

Thursday 17 June 2021

MID-DAY

Time of Issue: 1345 hours IST

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features

- ♦ The Northern Limit of Monsoon (NLM) continues to pass through lat. 20.5°N/ Long. 60°E, Diu, Surat, Nandurbar, Bhopal, Nowgong, Hamirpur, Barabanki, Bareilly, Saharanpur, Ambala and Amritsar.
- ♦ Large-scale atmospheric conditions are not favourable for further advance of monsoon into Rajasthan, remaining parts Punjab, Haryana and Delhi. However, there could be **slow progress into some more parts of Gujarat state and Uttar Pradesh** during next 2 to 3 days.
- ♦ A cyclonic circulation lies over Gangetic West Bengal & neighbourhood. Under its influence, widespread rainfall with isolated heavy to very heavy falls very likely over Bihar, Jharkhand, West Bengal & Sikkim and north Odisha during next 2-3 days.
- ♦ A cyclonic circulation lies over East Uttar Pradesh & neighbourhood. Under its influence, fairly widespread rainfall with isolated heavy to very heavy falls very likely over East Uttar Pradesh during next 2-3 days.
- ♦ An offshore trough runs from south Karnataka to north Kerala coast. Under its influence, widespread rainfall with isolated heavy to very heavy falls very likely over Konkan & Goa and Madhya Maharashtra during next 2-3 days; over Karnataka and Kerala & Mahe during next 2 days. Isolated extremely heavy falls also very likely over Konkan & Goa and Madhya Maharashtra during next 24 hours.
- ♦ A Western Disturbance runs from north Jammu & Kashmir to northeast Arabian Sea. Under its influence, fairly widespread rainfall with isolated heavy to very heavy falls very likely over Uttarakhand during next 2 days.
- ♦ **Moderate to severe thunderstorms** accompanied by **frequent cloud to ground lightning** very likely over Uttarakhand, Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Bihar and Jharkhand during 17th-18th June. This may cause injuries leading to casualties to people and animals staying outdoors.

### Main Weather Observations

- ♦ **Rain/Thundershowers observed (from 0830 hours IST of yesterday to 0830 hours IST of today):** at **most places** over West Bengal & Sikkim, Jharkhand, Bihar, Himachal Pradesh, Konkan & Goa, Karnataka and Kerala & Mahe; at **many places** over Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Odisha, Uttarakhand, Gujarat region, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh and Lakshadweep; at **a few places** over Andaman & Nicobar Islands, Assam & Meghalaya, Jammu, Kashmir, Ladakh, Gilgit-Baltistan, East Uttar Pradesh, Madhya Pradesh and Telangana and at **isolated places** over West Uttar Pradesh, Haryana, Chandigarh & Delhi, Punjab, Rajasthan, Saurashtra & Kutch, Coastal Andhra Pradesh & Yanam, Rayalaseema and Tamilnadu, Puducherry & Karaikal.
- ♦ **Rainfall recorded (from 0830 hours IST of yesterday to 0830 hours IST of today)** (8 cm or more): Gananbawada-28; Mahabaleshwar, Kottigehara-21; Avalanche-21; Rajapur, Harnai-20; Kolhapur, Agumbe and Canning-18; Radhanagari, Chiplun-17; Vaibhavwadi, Chandgarh-16; Ched, Kankavli, Kudal-15; Koderma, Alipore, Nippani and Kolkata-14; Padinjarathara and Bankura-13; Siddapur, Kalara, Sringeri, Bhagamandala and Upper Bhavani-12; Manchikere and Emerald-11; Kollur, Murnadu, Bombay(Calaba), Vytiri, Chinnakalar and Valprai-10; Manki, Khanapur, Sankeshwar, Vatkom, Kakkayam, Sholayar and Vengurla-9; Kolhapur, Belthangadi, Subramany, Mundgod, Jayapura, Manantoddy, Sangli and Satna-8 each.
- ♦ **Heavy rainfall recorded (from 0830 hours IST of yesterday to 0830 hours IST of today):** **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over Konkan & Goa, South Interior Karnataka, Tamilnadu, Puducherry & Karaikal and Madhya Maharashtra; **heavy to very heavy rainfall** at isolated places over Bihar, West Bengal & Sikkim, Kerala & Mahe and Jharkhand and **Heavy rainfall** at isolated places over Assam & Meghalaya, Odisha, East Uttar Pradesh, Himachal Pradesh, East Madhya Pradesh, Chhattisgarh and Coastal Karnataka.
- ♦ **Thunderstorm observed (from 0830 hours IST of yesterday to 0830 hours IST of today):** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan, Himachal Pradesh, Punjab, Uttarakhand, West Uttar Pradesh, West Rajasthan, Bihar, Odisha, Gangetic West Bengal, Assam & Meghalaya, Madhya Pradesh, Marathwada, Gujarat Region, Vidarbha, Chhattisgarh, Konkan & Goa and Coastal Andhra Pradesh & Yanam.
- ♦ **Maximum Temperature Departures as on 16-06-2021:** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Arunachal Pradesh and Gujarat State; **above normal (1.6°C to 3.0°C)** at most places over Assam & Meghalaya; at many places over Andaman & Nicobar Islands; at a few places over Coastal Andhra Pradesh & Yanam and at isolated places over Tamilnadu & Puducherry, Kerala & Mahe and Lakshadweep. They were **markedly below normal (-5.1°C and less)** at most places over Uttarakhand, Punjab, Himachal Pradesh, Haryana, Chandigarh & Delhi, Bihar and Jharkhand; at many places over Gangetic West Bengal; at a few places over East Uttar Pradesh and at isolated places over West Madhya Pradesh and Chhattisgarh; **appreciably below normal (-3.1°C to -5.0°C)** at most places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan, West Uttar Pradesh and East Madhya Pradesh; at many places over West Rajasthan; at a few places over East Rajasthan, North interior Karnataka and at isolated places over Vidarbha; **below normal (-1.6°C to -3.0°C)** at most places over Konkan & Goa, Madhya Maharashtra, Odisha and South Interior Karnataka; at many places over Telangana; at a few places over Sub-Himalayan West Bengal & Sikkim and at isolated places over Nagaland, Manipur, Mizoram & Tripura and Rayalaseema and near normal over rest parts of the country. Yesterday, the **highest maximum temperature of 40.0°C** was reported at Barmer (**East Rajasthan**).
- ♦ **Minimum Temperature Departures as on 17-06-2021:** Minimum temperatures are **above normal (1.6°C to 3.0°C)** at many places over Saurashtra & Kutch and Andaman & Nicobar Islands and at isolated places over West Madhya Pradesh, Coastal Andhra Pradesh & Yanam and Assam & Meghalaya and. They are **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Saurashtra & Kutch, East Madhya Pradesh and Vidarbha; **below normal (-1.6°C to -3.0°C)** at many places over Bihar; at a few places over Madhya Maharashtra, Gangetic West Bengal and Odisha; at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan, Haryana, Chandigarh & Haryana, Uttarakhand, Rajasthan, Uttar Pradesh, Konkan & Goa, Marathwada, Telangana and Tamilnadu, Puducherry & Karaikal. Today, the lowest **minimum temperature of 19.6°C** reported at Seoni (**East Madhya Pradesh**) over the plains of the country.

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### Meteorological Analysis (Based on 0830 hours IST)

- ◆ The Northern Limit of Monsoon (NLM) continue to pass through lat. 20.5°N/ Long. 60°E, Diu, Surat, Nandurbar, Bhopal, Nowgong, Hamirpur, Barabanki, Bareilly, Saharanpur, Ambala and Amritsar.
- ◆ Large-scale atmospheric conditions are not favourable for further advance of monsoon into Rajasthan, remaining parts Punjab, Haryana and Delhi. However, there could be **slow progress into some more parts of Gujarat state and Uttar Pradesh** during next 2 to 3 days.
- ◆ The cyclonic circulation over East Uttar Pradesh & neighbourhood extending upto 3.1 km above mean sea level persists.
- ◆ The Western Disturbance as a trough in mid & upper tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 72°E to the north of Lat. 22°N persists.
- ◆ The trough from south Punjab to south Assam now runs from West Rajasthan to northeast Bay of Bengal across northwest Madhya Pradesh, southeast Uttar Pradesh, south Bihar, Jharkhand and Gangetic West Bengal and extends upto 0.9 km above mean sea level.
- ◆ A cyclonic circulation lies over south Pakistan & neighbourhood and extends upto 1.5 km above mean sea level.
- ◆ A cyclonic circulation lies over south Haryana & neighbourhood at 0.9 km above mean sea level.
- ◆ The cyclonic circulation over Gangetic West Bengal & adjoining Bangladesh now lies over Gangetic West Bengal & neighbourhood and extends upto 7.6 km above mean sea level.
- ◆ The off shore trough at mean sea level off south Karnataka-north Kerala coasts persists.
- ◆ The trough from central parts of south Arabian Sea to south Konkan between 4.5 km & 5.8 km above mean sea level has become less marked.
- ◆ The cyclonic circulation over Punjab & adjoining areas of northwest Rajasthan and Haryana extending upto 3.1 km above mean sea level has become less marked.
- ◆ The cyclonic circulation over south Assam & neighbourhood extending upto 2.1 km above mean sea level has become less marked.

### Weather Forecast for next 5 days \* upto 0830 hours IST of 22nd June, 2021

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ◆ No significant change in temperatures over most parts of Northwest and East India during next 3 days and gradual rise by 2-4° C thereafter.
- ◆ No significant change in temperatures over remaining parts of the country during next 5 days.

### Weather Outlook for subsequent 2 days from 22nd June 2021 to 24th June 2021

- ◆ Fairly widespread to widespread rainfall with isolated heavy falls likely over most parts of Northeast and East India.
- ◆ Isolated to scattered rainfall over remaining parts of the country.

## Weather Warning during next 5 days \*

**17 June (Day 1): ♦ Heavy to Very Heavy Rainfall** with **extremely heavy falls** very likely at isolated places over Konkan & Goa and ghat areas of Madhya Maharashtra; **Heavy to Very Heavy Rainfall** at isolated places over Uttarakhand, East Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, Coastal & South Interior Karnataka and ghat areas of Tamil Nadu and **Heavy Rainfall** at isolated places over East Madhya Pradesh, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat region, North Interior Karnataka and Kerala & Mahe.

♦ **Thunderstorm with lightning & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Uttarakhand, West Uttar Pradesh and East Rajasthan and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, East Uttar Pradesh, Chhattisgarh, Madhya Pradesh, Vidarbha, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana and Tamilnadu, Puducherry & Karaikal. **Thunderstorm/Duststorm** with gusty winds (speed reaching 30-40 kmph) at isolated places very likely over West Rajasthan. **Strong surface wind (speed reaching 30-40 kmph)** at isolated places over Coastal Andhra Pradesh & Yanam.

♦ **Squally weather** (wind speed reaching **40-50 gusting to 60 kmph**) very likely over North and adjoining central Bay of Bengal along and off Andhra Pradesh Coast; along & off Karnataka-Goa-Maharashtra-Gujarat coasts. **Strong Winds (speed 45-55 kmph gusting to 65 kmph)** over central and southwest Arabian Sea and Gulf of Mannar. Fishermen are advised not to venture into these areas.

**18 June (Day 2): ♦ Heavy to Very Heavy Rainfall** very likely at isolated places over Uttarakhand, East Uttar Pradesh, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Konkan & Goa, ghat areas of Madhya Maharashtra and Coastal Karnataka. **Heavy Rainfall** at isolated places over West Uttar Pradesh, East Madhya Pradesh, Odisha, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Interior Karnataka and Kerala & Mahe.

♦ **Thunderstorm with lightning & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Uttarakhand, West Uttar Pradesh, Madhya Pradesh, Vidarbha and East Rajasthan and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, East Uttar Pradesh, Chhattisgarh, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Marathwada, Telangana and Tamilnadu, Puducherry & Karaikal. **Thunderstorm/Duststorm** with gusty winds (speed reaching 30-40 kmph) at isolated places very likely over West Rajasthan. **Strong surface wind (speed reaching 30-40 kmph)** at isolated places over Coastal Andhra Pradesh & Yanam.

♦ **Squally weather** (wind speed reaching **40-50 gusting to 60 kmph**) very likely over North and adjoining central Bay of Bengal; along & off Karnataka-Goa-Maharashtra-Gujarat coasts. **Strong Winds (speed 45-55 kmph gusting to 65 kmph)** over central and southwest Arabian Sea. Fishermen are advised not to venture into these areas.

**19 June (Day 3): ♦ Heavy to Very Heavy Rainfall** very likely at isolated places over East Madhya Pradesh and Chhattisgarh. **Heavy Rainfall** at isolated places over East Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, Assam & Meghalaya, Konkan & Goa, ghat areas of Madhya Maharashtra and Coastal Karnataka.

♦ **Thunderstorm with lightning & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Uttarakhand, West Uttar Pradesh, Madhya Pradesh and Vidarbha and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, East Uttar Pradesh, Rajasthan, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Assam & Meghalaya, Gujarat State and Tamilnadu, Puducherry & Karaikal.

♦ **Squally weather** (wind speed reaching **40-50 gusting to 60 kmph**) very likely over along & off Karnataka-Goa-Maharashtra coasts. **Strong Winds (speed 45-55 kmph gusting to 65 kmph)** over central and southwest Arabian Sea. Fishermen are advised not to venture into these areas.

**20 June (Day 4): ♦ Heavy Rainfall** likely at isolated places over Uttarakhand, East Uttar Pradesh, East Madhya Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Konkan & Goa and Coastal Karnataka.

♦ **Thunderstorm with lightning & gusty winds** (speed reaching 30-40 kmph) likely at isolated places over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Madhya Pradesh and Vidarbha and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, East Uttar Pradesh, Rajasthan, Chhattisgarh, Bihar, Gangetic West Bengal, Assam & Meghalaya and Gujarat State.

♦ **Squally weather** (wind speed reaching **40-50 gusting to 60 kmph**) likely over along & off Karnataka-Goa coasts. **Strong Winds (speed 45-55 kmph gusting to 65 kmph)** over central and southwest Arabian Sea. Fishermen are advised not to venture into these areas.

**21 June (Day 5): ♦ Heavy Rainfall** likely at isolated places over Andaman & Nicobar Islands and Konkan & Goa.

♦ **Thunderstorm with lightning & gusty winds** (speed reaching 30-40 kmph) likely at isolated places over West Uttar Pradesh and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, East Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar and Gujarat State.

♦ **Strong Winds (speed 45-55 kmph gusting to 65 kmph)** likely over central and southwest Arabian Sea. Fishermen are advised not to venture into these areas.

Kindly download **MAUSAM APP** for location specific forecast & warning, **MEGHDOOT APP** for Agromet advisory and **DAMINI APP** for Lightning Warning & visit state MC/RMC websites for district wise warning.

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**Table-1**  
**5 Day Rainfall Forecast (MID-DAY)**  
**17-June-2021**

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

**% Station Reporting Rainfall**

% 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)
No Rain	Dry		

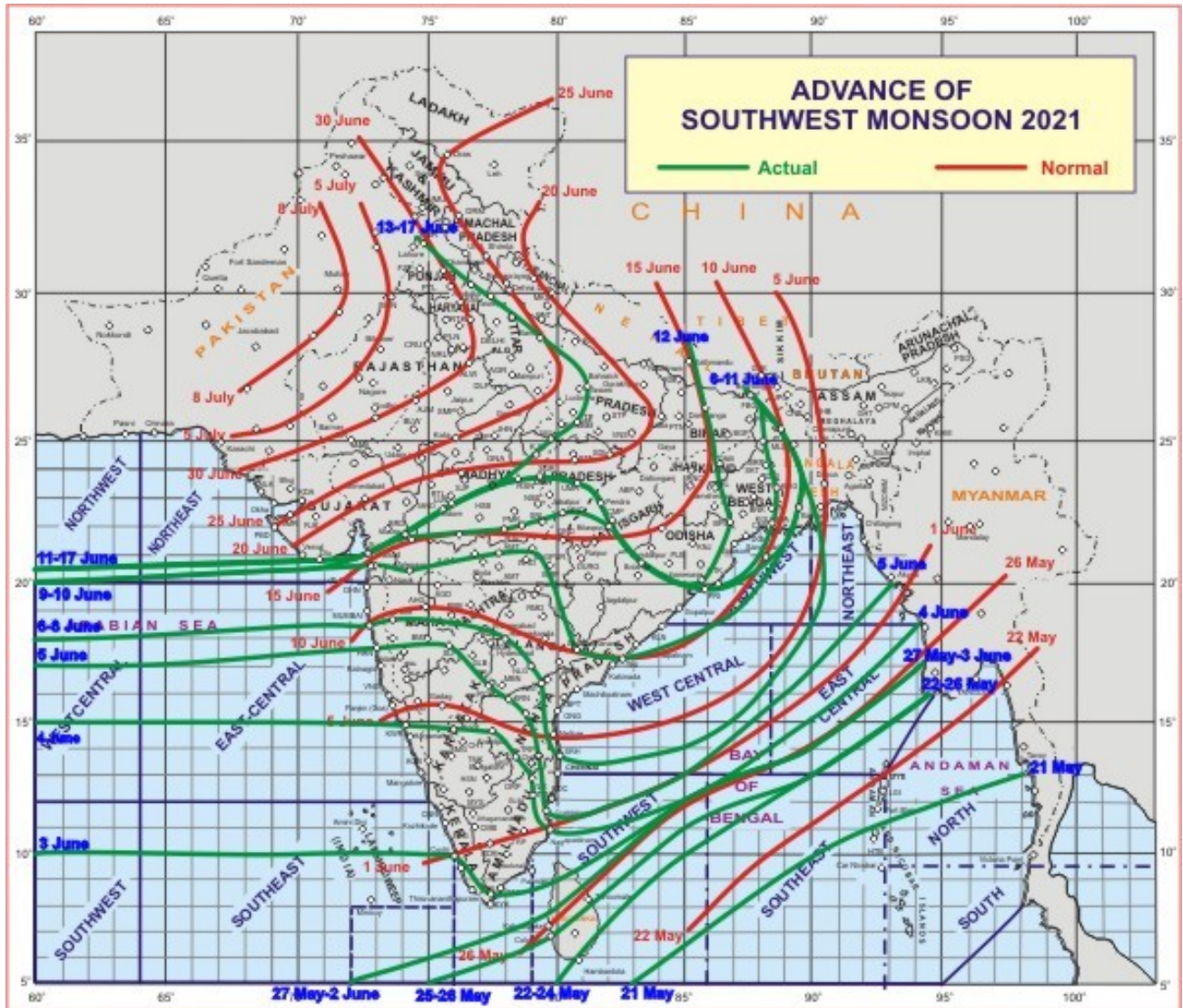
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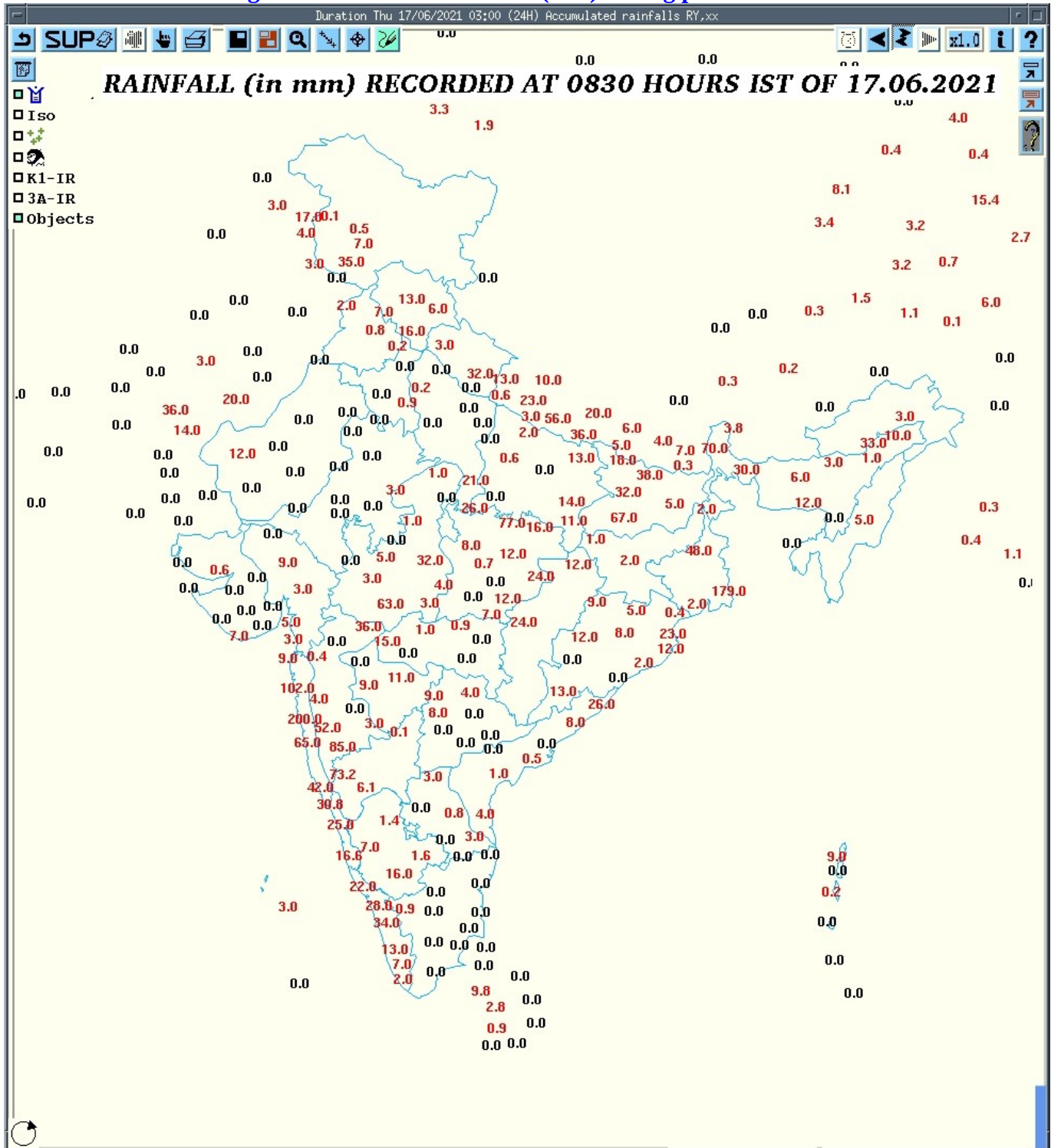
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**Fig. 1: Accumulated Rainfall (mm) during past 24 hours**



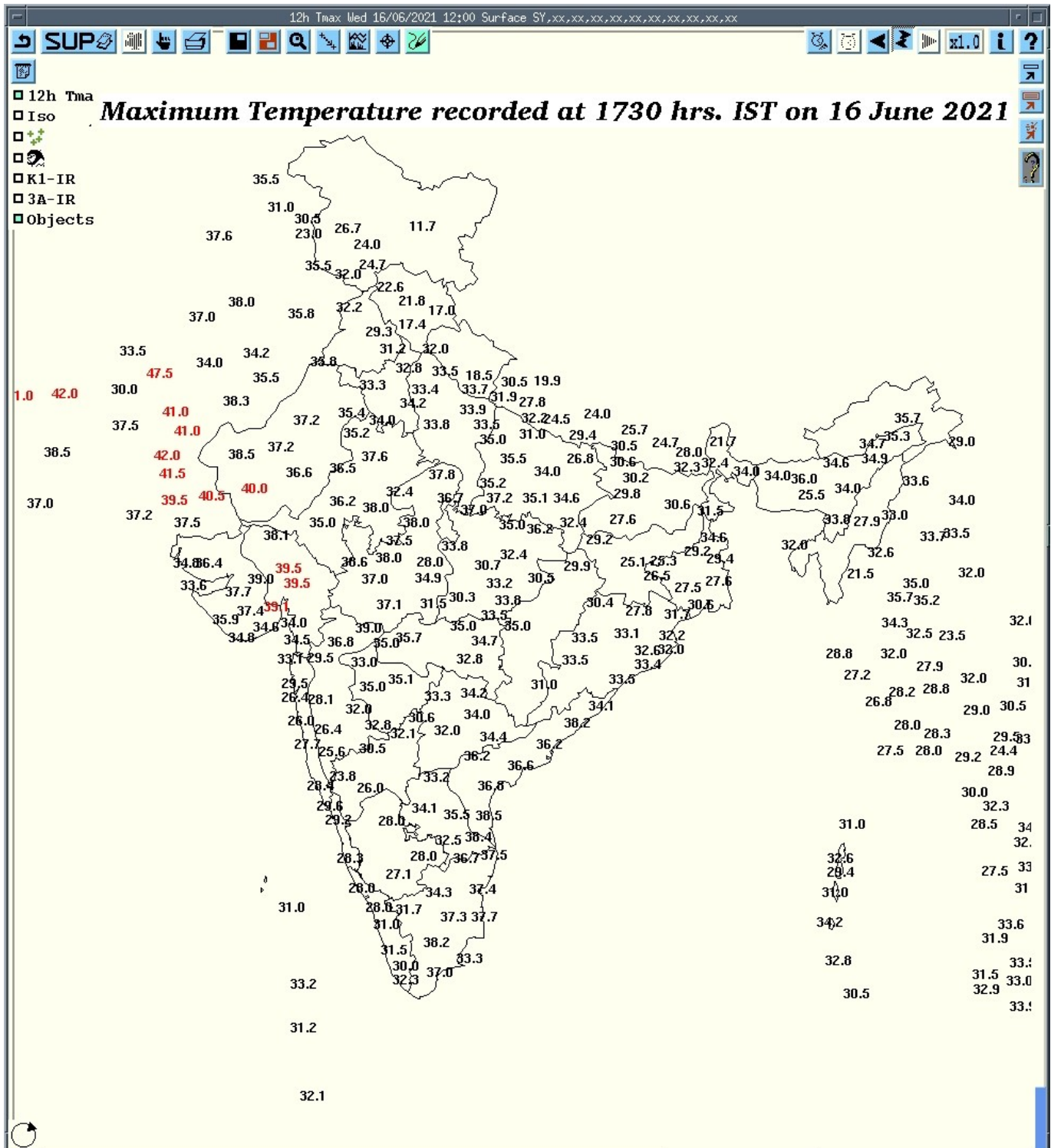
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**Fig. 2: Maximum Temperature during past 24 hours**



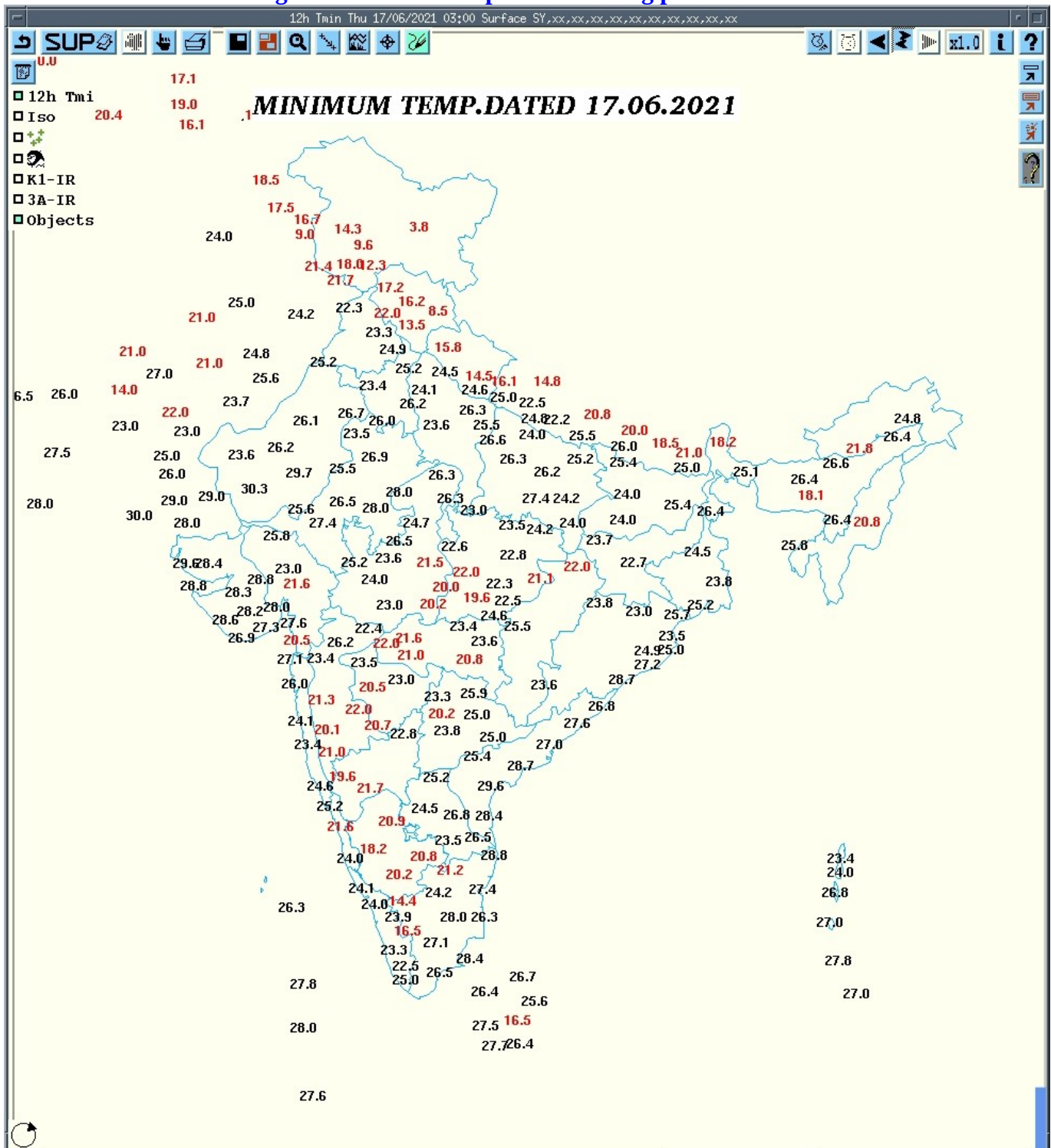
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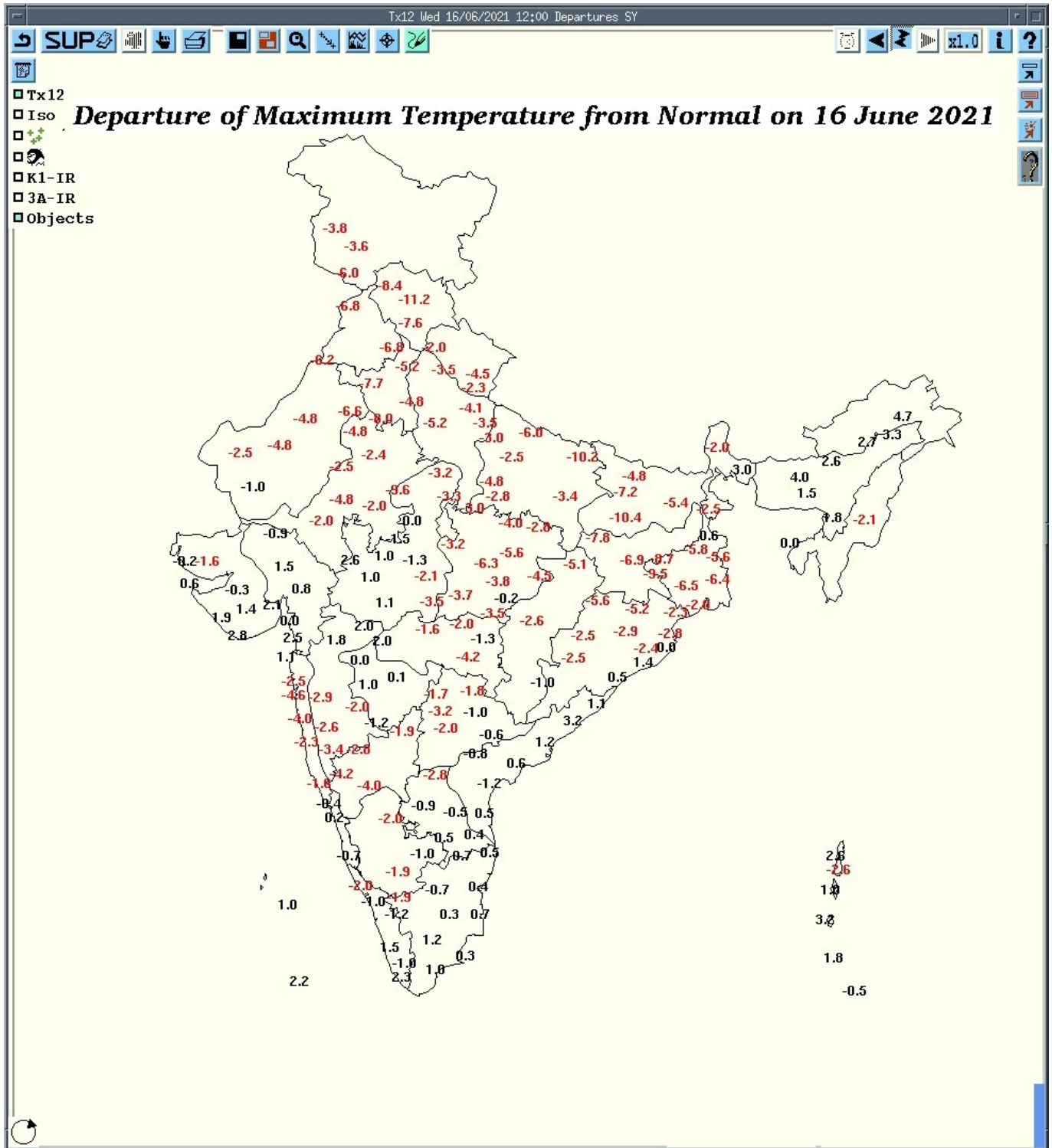


**MINIMUM TEMP.DATED 17.06.2021**

(Committed to the Nation since 1875)



Fig. 4 : Departure from Normal of Maximum Temperatures



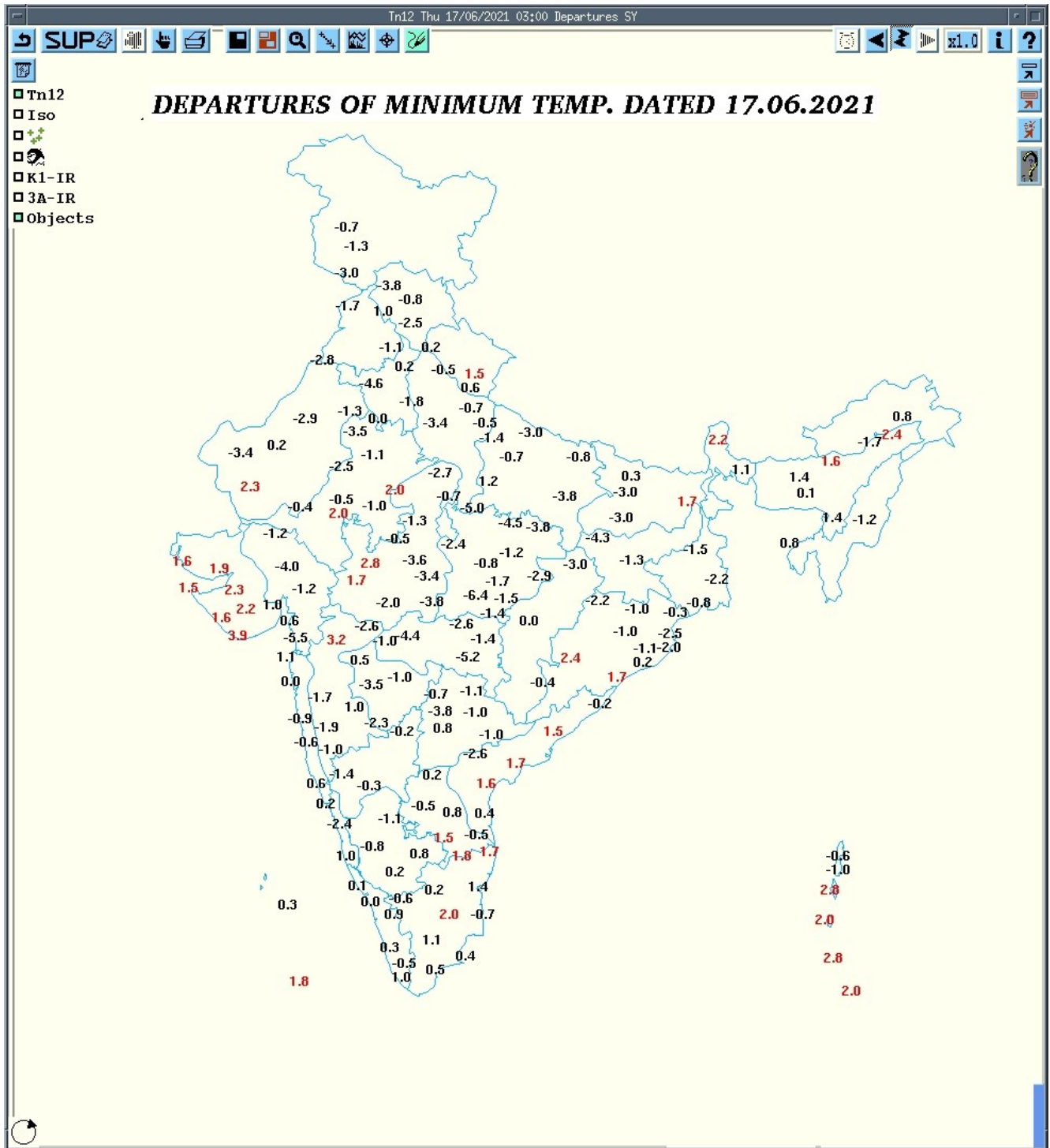
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Fig. 5 : Departure from Normal of Minimum Temperatures



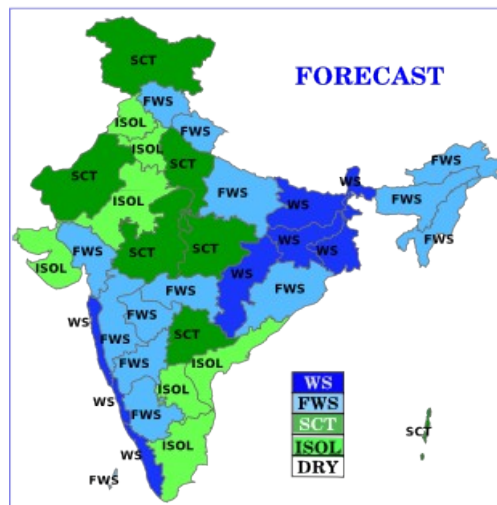
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**17 June (Day 1): ♦ Heavy to Very Heavy Rainfall** with **extremely heavy falls** very likely at isolated places over Konkan & Goa and ghat areas of Madhya Maharashtra; **Heavy to Very Heavy Rainfall** at isolated places over Uttarakhand, East Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, Coastal & South Interior Karnataka and ghat areas of Tamil Nadu and **Heavy Rainfall** at isolated places over East Madhya Pradesh, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat region, North Interior Karnataka and Kerala & Mahe.

♦ **Thunderstorm with lightning & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Uttarakhand, West Uttar Pradesh and East Rajasthan and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, East Uttar Pradesh, Chhattisgarh, Madhya Pradesh, Vidarbha, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana and Tamilnadu, Puducherry & Karaikal. **Thunderstorm/Duststorm** with gusty winds (speed reaching 30-40 kmph) at isolated places very likely over West Rajasthan. **Strong surface wind (speed reaching 30-40 kmph)** at isolated places over Coastal Andhra Pradesh & Yanam.

♦ **Squally weather** (wind speed reaching 40-50 gusting to 60 kmph) very likely over North and adjoining central Bay of Bengal along and off Andhra Pradesh Coast; along & off Karnataka-Goa-Maharashtra-Gujarat coasts. **Strong Winds (speed 45-55 kmph gusting to 65 kmph)** over central and southwest Arabian Sea and Gulf of Mannar. Fishermen are advised not to venture into these areas.

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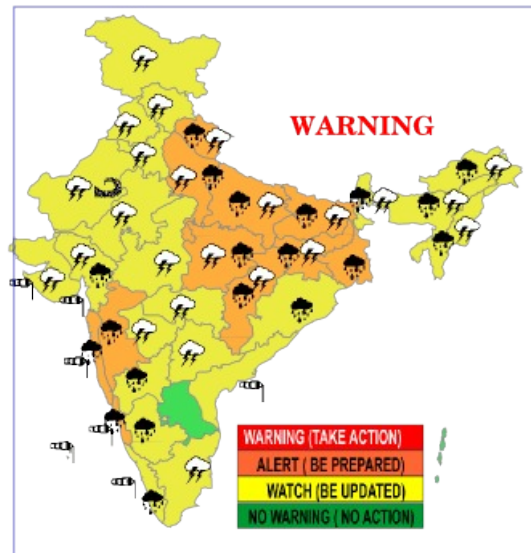
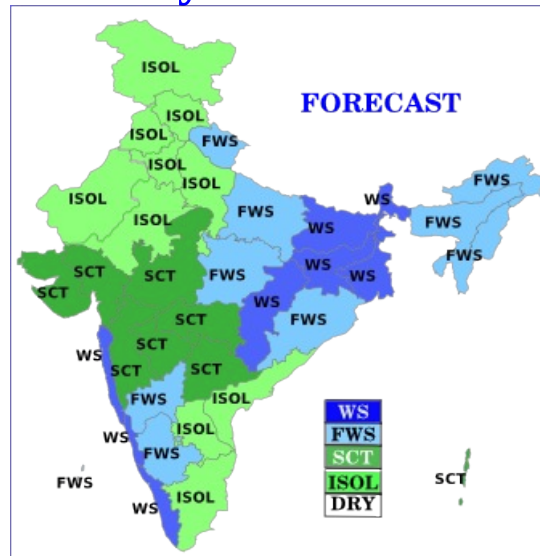
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## Friday 18 June 2021



**18 June (Day 2):** ♦ **Heavy to Very Heavy Rainfall** very likely at isolated places over Uttarakhand, East Uttar Pradesh, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Konkan & Goa, ghat areas of Madhya Maharashtra and Coastal Karnataka. **Heavy Rainfall** at isolated places over West Uttar Pradesh, East Madhya Pradesh, Odisha, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Interior Karnataka and Kerala & Mahe.

♦ **Thunderstorm with lightning & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Uttarakhand, West Uttar Pradesh, Madhya Pradesh, Vidarbha and East Rajasthan and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, East Uttar Pradesh, Chhattisgarh, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Marathwada, Telangana and Tamilnadu, Puducherry & Karaikal. **Thunderstorm/Duststorm** with gusty winds (speed reaching 30-40 kmph) at isolated places very likely over West Rajasthan. **Strong surface wind (speed reaching 30-40 kmph)** at isolated places over Coastal Andhra Pradesh & Yanam.

♦ **Squally weather** (wind speed reaching 40-50 gusting to 60 kmph) very likely over North and adjoining central Bay of Bengal; along & off Karnataka-Goa-Maharashtra-Gujarat coasts. **Strong Winds (speed 45-55 kmph gusting to 65 kmph)** over central and southwest Arabian Sea. Fishermen are advised not to venture into these areas.

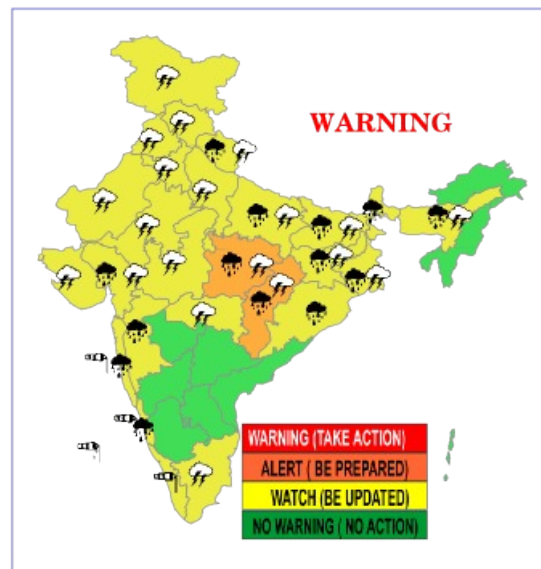
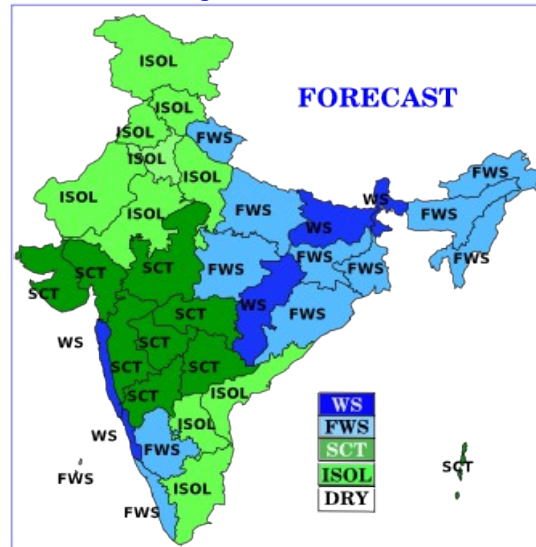
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## Saturday 19 June 2021



**19 June (Day 3): ♦ Heavy to Very Heavy Rainfall** very likely at isolated places over East Madhya Pradesh and Chhattisgarh. **Heavy Rainfall** at isolated places over East Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, Assam & Meghalaya, Konkan & Goa, ghat areas of Madhya Maharashtra and Coastal Karnataka.

♦ **Thunderstorm with lightning & gusty winds** (speed reaching 30-40 kmph) very likely at isolated places over Uttarakhand, West Uttar Pradesh, Madhya Pradesh and Vidarbha and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, East Uttar Pradesh, Rajasthan, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Assam & Meghalaya, Gujarat State and Tamilnadu, Puducherry & Karaikal.

♦ **Squally weather** (wind speed reaching 40-50 gusting to 60 kmph) very likely over along & off Karnataka-Goa-Maharashtra coasts. **Strong Winds** (speed 45-55 kmph gusting to 65 kmph) over central and southwest Arabian Sea. Fishermen are advised not to venture into these areas.

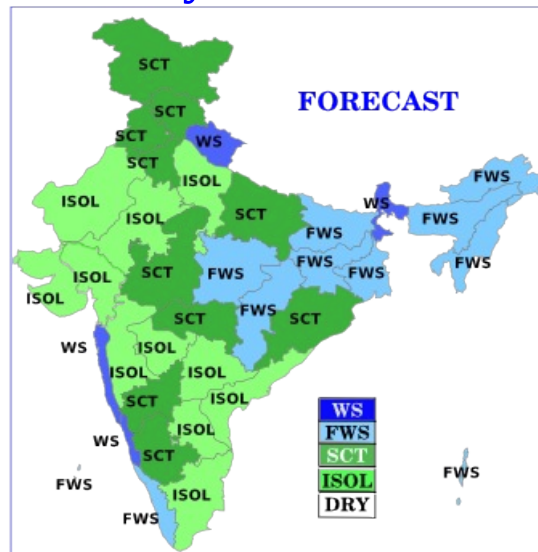
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## Sunday 20 June 2021



**20 June (Day 4):♦ Heavy Rainfall** likely at isolated places over Uttarakhand, East Uttar Pradesh, East Madhya Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Konkan & Goa and Coastal Karnataka.

♦ **Thunderstorm with lightning & gusty winds** (speed reaching 30-40 kmph) likely at isolated places over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Madhya Pradesh and Vidarbha and **with lightning** at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, East Uttar Pradesh, Rajasthan, Chhattisgarh, Bihar, Gangetic West Bengal, Assam & Meghalaya and Gujarat State.

♦ **Squally weather** (wind speed reaching 40-50 gusting to 60 kmph) likely over along & off Karnataka-Goa coasts. **Strong Winds** (speed 45-55 kmph gusting to 65 kmph) over central and southwest Arabian Sea. Fishermen are advised not to venture into these areas.

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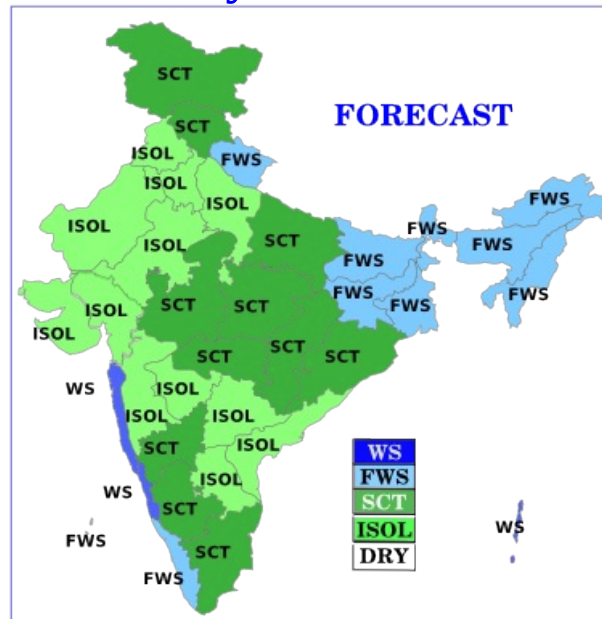
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## Monday 21 June 2021



21 June (Day 5): ♦ Heavy Rainfall likely at isolated places over Andaman & Nicobar Islands and Konkan & Goa.

♦ Thunderstorm with lightning & gusty winds (speed reaching 30-40 kmph) likely at isolated places over West Uttar Pradesh and with lightning at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, East Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar and Gujarat State.

♦ Strong Winds (speed 45-55 kmph gusting to 65 kmph) likely over central and southwest Arabian Sea. Fishermen are advised not to venture into these areas.

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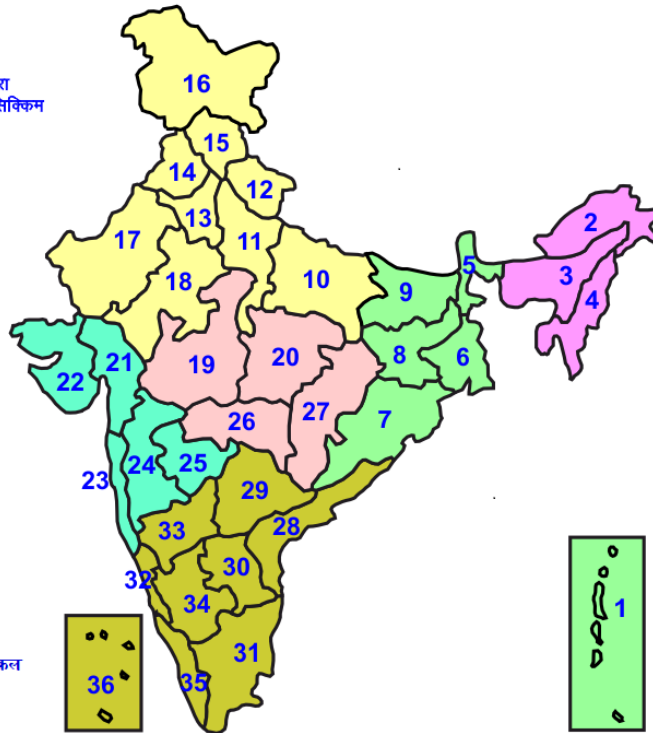
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## LEGENDS

- 1 अंडमान और निकोबार द्वीप समुह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड मनीपुर मीजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 पश्चिम गंगेय बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा चंडिगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर एवं लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एवं कच्छ
- 23 कोंकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठावाडा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एवं यनम
- 29 तेलंगाना
- 30 रायलसीमा
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 तटिय कर्नाटक
- 33 आंतरिक उत्तरी कर्नाटक
- 34 आंतरिक दक्षिणी कर्नाटक
- 35 केरल एवं माहे
- 36 लक्षद्वीप



1. Andaman & Nicobar Islands
2. Arunachal Pradesh
3. Assam & Meghalaya
4. Nagaland, Manipur, Mizoram & Tripura
5. Sub-Himalayan West Bengal & Sikkim
6. Gangetic West Bengal
7. Orissa
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chd & Delhi
14. Punjab
15. Himachal Pradesh
16. Jammu & Kashmir and Ladakh
17. West Rajasthan
18. East Rajasthan
19. West Madhya Pradesh
20. East Madhya Pradesh
21. Gujarat
22. Saurashtra
23. Konkan & Goa
24. Madhya Maharashtra
25. Marathawada
26. Vidharbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnadu, Puducherry & Karaikal
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala & Mahe
36. 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)

## WARNING

<b>WARNING (TAKE ACTION)</b>
<b>ALERT ( BE PREPARED)</b>
<b>WATCH (BE UPDATED)</b>
<b>NO WARNING ( NO ACTION)</b>

## Probabilistic Forecast

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



Heavy Rain



Heavy Snow



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State

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## LEGENDS

### WARNING

<b>WARNING (TAKE ACTION)</b>
<b>ALERT ( BE PREPARED)</b>
<b>WATCH (BE UPDATED)</b>
<b>NO WARNING ( NO ACTION)</b>

### 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  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .

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  $40^{\circ}\text{C}$

Warm Night: When minimum temperature departure  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .

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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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

(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  $\leq -4.5^{\circ}\text{C}$  or 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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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 Strom: Wind speed  $> 220$  kmph ( $> 119$  knots)

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