



Saturday 16 July 2022

MID-DAY

Time of Issue: 1340 hours IST

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

- ◆ Yesterday's **Well Marked Low Pressure Area** over Northeast Arabian Sea and adjoining coastal areas of Saurashtra & Kutch has intensified into a **Depression** over Northeast Arabian Sea off Saurashtra coast at 0830 hours IST of today. It lay centered at 0830 hours IST of today the 16th July, 2022 near latitude 21.6°N and longitude 69.0°E, about 70 km west of Porbandar (Gujarat), 100 km south of Okha (Gujarat), 190 km south of Naliya (Gujarat) and 410 km south-southeast of Karachi (Pakistan). It is very likely to move gradually north-northwestwards along & off Saurashtra & Kutch coasts and adjoining northeast Arabian Sea during next 24 hours. Thereafter, it is likely to move nearly westwards towards Oman coast across northwest Arabian Sea during subsequent 48 hours.
- ◆ A Low Pressure Area lies over Northwest Bay of Bengal off north Odisha-West Bengal coasts with the associated cyclonic circulation extending upto middle tropospheric levels.
- ◆ The monsoon trough is active and south of its normal position. It is likely to shift gradually northwards from 17th July, 2022.
- ◆ An off-shore trough at mean sea level runs from Gujarat Coast to Maharashtra.
- ◆ Under the influence above systems;
 - i) Fairly widespread/widespread light/moderate rainfall & thunderstorm/lightning very likely over Chhattisgarh, Vidarbha, Madhya Pradesh, Odisha, Konkan & Goa, Kerala & Mahe, Karnataka and Lakshadweep during next 5 days.
 - a) Isolated heavy rainfall very likely over Interior Karnataka, West Madhya Pradesh & Vidarbha on 16th & 17th; Coastal Karnataka, Konkan & Goa & Odisha during 16th-18th; East Madhya Pradesh during 16th-19th and over Kerala & Mahe & Chhattisgarh during 16th-20th July, 2022.
 - ii) Fairly widespread to widespread rainfall with isolated heavy falls thunderstorm/lightning very likely over Jammu & Kashmir, Himachal Pradesh & Uttarakhand on 19th & 20th July, 2022.
 - a) Isolated very heavy rainfall very likely over HP on 20th and over Uttarakhand on 19th & 20th. Isolated extremely rainfall also likely over Uttarakhand on 19th & 20th July, 2022.
 - iii) Isolated rainfall activity with thunderstorm & lightning very likely over Punjab, Haryana, Chandigarh-Delhi & Uttar Pradesh during next 3 days and fairly widespread to widespread rainfall with isolated heavy falls, thunderstorm & lightning also likely over the region 19th & 20th July, 2022.
 - a) Fairly widespread light/moderate rainfall with isolated heavy falls very likely over West Rajasthan during next 3 days and scattered light/moderate rainfall with isolated heavy falls over East Rajasthan during next 2 days.
 - iv) Scattered to fairly widespread light/moderate rainfall with heavy falls very likely over Northeast India during next 2 days and widespread rainfall with very heavy falls also likely over the region during 18th-20th July, 2022.

Main Weather Observations

* Red color warning does not mean "Red Alert" Red color warning means "Take Action".

Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day

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

◆ **Heavy rainfall observed (from 0830 hours of yesterday IST to 0830 hours IST of today):** Heavy to very heavy rainfall with extremely heavy falls at isolated places occurred over ghat areas of Madhya Maharashtra; heavy to very heavy rainfall at isolated places occurred over Gujarat Region, East Madhya Pradesh, West Rajasthan, Coastal Karnataka, Assam & Meghalaya, Tamil Nadu and Kerala and heavy rainfall at isolated places over East Rajasthan, West Madhya Pradesh, Saurashtra-Kutch, Punjab, Himachal Pradesh, Odisha, Konkan & Goa, Andaman & Nicobar Islands, Haryana and Interior Karnataka.

◆ **Chief amount of Rainfall observed (from 0830 hours IST of yesterday to 0830 hours IST of today): (7 cm or more):** **Madhya Maharashtra:** Ambone-23, Shirgaon-20, Mahabaleshwar- Imd Obsy (dist Satara) 15, Lonavala_agri (dist Pune) 14, Igatpuri (dist Nashik) 12, Gaganbawada (dist Kolhapur) 10, Radhanagari (dist Kolhapur) 10, Velhe (dist Pune) 9; **Gujarat Region:** Daman_arg (dist Daman) 19, Dharampur (dist Valsad) 14, Kaprada (dist Valsad) 13, Khergam (dist Navsari) 9, Nanipalson (dist Valsad) 9, Chikhli (dist Navsari) 9, Madhbun (dist Dadara & Nagar Haveli) 9, Khanvel (dist Dadara & Nagar Haveli) 8, Silvassa (dist Dadara & Nagar Haveli) 8, Vapi (dist Valsad) 7, Waghai (dist Dangs) 7, Pardi (dist Valsad) 7; **Tamil Nadu:** The Nilgiris: Avalanche-17, Upperbhawani-10, Coimbatore: Chinnakalar-7; **Kerala & Mahe:** Peruvannamuzhi ARG (Kozhikode district) 16, Nilambur (Malappuram district), Vadakara (Kozhikode district), Taliparamba (Kannur district) & Kakkayam AWS (Kozhikode district) 10 each, Mannarkkad (Palakkad district) 9, Irikkur (Kannur district) & Mahe (Puducherry UT) 8 each; **Coastal Karnataka:** Castle Rock (dist Uttara Kannada) 15, Gersoppa (dist Uttara Kannada) 13, Siddapura Arg (dist Udupi) 12, Honavar Obsy (dist Uttara Kannada) 12, Kundapur (dist Udupi) 12, Siddapura (dist Udupi) 11, Manki (dist Uttara Kannada) 11, Kumta (dist Uttara Kannada) 11, Siddapur (dist Uttara Kannada) 11, Gokarna (dist Uttara Kannada) 10, Karwar Obsy (dist Uttara Kannada) 9, Ankola (dist Uttara Kannada) 8, Yellapur (dist Uttara Kannada) 8, Shirali Pto (dist Uttara Kannada) 7, Dharmasthala (dist Dakshina Kannada) 7; **Assam & Meghalaya:** Jorhat-13, Bokajan-11, Khliehriat-7; **West Rajasthan:** Nagaur: Makarana-13, Churu: Ratangarh-8; **East Madhya Pradesh:** Birsia (dist Balaghat) 12, Malanjhand (dist Balaghat) 9, Lakhnadon (dist Seoni) 9, Paraswada (dist Balaghat) 8, Amarwara (dist Chindwara) 7; **Konkan & Goa:** Roha (dist Raigad) 11, Jawhar (dist Palghar) 11, Pernem (dist North Goa) 9, Matheran (dist Raigad) 8, Khed (dist Ratnagiri) 8, Dapoli_agri (dist Ratnagiri) 8, Murbad (dist Thane) 7, Talasari (dist Palghar) 7; **Odisha:** Bargarh: Bargarh-10, Khurda: Balipatna-10, Cuttack: Kantapada-7, Jharsuguda: Deogaon-8; **North Interior Karnataka:** Londa (dist Belagavi) 9; **South Interior Karnataka:** Linganamakki Hms (dist Shivamogga) 9, Sringeri Hms (dist Chikkamagaluru) 9, Hunchadakatte (dist Shivamogga) 8, Bhagamandala (dist Kodagu) 8, Koppa (dist Chikkamagaluru) 8, Jayapura (dist Chikkamagaluru) 7; **Andaman & Nicobar Islands:** Long Island-9, Port Blair-8; **Punjab:** Muksar Aws (dist Muksar) 9; **West Madhya Pradesh:** Shajapur (dist Shajapur) 8, Navibagh Aet (dist Bhopal) 7, Rajgarh (dist Rajgarh) 7, Sohagpur (dist Narmadapuram) 7; **Saurashtra & Kutch:** Talala (dist Gir Somnath) 7; **Himachal Pradesh:** Shimla: Sarahan-8;

◆ **Thunderstorm observed (from 0830 hours IST of yesterday to 0830 hours IST of today):** at isolated places over East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Odisha, Chhattisgarh, Madhya Pradesh, Punjab, Haryana, Assam & Meghalaya, Gujarat State and Rajasthan.

◆ **Minimum Temperature Departures (as on 16-07-2022):** Minimum temperatures are appreciably above normal (3.1°C to 5.0°C) at a few places over Sub-Himalayan West Bengal & Sikkim and at isolated places over East Uttar Pradesh; above normal (1.6°C to 3.0°C) at many places over West Uttar Pradesh; at a few places over Assam & Meghalaya and at isolated places over Himachal Pradesh, Haryana, Chandigarh & Delhi, East Madhya Pradesh, Coastal Andhra Pradesh & Yanam and Tamilnadu, Puducherry & Karaikal. They are below normal (-1.6°C to -3.0°C) at many places over West Rajasthan and at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad and West Madhya Pradesh and near normal over rest parts of the country. Today, the lowest minimum temperature of 18.4° is reported at Khargone (West Madhya Pradesh) over the plains of the country.

◆ **Maximum Temperature Departures (as on 15-07-2022):** Maximum temperatures were markedly above normal (5.1°C or more) at many places over Assam & Meghalaya and Sub-Himalayan West Bengal & Sikkim and at isolated places over East Uttar Pradesh; appreciably above normal (3.1°C to 5.0°C) at most places over Uttarakhand; at many places over Bihar and West Uttar Pradesh; above normal (1.6°C to 3.0°C) at many places over Gangetic West Bengal and at isolated [places over East Madhya Pradesh, Coastal Andhra Pradesh & Yanam and Tamilnadu, Puducherry & Karaikal. They were markedly below normal (-5.1°C or less) at a few places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad and West Rajasthan and below normal (-1.6°C to -3.0°C) at most places over Marathwada; at many places over Madhya Maharashtra and North Interior Karnataka and at a few places over Gujarat State, West Madhya Pradesh and Telangana and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 39.0°C was reported at Bareilly and Bahraich (Uttar Pradesh).

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Meteorological Analysis (Based on 0830 hours IST)

- ◆ The **Well Marked Low Pressure Area** over Northeast Arabian Sea and adjoining coastal areas of Saurashtra & Kutch has intensified into a **depression** over Northeast Arabian Sea off Saurashtra coast and lay centered at 0830 hours IST of today, the 16th July, 2022 near latitude 21.6°N and longitude 69.0°E, about 70 km west of Porbandar (Gujarat), 100 km south of Okha (Gujarat), 190 km south of Naliya (Gujarat) and 410 km south-southeast of Karachi (Pakistan). It is very likely to move gradually north-northwestwards along & off Saurashtra & Kutch coasts and adjoining northeast Arabian Sea during next 24 hours. Thereafter, it is likely to move nearly westwards towards Oman coast across northwest Arabian Sea during subsequent 48 hours.
- ◆ The **Low Pressure Area** over coastal Odisha & neighbourhood now lies over Northwest Bay of Bengal off north Odisha-West Bengal Coasts and the associated cyclonic circulation extends upto 7.6 km above mean sea level.
- ◆ The **monsoon trough** now passes through Depression over Northeast Arabian Sea off Saurashtra coast, Bhavnagar, Indore, Jabalpur, Pendra Road, Jharsuguda, centre of Low Pressure Area over Northwest Bay of Bengal off north Odisha-West Bengal Coasts and thence southeastwards to Eastcentral Bay of Bengal and extends upto 1.5 km above mean sea level.
- ◆ The **Western Disturbance** now seen as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 72°E & to the north of Lat.32°N.
- ◆ The off-shore trough at mean sea level from Gujarat Coast to Maharashtra Coast persists.

Weather Forecast for next 5 days * upto 0830 hours IST of 21st 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 21st July-23rd July, 2022

- ◆ Widespread rainfall activity likely along the West coast and over parts of Central & adjoining East India.
- ◆ Fairly widespread/widespread rainfall activity with isolated heavy falls very likely over Himachal Pradesh, Uttarakhand, Uttar Pradesh, Bihar, Sub-Himalayan West Bengal and Northeastern states.
- ◆ Scattered rainfall activity likely over remaining parts of the country except Rayalaseema and Coastal Andhra Pradesh & Yanam where isolated activity is likely.

Weather Warning during next 5 days *

16 July (Day 1): ♦ **Heavy to very heavy rainfall** at isolated places over Odisha and **heavy rainfall** at isolated places over Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Madhya Maharashtra, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning & Gusty winds (speed reaching 30-40 kmph) likely** at isolated places over Gangetic West Bengal and Andaman & Nicobar Islands and **with lightning** at isolated places over Haryana-Delhi, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.

♦ **Squally weather** with wind speed reaching 45-55 kmph gusting to 65 kmph very likely over northeast Arabian Sea, adjoining central Arabian Sea, along & off Gujarat coast and 40-50 kmph gusting to 60 kmph along & off Maharashtra & Karnataka coasts. **Strong winds** with speed reaching 45-55 kmph gusting to 65 kmph very likely over remaining parts of central and adjoining south Arabian Sea under the influence of strong monsoon condition over the region.

17 July (Day 2): ♦ **Heavy rainfall** at isolated places over Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Konkan & Goa, Telangana, Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning likely** at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.

♦ **Squally weather** with wind speed reaching 45-55 kmph gusting to 65 kmph very likely over northeast and adjoining northwest Arabian Sea. **Strong winds** with speed reaching 45-55 kmph gusting to 65 kmph very likely over westcentral and adjoining southwest Arabian Sea. Strong winds with speed reaching 40-50 kmph gusting to 60 kmph very likely over eastcentral and adjoining south Arabian Sea.

18 July (Day 3): ♦ **Heavy to very heavy rainfall at isolated** places very likely over Uttarakhand, Arunachal Pradesh and Assam & Meghalaya; **heavy rainfall** at isolated places over East Rajasthan, East Madhya Pradesh, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Odisha, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Telangana, Coastal Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning likely** at isolated places over Uttarakhand, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Marathwada and Tamil Nadu, Puducherry & Karaikal.

♦ **Squally weather** with wind speed reaching 40-50 kmph gusting to 70 kmph very likely over northwest Arabian Sea. **Strong winds** with speed reaching 45-55 kmph gusting to 65 kmph very likely over westcentral Arabian Sea. Fishermen are advised not to venture into these areas.

19 July (Day 4): ♦ **Heavy to very heavy rainfall at a few with extremely heavy falls at isolated** places very likely over Uttarakhand; **heavy to very heavy rainfall** at isolated places over Uttar Pradesh, Arunachal Pradesh and Assam & Meghalaya; and **heavy rainfall** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, East Rajasthan, East Madhya Pradesh, Chhattisgarh, Bihar, Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning likely** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan and Marathwada.

♦ **Strong winds** with speed reaching 45-55 kmph gusting to 65 kmph very likely over westcentral and adjoining southwest Arabian Sea. Fishermen are advised not to venture into these areas.

20 July (Day 5): ♦ **Heavy to very heavy rainfall at a few with extremely heavy falls at isolated** places very likely over Uttarakhand; **heavy to very heavy rainfall** at isolated places over Himachal Pradesh, Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Assam & Meghalaya and **heavy rainfall** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Punjab, Haryana, Chandigarh & Delhi, Chhattisgarh, Bihar, Nagaland, Manipur, Mizoram & Tripura and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning likely** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan and Rayalaseema.

♦ **Strong winds** with speed reaching 45-55 kmph gusting to 65 kmph very likely over westcentral and adjoining 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)
16-July-2022

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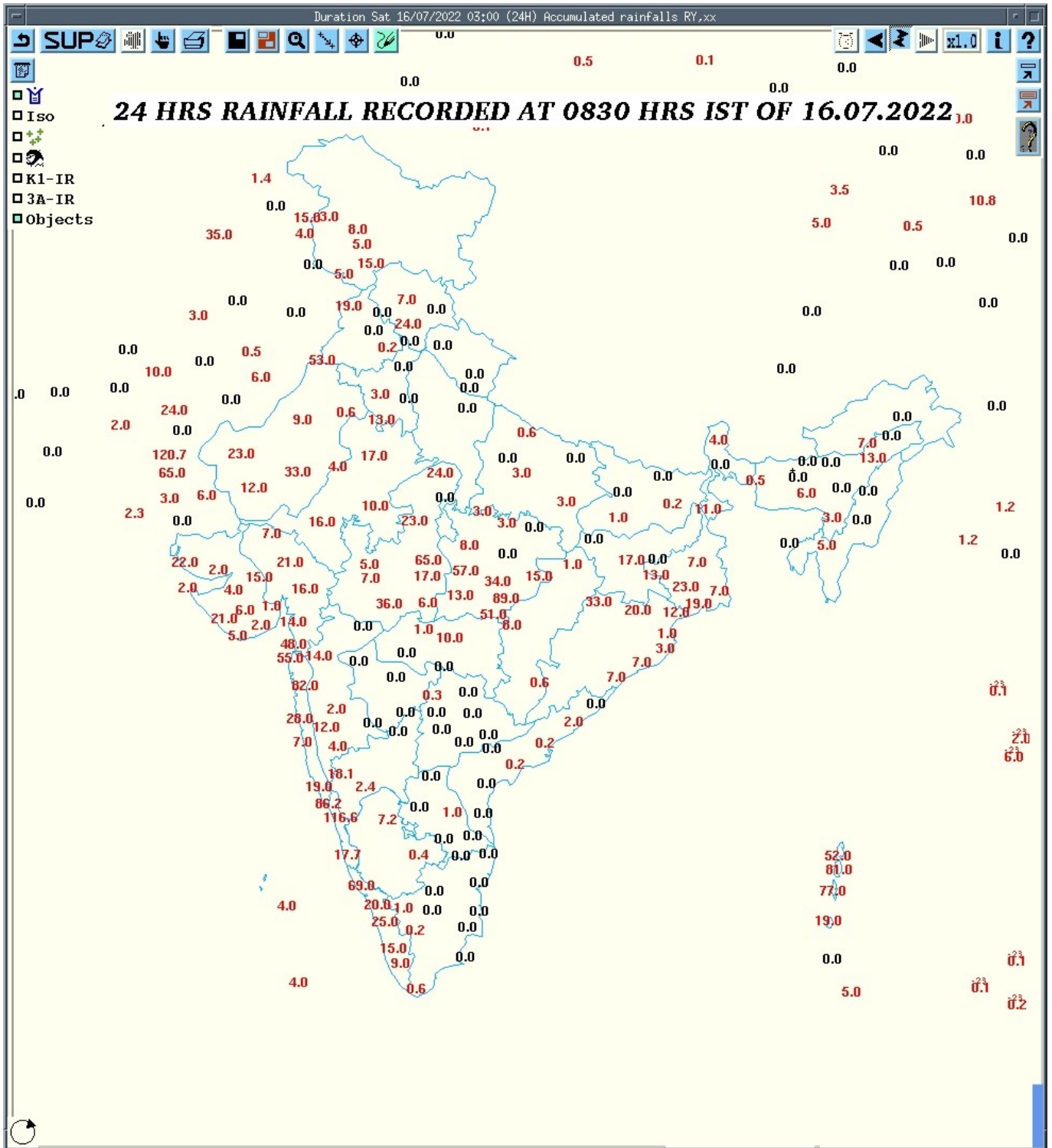
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Fig. 1: Accumulated Rainfall (mm) during past 24 hours



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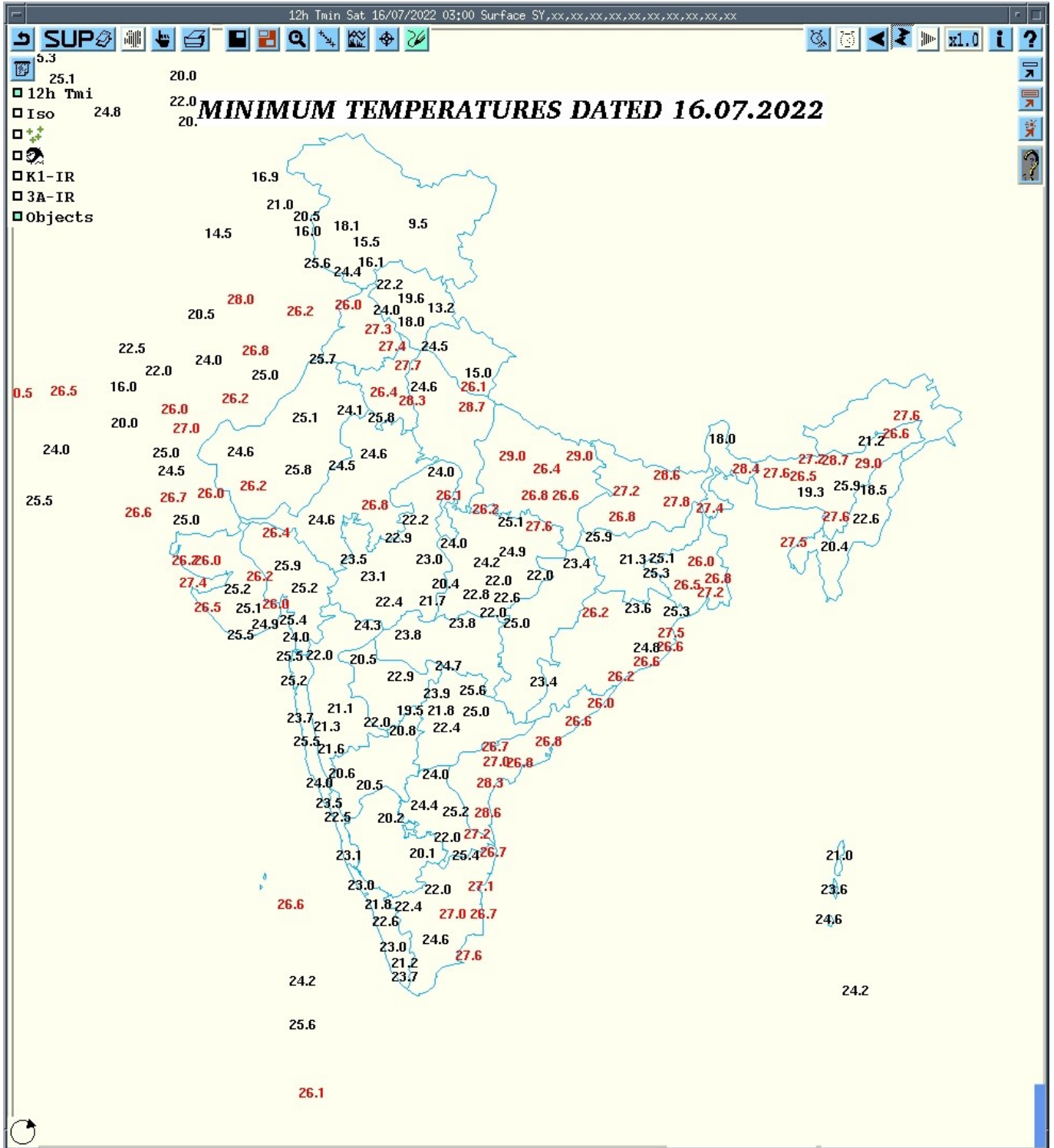
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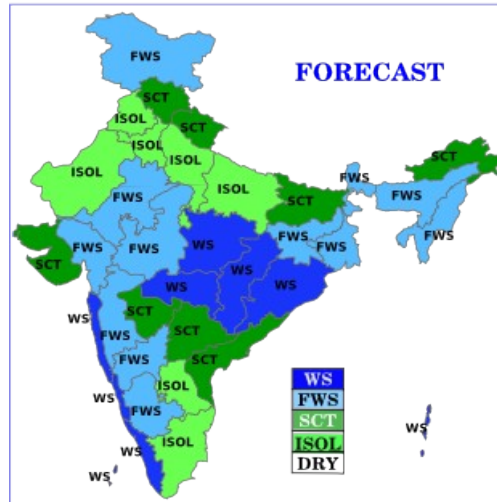


Fig. 3: Minimum Temperature during past 24 hours



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Saturday 16 July 2022



16 July (Day 1): ♦ **Heavy to very heavy rainfall** at isolated places over Odisha and **heavy rainfall** at isolated places over Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Madhya Maharashtra, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning & Gusty winds (speed reaching 30-40 kmph) likely** at isolated places over Gangetic West Bengal and Andaman & Nicobar Islands and **with lightning** at isolated places over Haryana-Delhi, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.

♦ **Squally weather** with wind speed reaching 45-55 kmph gusting to 65 kmph very likely over northeast Arabian Sea, adjoining central Arabian Sea, along & off Gujarat coast and 40-50 kmph gusting to 60 kmph along & off Maharashtra & Karnataka coasts. **Strong winds** with speed reaching 45-55 kmph gusting to 65 kmph very likely over remaining parts of central and adjoining south Arabian Sea under the influence of strong monsoon condition over the region.

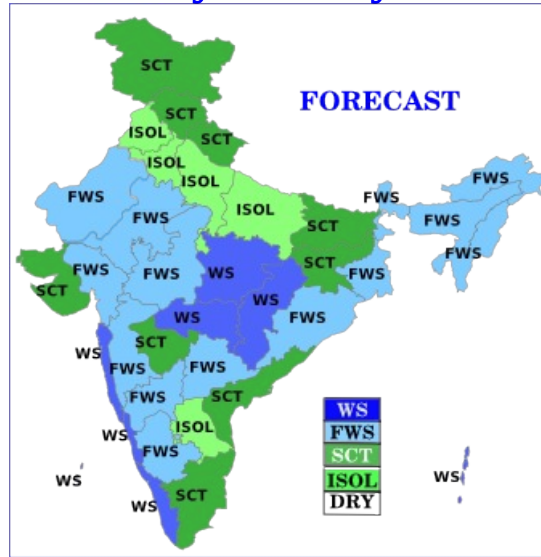
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Sunday 17 July 2022



17 July (Day 2): ♦ Heavy rainfall at isolated places over Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Konkan & Goa, Telangana, Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning likely** at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.

♦ **Squally weather** with wind speed reaching 45-55 kmph gusting to 65 kmph very likely over northeast and adjoining northwest Arabian Sea. **Strong winds** with speed reaching 45-55 kmph gusting to 65 kmph very likely over westcentral and adjoining southwest Arabian Sea. **Strong winds** with speed reaching 40-50 kmph gusting to 60 kmph very likely over eastcentral and adjoining south Arabian Sea.

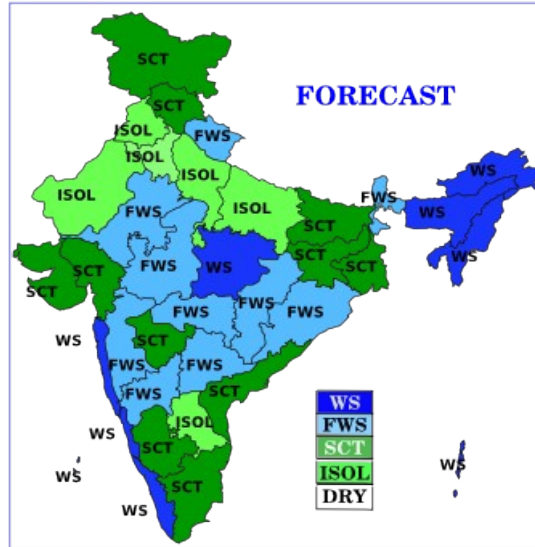
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Monday 18 July 2022



18 July (Day 3): ♦ **Heavy to very heavy rainfall at isolated** places very likely over Uttarakhand, Arunachal Pradesh and Assam & Meghalaya; **heavy rainfall** at isolated places over East Rajasthan, East Madhya Pradesh, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Odisha, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Telangana, Coastal Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning likely** at isolated places over Uttarakhand, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Marathwada and Tamil Nadu, Puducherry & Karaikal.

♦ **Squally weather** with wind speed reaching 40-50 kmph gusting to 70 kmph very likely over northwest Arabian Sea. **Strong winds** with speed reaching 45-55 kmph gusting to 65 kmph very likely over westcentral Arabian Sea. Fishermen are advised not to venture into these areas.

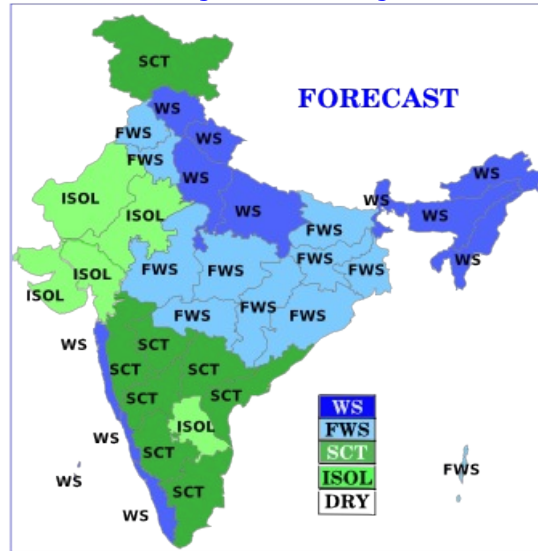
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(Circle as the Nation since 1975)

Tuesday 19 July 2022



19 July (Day 4): ♦ **Heavy to very heavy rainfall at a few with extremely heavy falls at isolated** places very likely over Uttarakhand; **heavy to very heavy rainfall** at isolated places over Uttar Pradesh, Arunachal Pradesh and Assam & Meghalaya; and **heavy rainfall** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, East Rajasthan, East Madhya Pradesh, Chhattisgarh, Bihar, Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning likely** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan and Marathwada.

♦ **Strong winds** with speed reaching 45-55 kmph gusting to 65 kmph very likely over westcentral and adjoining southwest Arabian Sea. Fishermen are advised not to venture into these areas.

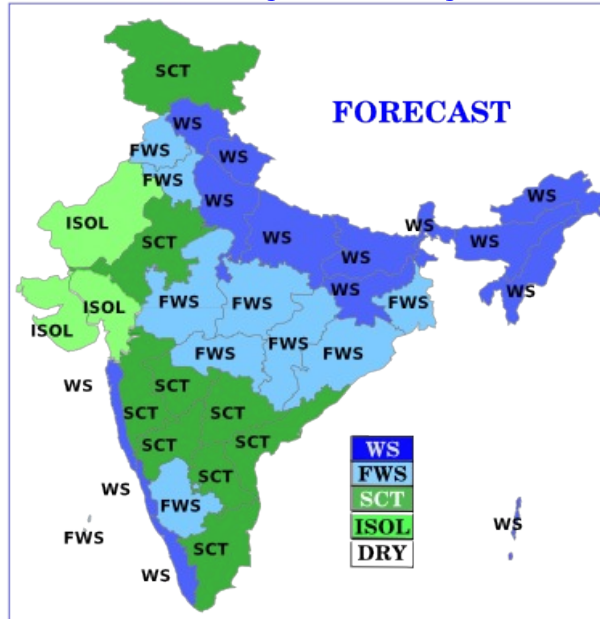
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(Circle as the National flag)

Wednesday 20 July 2022



20 July (Day 5): ♦ **Heavy to very heavy rainfall at a few with extremely heavy falls at isolated places** very likely over Uttarakhand; **heavy to very heavy rainfall** at isolated places over Himachal Pradesh, Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Assam & Meghalaya and **heavy rainfall** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Punjab, Haryana, Chandigarh & Delhi, Chhattisgarh, Bihar, Nagaland, Manipur, Mizoram & Tripura and Kerala & Mahe.

♦ **Thunderstorm accompanied with lightning likely** at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan and Rayalaseema.

♦ **Strong winds** with speed reaching 45-55 kmph gusting to 65 kmph very likely over westcentral and adjoining southwest Arabian Sea. Fishermen are advised not to venture into these areas.

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(Circle as the Nation since 1975)

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. Marathwada
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

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



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State

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(Copies to the Media upto 1070)

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 $\geq -6.5^{\circ}\text{C}$

(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°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)

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