



Wednesday 13 July 2022

**MORNING**

Time of Issue: 0745 hours IST

**ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN**

**Significant Weather Features**

- ◆ **A Well Marked Low Pressure Area** lies over south coastal Odisha & neighbourhood with the associated cyclonic circulation extends upto middle tropospheric levels tilting southwestwards with height.
- ◆ The monsoon trough is active and south of its normal position.
- ◆ An east-west shear zone runs roughly along 20°N in lower & mid tropospheric levels tilting southwestwards with height across North Peninsular India.
- ◆ **Under the influence above systems;**
  - o Fairly widespread/widespread light/moderate rainfall & thunderstorm/lightning with isolated **heavy rainfall** very likely over Chhattisgarh, Vidarbha, Madhya Pradesh, Odisha, Maharashtra, Gujarat State, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Telangana and Karnataka during next 4-5 days.
  - ▶ **Isolated very heavy rainfall** very likely over West Madhya Pradesh during 13th-17th; East Madhya Pradesh during 14th-16th; Vidarbha and Chhattisgarh on 13th; Coastal & South Interior Karnataka on 13th; Konkan & Goa and Madhya Maharashtra on 15th & 16th; Gujarat region on 14th; Odisha on 14th, 15th & 16th and over Saurashtra & Kutch on 15th July, 2022.
  - ▶ **Isolated extremely heavy falls** very likely over Gujarat region on 13th; over Saurashtra & Kutch, ghat areas of Madhya Maharashtra and Konkan & Goa on 13th & 14th July, 2022.
  - o **Isolated/scattered light/moderate rainfall** activity very likely over Rayalaseema and Tamil Nadu, Puducherry & Karaikal during next 5 days.
  - o Scattered to fairly widespread light/moderate rainfall with isolated thunderstorm/lightning very likely over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh, Delhi during next 2 days.
  - ▶ **Isolated heavy rainfall** very likely over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab and Haryana on 13th & 14th July, 2022.

**Main Weather Observations**

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◆ **Rainfall/thundershower observed (from 0830 hours IST to 1730 hours IST of yesterday):** at most places over Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra, Telangana, Vidarbha, Gangetic West Bengal, Coastal & North Interior Karnataka and Lakshadweep; at many places over Marathwada, Madhya Pradesh, Jharkhand and Odisha; at a few places over Himachal Pradesh, Uttarakhand, Punjab, Gujarat region, Andaman & Nicobar Islands, Coastal Andhra Pradesh & Yanam, South Interior Karnataka, Kerala & Mahe and Nagaland, Manipur, Mizoram & Tripura and at isolated places over West Uttar Pradesh, Haryana, Chandigarh & Delhi, East Rajasthan, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Chhattisgarh, Rayalaseema and Tamil Nadu, Puducherry & Karaikal.

◆ **Heavy rainfall observed (from 0830 hours IST to 1730 hours IST of yesterday):** Heavy to very heavy rainfall at isolated places occurred over Saurashtra & Kutch and heavy rainfall at isolated places over West Madhya Pradesh, Konkan & Goa and Telangana.

◆ **Chief amount of Rainfall observed (from 0830 hours IST to 1730 hours IST of yesterday): (2 cm or more):** Bhuj-12; Adilabad and Matheran-9 each; Naliya and Rajkot-8 each; Betul and Kandla-7 each; Ramgundam, Okha, Baroda and Mahabaleshwar-6 each; Gwalior, Dharmasala, Long Island, Hanamkonda and Khandwa-4 each; Bhaunagar, Surat, Pune, Maya Bandar and Pachmarhi-3 each; Sundernagar, Bhopal, Bankura, Kolkata (Dum Dum), Sholapur, Nizamabad, Mumbai (Santacruz), Karwar, Angul, Bolangir, Udgir and Koraput-2 each.

◆ **Thunderstorm observed (from 0830 hours IST of yesterday to 0530 hours IST of today):** at isolated places over Himachal Pradesh, West Uttar Pradesh, Punjab, Haryana, Chandigarh, East Rajasthan, Madhya Pradesh, Odisha, Assam & Meghalaya, Gujarat region and Vidarbha.

◆ **Minimum Temperature Departures (as on 12-07-2022):** Minimum temperatures were appreciably above normal (3.1°C to 5.1°C) at a few places over Himachal Pradesh, East Uttar Pradesh and Sub-Himalayan West Bengal & Sikkim; above normal (1.6°C to 3.0°C) at many places over Haryana, Chandigarh & Delhi; at a few places over West Uttar Pradesh, East Rajasthan and Kerala & Mahe and at isolated places over East Madhya Pradesh. They were appreciably below normal (-3.1°C to -5.1°C) at a few places over Telangana; below normal (-1.6°C to -3.0°C) at many places over Konkan & Goa and Coastal Andhra Pradesh & Yanam; at a few places over Saurashtra & Kutch; at isolated places over West Madhya Pradesh and near normal over rest parts of the country. Yesterday, the lowest minimum temperature of 20°C was reported at Khandwa (West Madhya Pradesh) over the plains of the country.

◆ **Maximum Temperature Departures (as on 12-07-2022):** Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at most places over East Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Bihar; at isolated places over East Madhya Pradesh; above normal (1.6°C to 3.0°C) at many places over West Uttar Pradesh and Nagaland, Manipur, Mizoram & Tripura; at isolated places over Odisha and Gangetic West Bengal. They were markedly below normal (-5.1°C or less) at most places over Marathwada and Telangana; at a few places over Saurashtra & Kutch, Rayalaseema and Coastal Andhra Pradesh & Yanam; at isolated places over West Madhya Pradesh and Vidarbha; appreciably below normal (-3.1°C to -5.0°C) at most places over North Interior Karnataka; at many places over Madhya Maharashtra; at isolated places over Haryana, Chandigarh & Delhi and Tamilnadu, Puducherry & Karaikal; below normal (-1.6°C to -3.0°C) at most places over Gujarat Region; at many places over Jharkhand; at a few places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad; at isolated places over Kerala & Mahe and Konkan & Goa and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 40.5°C was reported at Ganganagar (West Rajasthan).

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

- ◆ The **Well Marked Low Pressure Area** over south Coastal Odisha & neighbourhood with the associated cyclonic circulation extending upto 7.6 km above mean sea level tilting southwestwards with height persists.
- ◆ The monsoon trough now passes through Bikaner, Jaipur, Guna, Jabalpur, Raipur, center of Well Marked Low Pressure Area over south coastal Odisha & neighborhood and thence southeastwards to Eastcentral Bay of Bengal and extends upto 1.5 km above mean sea level.
- ◆ The east-west shear zone roughly along 20°N between 3.1 km & 7.6 km above mean sea level tilting southwards with height across North Peninsular India persists.
- ◆ The cyclonic circulation over north Punjab & neighbourhood at 1.5 km above mean sea level persists.

### Weather Forecast for next 5 days \* upto 0830 hours IST of 18th July, 2022

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ◆ 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 18th July-20th July, 2022

- ◆ Widespread rainfall activity with isolated heavy to very heavy rainfall likely along the west coast and over parts of Central & adjoining East India.
- ◆ Fairly widespread rainfall activity likely over Northwest & adjoining Central India and Northeast India.
- ◆ Scattered rainfall activity likely over remaining parts of the country except Rayalaseema and Tamilnadu where isolated activity is likely.

## Weather Warning during next 5 days \*

**13 July (Day 1):** ♦ **Heavy to very heavy rainfall at a few places with extremely heavy falls** at isolated places very likely over Konkan & Goa; **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over Gujarat State and Madhya Maharashtra; **heavy to very heavy rainfall** at isolated places over Rajasthan, West Madhya Pradesh, Vidarbha, Chhattisgarh and Coastal & South Interior Karnataka and **heavy rainfall** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, East Madhya Pradesh, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana, North Interior Karnataka and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning, Gusty winds & Squall (speed reaching 50-60 kmph)** very likely at isolated places over Andaman & Nicobar Islands and **with lightning** at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Gangetic West Bengal, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.

♦ **Squally weather** (wind speed 45-55 kmph gusting to 65 kmph) very likely over northeast Arabian Sea and along & off Karnataka, Goa, Maharashtra, Gujarat coasts, westcentral and northwest Bay of Bengal along & off Andhra Pradesh and Odisha coasts, North Andaman Sea. Strong winds of 50-60 kmph gusting to 70 kmph likely over southwest and adjoining westcentral Arabian Sea. **Strong winds** of 45-55 kmph gusting to 65 kmph likely over eastcentral and adjoining south Arabian Sea. Strong winds of 50-60 kmph gusting to 70 kmph likely over central & adjoining south Bay of Bengal. Fisherman are advised not to venture into these areas.

**14 July (Day 2):** ♦ **Heavy to very heavy rainfall at a few places with extremely heavy falls** at isolated places very likely over Saurashtra & Kutch and Konkan & Goa; **Heavy to very heavy rainfall with extremely heavy falls** at isolated places over Madhya Maharashtra; **heavy to very heavy rainfall** at isolated places over East Rajasthan, Madhya Pradesh, Odisha and Gujarat Region and **heavy rainfall** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Rajasthan, Vidarbha, Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Karnataka and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning, Gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over Andaman & Nicobar Islands and **with lightning** at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal and Coastal Andhra Pradesh & Yanam.

♦ **Squally weather** (wind speed 45-55 kmph gusting to 65 kmph) very likely along and off Karnataka, Goa, Maharashtra, westcentral and northwest Bay of Bengal along & off coastal Andhra Pradesh and Odisha coasts, North Andaman Sea and adjoining eastcentral & northeast Bay of Bengal. **Strong winds** of 50-60 kmph gusting to 70 kmph likely over southwest & adjoining westcentral Arabian Sea and Northeast Arabian Sea along & off Gujarat coast. Strong winds of 45-55 kmph gusting to 65 kmph likely over eastcentral and adjoining south Arabian Sea. Fisherman are advised not to venture into these areas.

**15 July (Day 3):** ♦ **Heavy to very heavy rainfall** at isolated places likely over Madhya Pradesh, Odisha, Saurashtra & Kutch, Madhya Maharashtra and Konkan and **heavy rainfall** at isolated places over Vidarbha, Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat Region, Karnataka and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning, Gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Andaman & Nicobar Islands and **with lightning** at isolated places over Bihar and Coastal Andhra Pradesh & Yanam.

♦ **Squally weather** (wind speed 45-55 kmph gusting to 65 kmph) very likely along and off Karnataka, Goa, Maharashtra, westcentral and northwest & adjoining westcentral & eastcentral Bay of Bengal along & off Andhra Pradesh, Odisha and West Bengal coasts. **Strong winds** of 50-60 kmph gusting to 70 kmph likely over southwest & adjoining westcentral Arabian Sea and Northeast Arabian Sea along & off Gujarat coast. Strong winds of 45-55 kmph gusting to 65 kmph likely over eastcentral and adjoining south Arabian Sea. Fisherman are advised not to venture into these areas.

**16 July (Day 4):** ♦ **Heavy to very heavy rainfall** at isolated places over Madhya Pradesh, Odisha, Madhya Maharashtra and Konkan & Goa and **heavy rainfall** at isolated places over Vidarbha, Chhattisgarh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Karnataka and Kerala & Mahe.

♦ **Squally weather** (wind speed 45-55 kmph gusting to 65 kmph) very likely along and off Karnataka, Goa, Maharashtra, northwest & westcentral & adjoining eastcentral Bay of Bengal along & off Andhra Pradesh, Odisha and West Bengal coasts. **Strong winds** of 50-60 kmph gusting to 70 kmph likely over southwest and adjoining westcentral Arabian Sea and Northeast Arabian Sea along & off Gujarat coast. Strong winds of 45-55 kmph gusting to 65 kmph likely over eastcentral and adjoining south Arabian Sea. Fisherman are advised not to venture into these areas.

**17 July (Day 5):** ♦ **Heavy to very heavy rainfall** at isolated places likely over West Madhya Pradesh, Madhya Maharashtra and Konkan & Goa and **heavy rainfall** at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal & South Interior Karnataka and Kerala & Mahe.

♦ **Squally weather** (wind speed 40-50 kmph gusting to 60 kmph) very likely along and off Karnataka, Goa, Maharashtra, northwest & westcentral & adjoining eastcentral Bay of Bengal along & off Andhra Pradesh, Odisha and West Bengal coasts. **Strong winds** of 50-60 kmph gusting to 70 kmph likely over southwest and adjoining westcentral Arabian Sea and Northeast Arabian Sea along & off Gujarat coast. Strong winds of 40-50 kmph gusting to 60 kmph likely over eastcentral and adjoining south Arabian Sea. Fisherman 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 (MORNING)**  
**13-July-2022**

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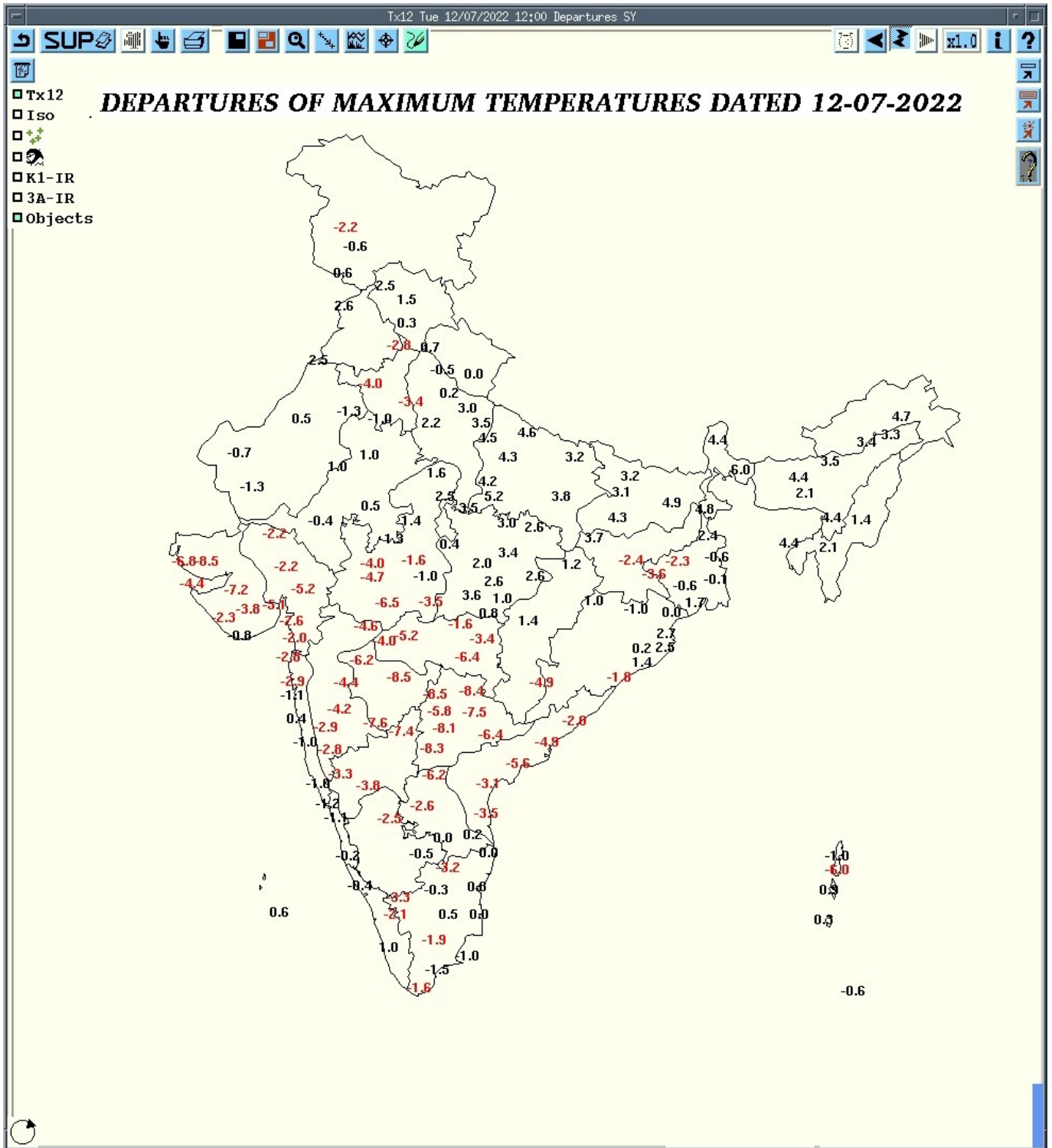








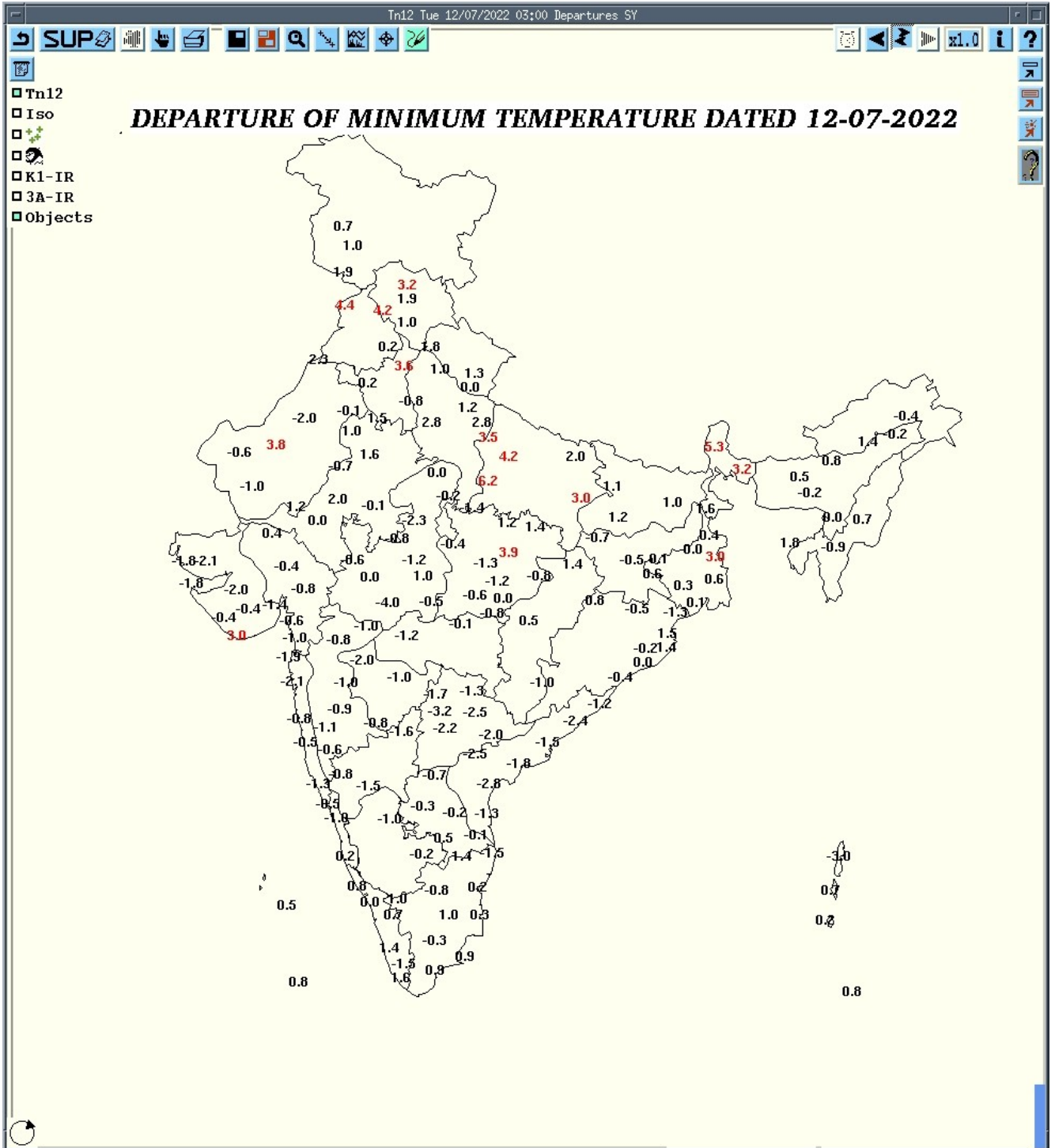
Fig. 4 : Departure from Normal of Maximum Temperatures



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Fig. 5 : Departure from Normal of Minimum Temperatures



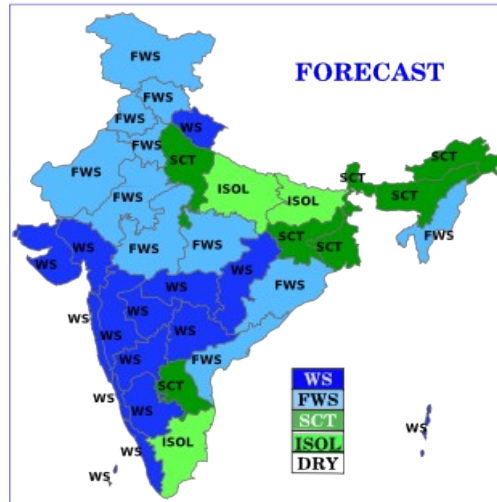
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## Wednesday 13 July 2022



**13 July (Day 1):** ♦ **Heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places very likely over Konkan & Goa; Heavy to very heavy rainfall with extremely heavy falls at isolated places over Gujarat State and Madhya Maharashtra; heavy to very heavy rainfall at isolated places over Rajasthan, West Madhya Pradesh, Vidarbha, Chhattisgarh and Coastal & South Interior Karnataka and heavy rainfall at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, East Madhya Pradesh, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana, North Interior Karnataka and Kerala & Mahe.**

♦ **Thunderstorm accompanied with lightning, Gusty winds & Squall (speed reaching 50-60 kmph) very likely at isolated places over Andaman & Nicobar Islands and with lightning at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Gangetic West Bengal, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.**

♦ **Squally weather** (wind speed 45-55 kmph gusting to 65 kmph) very likely over northeast Arabian Sea and along & off Karnataka, Goa, Maharashtra, Gujarat coasts, westcentral and northwest Bay of Bengal along & off Andhra Pradesh and Odisha coasts, North Andaman Sea. Strong winds of 50-60 kmph gusting to 70 kmph likely over southwest and adjoining westcentral Arabian Sea. **Strong winds** of 45-55 kmph gusting to 65 kmph likely over eastcentral and adjoining south Arabian Sea. Strong winds of 50-60 kmph gusting to 70 kmph likely over central & adjoining south Bay of Bengal. Fisherman are advised not to venture into these areas.

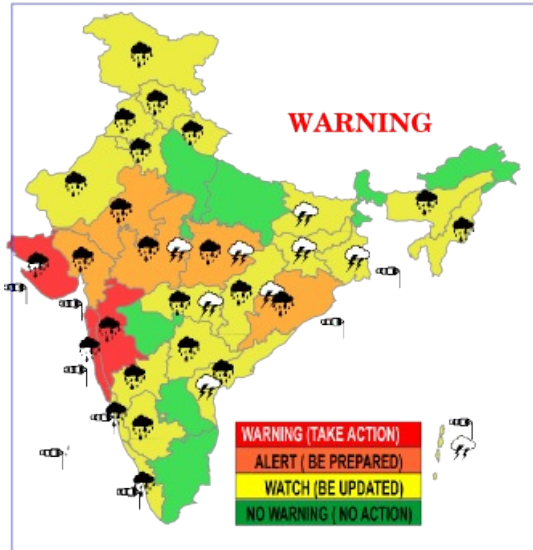
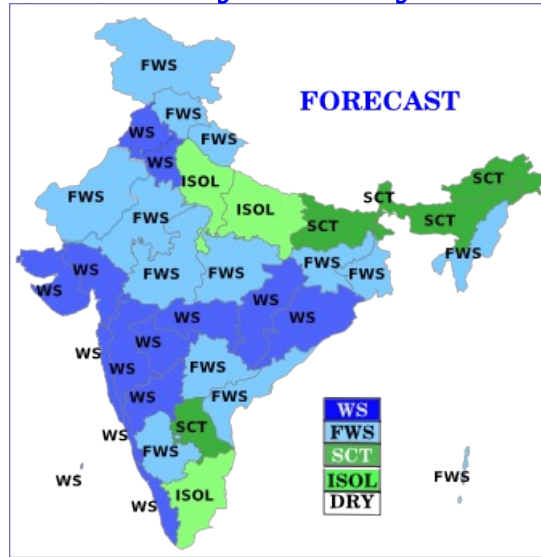
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## Thursday 14 July 2022



**14 July (Day 2):** ♦ **Heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places very likely over Saurashtra & Kutch and Konkan & Goa; Heavy to very heavy rainfall with extremely heavy falls at isolated places over Madhya Maharashtra; heavy to very heavy rainfall at isolated places over East Rajasthan, Madhya Pradesh, Odisha and Gujarat Region and heavy rainfall at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Rajasthan, Vidarbha, Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Karnataka and Kerala & Mahe.**

♦ **Thunderstorm accompanied with lightning, Gusty winds (speed reaching 40-50 kmph) very likely at isolated places over Andaman & Nicobar Islands and with lightning at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal and Coastal Andhra Pradesh & Yanam.**

♦ **Squally weather** (wind speed 45-55 kmph gusting to 65 kmph) very likely along and off Karnataka, Goa, Maharashtra, westcentral and northwest Bay of Bengal along & off coastal Andhra Pradesh and Odisha coasts, North Andaman Sea and adjoining eastcentral & northeast Bay of Bengal. **Strong winds** of 50-60 kmph gusting to 70 kmph likely over southwest & adjoining westcentral Arabian Sea and Northeast Arabian Sea along & off Gujarat coast. Strong winds of 45-55 kmph gusting to 65 kmph likely over eastcentral and adjoining south Arabian Sea. Fisherman are advised not to venture into these areas.

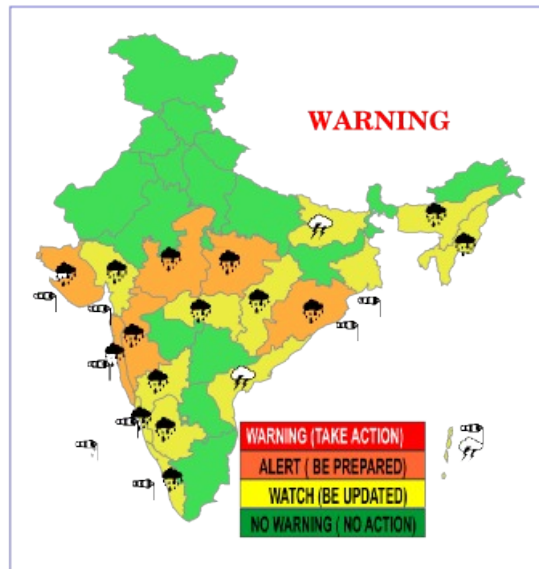
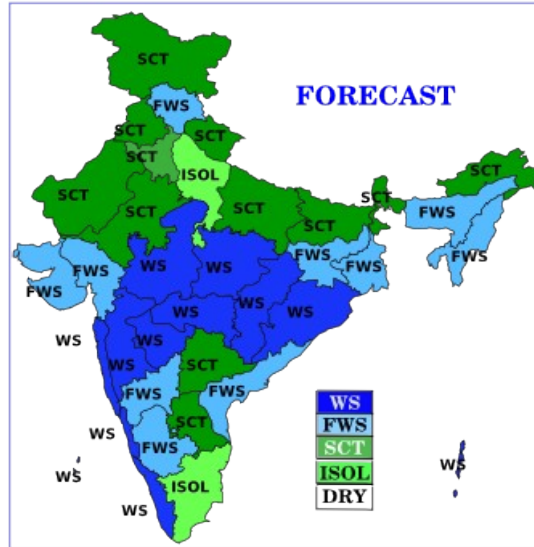
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## Friday 15 July 2022



**15 July (Day 3): ♦ Heavy to very heavy rainfall** at isolated places likely over Madhya Pradesh, Odisha, Saurashtra & Kutch, Madhya Maharashtra and Konkan and **heavy rainfall** at isolated places over Vidarbha, Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat Region, Karnataka and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning, Gusty winds (speed reaching 30-40 kmph)** likely at isolated places over Andaman & Nicobar Islands and **with lightning** at isolated places over Bihar and Coastal Andhra Pradesh & Yanam.

♦ **Squally weather** (wind speed 45-55 kmph gusting to 65 kmph) very likely along and off Karnataka, Goa, Maharashtra, westcentral and northwest & adjoining westcentral & eastcentral Bay of Bengal along & off Andhra Pradesh, Odisha and West Bengal coasts. **Strong winds** of 50-60 kmph gusting to 70 kmph likely over southwest & adjoining westcentral Arabian Sea and Northeast Arabian Sea along & off Gujarat coast. Strong winds of 45-55 kmph gusting to 65 kmph likely over eastcentral and adjoining south Arabian Sea. Fisherman are advised not to venture into these areas.

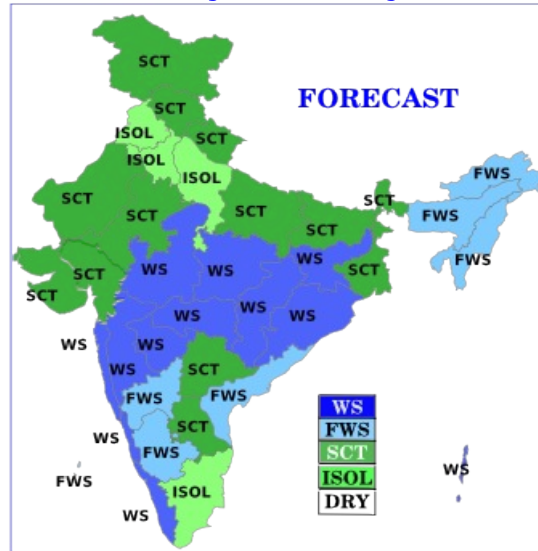
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## Saturday 16 July 2022



**16 July (Day 4):** ♦ **Heavy to very heavy rainfall** at isolated places over Madhya Pradesh, Odisha, Madhya Maharashtra and Konkan & Goa and **heavy rainfall** at isolated places over Vidarbha, Chhattisgarh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Karnataka and Kerala & Mahe.

♦ **Squally weather** (wind speed 45-55 kmph gusting to 65 kmph) very likely along and off Karnataka, Goa, Maharashtra, northwest & westcentral & adjoining eastcentral Bay of Bengal along & off Andhra Pradesh, Odisha and West Bengal coasts. **Strong winds** of 50-60 kmph gusting to 70 kmph likely over southwest and adjoining westcentral Arabian Sea and Northeast Arabian Sea along & off Gujarat coast. Strong winds of 45-55 kmph gusting to 65 kmph likely over eastcentral and adjoining south Arabian Sea. Fisherman are advised not to venture into these areas.

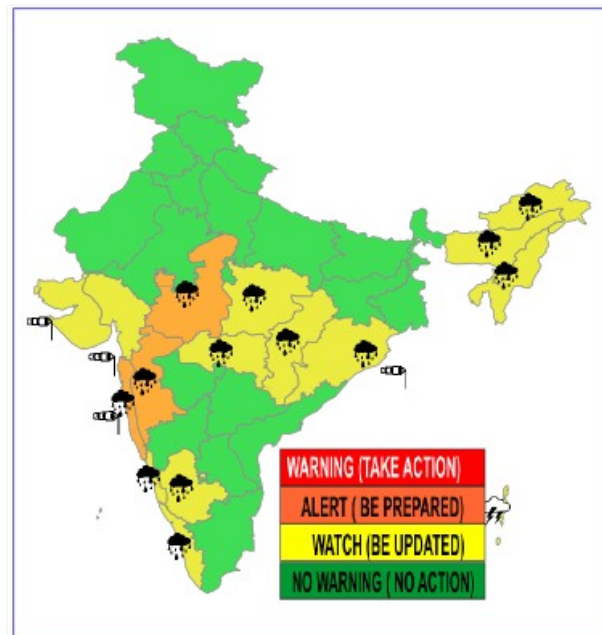
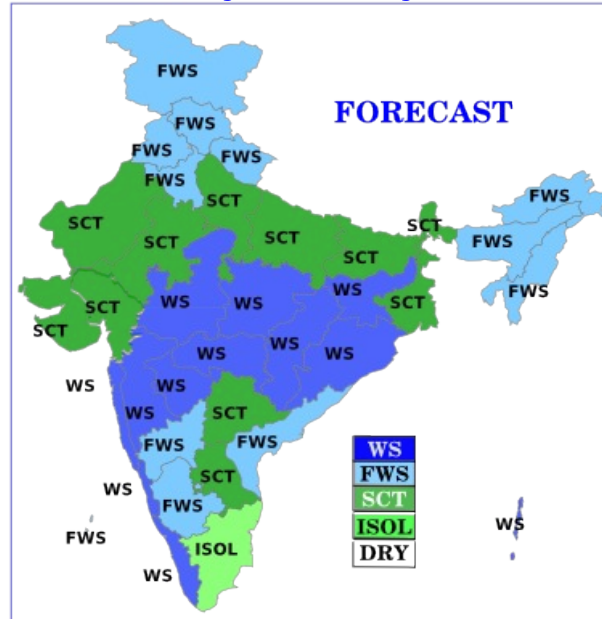
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(Circle as the Nation since 1975)

## Sunday 17 July 2022



**17 July (Day 5):** ♦ **Heavy to very heavy rainfall** at isolated places likely over West Madhya Pradesh, Madhya Maharashtra and Konkan & Goa and **heavy rainfall** at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal & South Interior Karnataka and Kerala & Mahe.

♦ **Squally weather** (wind speed 40-50 kmph gusting to 60 kmph) very likely along and off Karnataka, Goa, Maharashtra, northwest & westcentral & adjoining eastcentral Bay of Bengal along & off Andhra Pradesh, Odisha and West Bengal coasts. **Strong winds** of 50-60 kmph gusting to 70 kmph likely over southwest and adjoining westcentral Arabian Sea and Northeast Arabian Sea along & off Gujarat coast. Strong winds of 40-50 kmph gusting to 60 kmph likely over eastcentral and adjoining south Arabian Sea. Fisherman are advised not to venture into these areas.

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## LEGENDS

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

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  $4.5^{\circ}\text{C}$  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 Storm: Wind speed  $> 220$  kmph ( $> 119$  knots)

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