** at isolated places over Arunachal Pradesh, Andaman & Nicobar Islands, Kerala & Mahe and Assam & Meghalaya.

- ♦ Thunderstorm accompanied with lightning at isolated places likely over Jharkhand, Chhattisgarh, Odisha, Madhya Maharashtra, Marathawada, Kerala & Mahe and Lakshadweep.
- ♦ **Heat wave condition** at isolated places likely over Vidarbha.
- ♦ Strong winds (wind speed 40-50 kmph gusting to 60 kmph) likely over southwest Arabian Sea. Fishermen are advised not to venture into these areas.



## Monday 06 June 2022



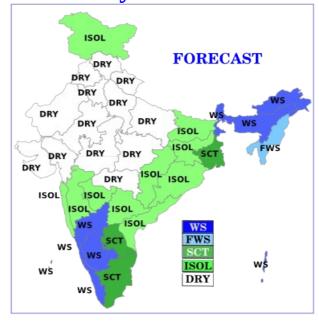


**06** June (Day 4): ♦ Heavy to very heavy rainfall at isolated places likely over Sub-Himalayan West Bengal & Sikkim and heavy rainfall at isolated places over Arunachal Pradesh, Andaman & Nicobar Islands, Kerala & Mahe and Assam & Meghalaya.

- ♦ Thunderstorm accompanied with lightning at isolated places likely over Chhattisgarh, Odisha, Madhya Maharashtra, Marathawada, Kerala & Mahe and Lakshadweep.
- ♦ Squally weather (wind speed 40-50 kmph gusting to 60 kmph) likely over south west Bay of Bengal and adjoining west central Bay of Bengal. Strong winds (wind speed 40-50 kmph gusting to 60 kmph) over southwest Arabian Sea. Fishermen are advised not to venture into these areas.



## Tuesday 07 June 2022



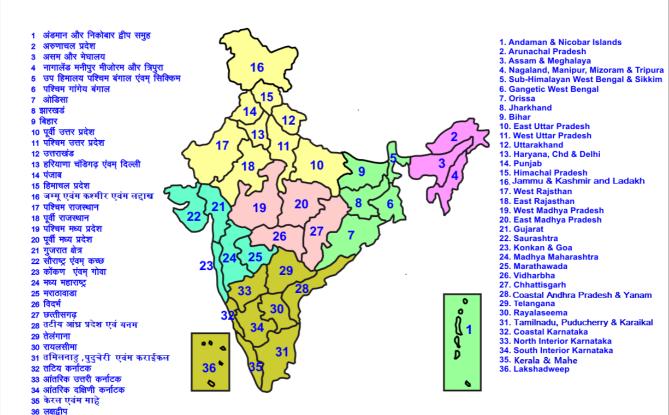


**07 June (Day 5): ♦ Heavy to very heavy rainfall** at isolated places likely over Sub-Himalayan West Bengal & Sikkim and **heavy rainfall** at isolated places over Arunachal Pradesh, Andaman & Nicobar Islands, Kerala & Mahe, Tamilnadu, Puducherry & Karaikal and Assam & Meghalaya.

- ♦ Thunderstorm accompanied with lightning at isolated places likely over Chhattisgarh, Odisha, Madhya Maharashtra, Marathawada, Kerala & Mahe and Lakshadweep.
- ♦ Squally weather (wind speed 40-50 kmph gusting to 60 kmph) likely over south west Bay of Bengal and adjoining west central Bay of Bengal. Strong winds (wind speed 40-50 kmph gusting to 60 kmph) over southwest Arabian Sea. Fishermen are advised not to venture into these areas.



## **LEGENDS**



### 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 Widespred (FWS/ Many Places)	1-25	Isolated (ISOL)

#### **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



**Heavy Rain** 



**Heavy Snow** 



**77** Thunderstorm



**Dust Storm** 



**Strong Winds** 



Visibility



Cyclone





Squall/ Hail



**Sea State** 





#### **LEGENDS Probabilistic Forecast** WARNING **WARNING (TAKE ACTION)** Probability of Occurrence (%) ALERT ( BE PREPARED) WATCH (BE UPDATED) Very Likely Most Likely NO WARNING ( NO ACTION > 75 Heavy: 64.5 to 115.5 mm/cm \* Very Heavy: 115.6 to 204.4 mm/cm\* Rain/ Snow \* Extremely Heavy: > 204.4 mm/cm When maximum temperature of a station reaches ≥40° C for plains and ≥30° 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 ≥6.5° C (b). Based on Actual maximum temperature **Heat Wave** Heat Wave: When actual maximum temperature ≥45°C. Severe Heat Wave: When actual maximum temperature ≥47°C (c). Criteria for heat wave for coastal stations When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°C When maximum temperature remains 40°C J+ Warm Night Warm Night: When minimum temperature departure 4.5 °C to 6.4 °C. Severe Warm Night: When minimum temperature departure >6.4 °C. When minimum temperature of a station ≤10°C for plains and ≤0°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 ≥ -6.5 °C (b) Based on actual Minimum Temperature (for Plains only) **Cold Wave** Cold Wave : When Minimum Temperature is ≤ 4.0 °C Severe Cold Wave: When Minimum Temperature is $\leq 2.0$ °C (c) For Coastal Stations When Minimum Temperature departure is ≤-4.5 °C or actual Minimum Temperature is ≤ 15 °C When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions Based on departure Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C. **Cold Day** Severe Cold Day: Maximum Temperature Departure from normal ≤ -6.5 °C Phenomenon of small droplets suspended in air and the horizontal visibility < 1km Moderate Fog: When the visibility between 500-200 metres 0 Dense Fog: when the visibility between 50- 200 metres Fog Very Dense Fog: when the visibility < 50 metres *44* Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder) Thunderstorm An ensemble of particles of dust or sand energetically lifted to great heights by a strong and Dust/Sand Storm turbulent wind. Ice deposits on ground 55 Air temperature ≤4°C ( over Plains) **Frost** A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph 4 Severe: Wind speed 62-87 kmph Squall Very Severe: Wind speed >87 kmph 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 **Sea State** Phenomenal: Wind speed >117 kmph (>63 knots) & Wave height >14 metre Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots) Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots) 9 Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots) Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots) Cyclone Super Cyclone Strom: Wind speed >220 kmph (>119 knots)