



Tuesday 08 May 2018

**MID-DAY**

**Time of Issue: 1345 hours IST**

**ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN**

**Significant Weather Features**

- ◆ Under the influence of the present Western Disturbance over Jammu & Kashmir & neighbourhood; the cyclonic circulation over Haryana & neighbourhood and a north-south trough from East Uttar Pradesh to Vidarbha in lower levels, thunderstorm accompanied with gusty winds and moderate squall (speed between 50 to 70 kmph) is very likely to continue at isolated places over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi and West Uttar Pradesh during next 24 hours. Hailstorm is also likely at isolated places over Himachal Pradesh and Uttarakhand during the same period.
- ◆ Maximum temperatures very likely to remain in the range of 40-44°C over Rajasthan, Gujarat, Madhya Pradesh, Interior Maharashtra and over some parts of Chhattisgarh, Telangana, Rayalaseema, Coastal Andhra Pradesh and North Interior Karnataka during next two days.
- ◆ **Thunderstorm observed** at isolated places over Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Rajasthan, East Uttar Pradesh, Karnataka, Telangana, Kerala, Tamilnadu & Puducherry, Gangetic West Bengal, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura from 0830 hours IST yesterday to 0830 hours IST of today and **heavy rain** occurred at isolated places over Tripura.
- ◆ **Yesterday's Heat wave** was observed at one or two pockets over Vidarbha.

**Main Weather Observations**

- ◆ **Rainfall observed (from 0830 yesterday to 0830 hours IST of today):** Rain/thundershowers observed at most places over Jammu & Kashmir, Himachal Pradesh, West Rajasthan, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; at many places over Uttarakhand, Sub-Himalayan West Bengal & Sikkim and Kerala; at a few places over Andaman & Nicobar Islands and at isolated places over Punjab, East Rajasthan, Haryana & Delhi, East Uttar Pradesh, Gangetic West Bengal, Odisha, Coastal & South Interior Karnataka, interior Tamilnadu and Lakshadweep.
- ◆ **Amount of rainfall recorded at 0830 hours IST of today (2 cm or more)** are: Kailashahar-8; Goalpada-5; Mangaluru, Guwahati, Thiruvananthapuram & Aijal-4 each; Golaghat, Cooch Behar & Kalpa-3 each; Badarwah, Phalodi, North Lakhimpur, Chaparmukh, Dhubri & Manali-2 each.
- ◆ **Maximum temperature departures as on 07-05-2018:** Maximum temperatures were **above normal (1.6°C to 3.0°C)** at most places over Uttarakhand and East Madhya Pradesh; at many places over Jharkhand and Konkan & Goa; at a few places over Madhya Maharashtra, Vidarbha, Coastal Karnataka and Bihar and at isolated places over west Rajasthan, Delhi, Haryana & Chandigarh, East Uttar Pradesh, Chhattisgarh, Saurashtra & Kutch, Odisha, Telangana, Coastal Andhra Pradesh, Tamilnadu & Puducherry, Assam & Meghalaya and Andaman & Nicobar Islands. They were **markedly below normal (-5.1°C or Less)** at most places over Jammu & Kashmir; **below normal (-1.6°C to -3.0°C)** at most places over Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura; at a few places over Himachal Pradesh and Punjab and near normal over rest of the country. yesterday, the **highest maximum temperature of 45.1°C** was recorded at **Bramhapuri (Vidarbha)**.
- ◆ **Minimum temperature departures as on 08-05-2018:** Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at isolated places over northeast Madhya Pradesh, Gangetic West Bengal, north Odisha and Telangana; **above normal (1.6°C to 3.0°C)** at many places over Saurashtra & Kutch, Sub-Himalayan West Bengal & Sikkim and rest Odisha; at isolated places over West Uttar Pradesh, East Rajasthan, rest East Madhya Pradesh, Gujarat region, Jharkhand, coastal Andhra Pradesh, Rayalaseema, South Interior Karnataka, Tamilnadu and Kerala. They are **markedly appreciably below normal (-5.0°C or less)** at many places over East Rajasthan and at isolated places over northeast Rajasthan; **appreciably below normal (-3.1°C to -5.0°C)** at a few places over Himachal Pradesh and at isolated places over Jammu & Kashmir; **below normal (-1.6°C to -3.0°C)** at isolated places over Haryana & Delhi, East Uttar Pradesh and West Madhya Pradesh and near normal over rest of the country.

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

- ◆ The Western Disturbance as an upper air cyclonic circulation at 3.1 km above mean sea level over Jammu & Kashmir & neighbourhood persists and the trough aloft with its axis at 5.8 km above mean sea level now runs roughly along Long. 74°E to the north of Lat. 30°N.
- ◆ The cyclonic circulation over Haryana & neighbourhood extending upto 0.9 km above mean sea level persists.
- ◆ The trough at 1.5 km above mean level runs from Punjab to Madhya Maharashtra across West Uttar Pradesh & Madhya Pradesh, now seen at 0.9km above mean level from East Uttar Pradesh to Vidarbha across East Madhya Pradesh.
- ◆ A cyclonic circulation lies over south Rajasthan & adjoining north Gujarat extends upto 1.5 km above mean sea level.
- ◆ The cyclonic circulation over Sub-Himalayan West Bengal & Sikkim and neighbourhood, now lies over Sub-Himalayan West Bengal & adjoining Bihar extending upto 0.9 km above mean sea level.
- ◆ The cyclonic circulation over east Assam & neighbourhood extending upto 0.9 km above mean sea level persists.
- ◆ The north-south trough at 1.5 km above mean sea level roughly along Long. 88°E to the north of Lat.24°N persists.
- ◆ The north-south trough from North Interior Karnataka to south interior Tamilnadu across South Interior Karnataka extending upto 0.9 km above mean sea level persists.
- ◆ The cyclonic circulation over southeast Arabian Sea, now lies over central parts of south Arabian sea extending upto 3.1 km above mean sea level.
- ◆ A cyclonic circulation lies over south Tamilnadu & neighbourhood between 4.5 & 5.8 km above mean sea level.
- ◆ A cyclonic circulation lies off Tamilnadu coast between 2.1 & 3.1 km above mean sea level.
- ◆ A cyclonic circulation lies over Lakshadweep area at 1.5 km above mean sea level.

### Weather Forecast for next 5 days \* upto 0830 hours IST of 12th May, 2018

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table 1.
- ◆ No significant change in maximum temperatures over Northwest and Central India during next 2-3 days.
- ◆ Maximum temperatures very likely to remain in the range of 40-44°C over Rajasthan, Gujarat, Madhya Pradesh, Interior Maharashtra and over some parts of Chhattisgarh, Telangana, Rayalaseema, Coastal Andhra Pradesh and North Interior Karnataka during next 2 days and no significant change in maximum temperatures over rest of the country during the same period.

### Weather Outlook for subsequent 2 days from 13th May to 15th May 2018

- ◆ Scattered to fairly widespread rain/thundershowers likely over northeast India.
- ◆ Isolated to scattered rain/thundershowers likely over Western Himalayan region, East India, central and south peninsular India.
- ◆ Dry weather likely over remaining parts of the country.
- ◆ A fresh Western Disturbance is likely to affect Western Himalayan region from 13th May onwards.



Weather Warning during next 5 days \*

**08 May (Day 1): ♦Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) **and hail** very likely at isolated places over Himachal Pradesh and Uttarakhand.

♦ **Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) very likely at isolated places over Jammu & Kashmir, Punjab, Haryana, Chandigarh & Delhi and West Uttar Pradesh.

♦ **Thunderstorm accompanied with gusty winds** very likely at isolated places over East Uttar Pradesh, West Bengal & Sikkim, Bihar, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, West Madhya Pradesh, East Uttar Pradesh, South Interior Karnataka, north Coastal Andhra Pradesh, Telangana, Rayalaseema, Tamilnadu and Kerala.

♦ **Thunderstorm/ duststorm accompanied with squall** very likely at isolated places Rajasthan.

♦ **Heavy rain** very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamilnadu, South Interior Karnataka and Kerala.

♦ **Heat wave conditions** likely at one or two pockets over Vidarbha, interior Odisha and west parts of Jharkhand.

**09 May (Day 2): ♦ ♦Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) **and hail** very likely at isolated places over Uttarakhand, Bihar and Sub-Himalayan West Bengal & Sikkim.

♦ **Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) very likely at isolated places over Jharkhand, Gangetic West Bengal.

♦ **Thunderstorm accompanied with gusty winds** very likely at isolated places over Himachal Pradesh, Uttar Pradesh, East Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, South Interior Karnataka, north Coastal Andhra Pradesh, Rayalaseema, Tamilnadu and Kerala.

♦ **Thunderstorm/ duststorm** very likely at isolated places West Rajasthan.

♦ **Heavy rain** very likely at isolated places over Tamilnadu, South Interior Karnataka and Kerala.

♦ **Heat wave conditions** likely at one or two pockets over Vidarbha, interior Odisha and west parts of Jharkhand.

**10 May (Day 3): ♦Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) **and hail** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim.

♦ **Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) very likely at isolated places over Gangetic West Bengal.

♦ **Heavy rain** very likely at isolated places over Assam & Meghalaya.

♦ **Heat wave conditions** likely at one or two pockets over Vidarbha.

**11 May (Day 4): ♦ Heat wave conditions** likely at one or two pockets over Vidarbha.

**12 May (Day 5): ♦ Heavy rain** very likely at isolated places over Coastal & South Interior Karnataka, Kerala and Tamilnadu.

♦ **Heat wave conditions** likely at one or two pockets over Vidarbha.



Table-1

## 5 Day Rainfall Forecast (MID-DAY)

08-May-2018

Met-Sub-Division	08-May Today	09May Wed	10May Thu	11May Fri	12May Sat
1. Andaman & Nicobar Islands	SCT	SCT	SCT	FWS	FWS
2. Arunachal Pradesh	FWS	FWS	SCT	SCT	SCT
3. Assam & Meghalaya	WS	WS	FWS	SCT	SCT
4. N. M. M. & T.	WS	WS	FWS	SCT	SCT
5. S.H. West Bengal & Sikkim	FWS	FWS	FWS	SCT	SCT
6. Gangetic West Bengal	ISOL	ISOL	ISOL	ISOL	SCT
7. Odisha	ISOL	ISOL	ISOL	ISOL	ISOL
8. Jharkhand	ISOL	ISOL	ISOL	ISOL	ISOL
9. Bihar	ISOL	SCT	ISOL	ISOL	ISOL
10. East Uttar Pradesh	ISOL	ISOL	DRY	DRY	DRY
11. West Uttar Pradesh	SCT	SCT	DRY	DRY	DRY
12. Uttarakhand	WS	FWS	DRY	DRY	ISOL
13. Haryana, Chd & Delhi	FWS	ISOL	DRY	DRY	DRY
14. Punjab	FWS	ISOL	DRY	DRY	ISOL
15. Himachal Pradesh	WS	SCT	DRY	DRY	ISOL
16. Jammu & Kashmir	FWS	ISOL	DRY	DRY	SCT
17. West Rajsthan	ISOL	DRY	DRY	DRY	DRY
18. East Rajasthan	SCT	ISOL	DRY	DRY	DRY
19. West Madhya Pradesh	ISOL	DRY	DRY	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	DRY	DRY	DRY	ISOL	ISOL
24. Madhya Maharashtra	DRY	DRY	ISOL	ISOL	ISOL
25. Marathawada	DRY	DRY	DRY	DRY	DRY
26. Vidharbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	DRY	DRY	DRY	ISOL	ISOL
28. Coastal Andhra Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
29. Telangana	ISOL	ISOL	ISOL	ISOL	ISOL
30. Rayalaseema	ISOL	ISOL	ISOL	ISOL	ISOL
31. Tamilnadu & Puducherry	ISOL	ISOL	ISOL	ISOL	SCT
32. Coastal Karnataka	SCT	SCT	SCT	SCT	SCT
33. North Interior Karnataka	ISOL	ISOL	ISOL	ISOL	ISOL
34. South Interior Karnataka	SCT	SCT	SCT	SCT	SCT
35. Kerala	SCT	SCT	SCT	SCT	SCT
36. Lakshadweep	ISOL	ISOL	SCT	ISOL	SCT

### % 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		

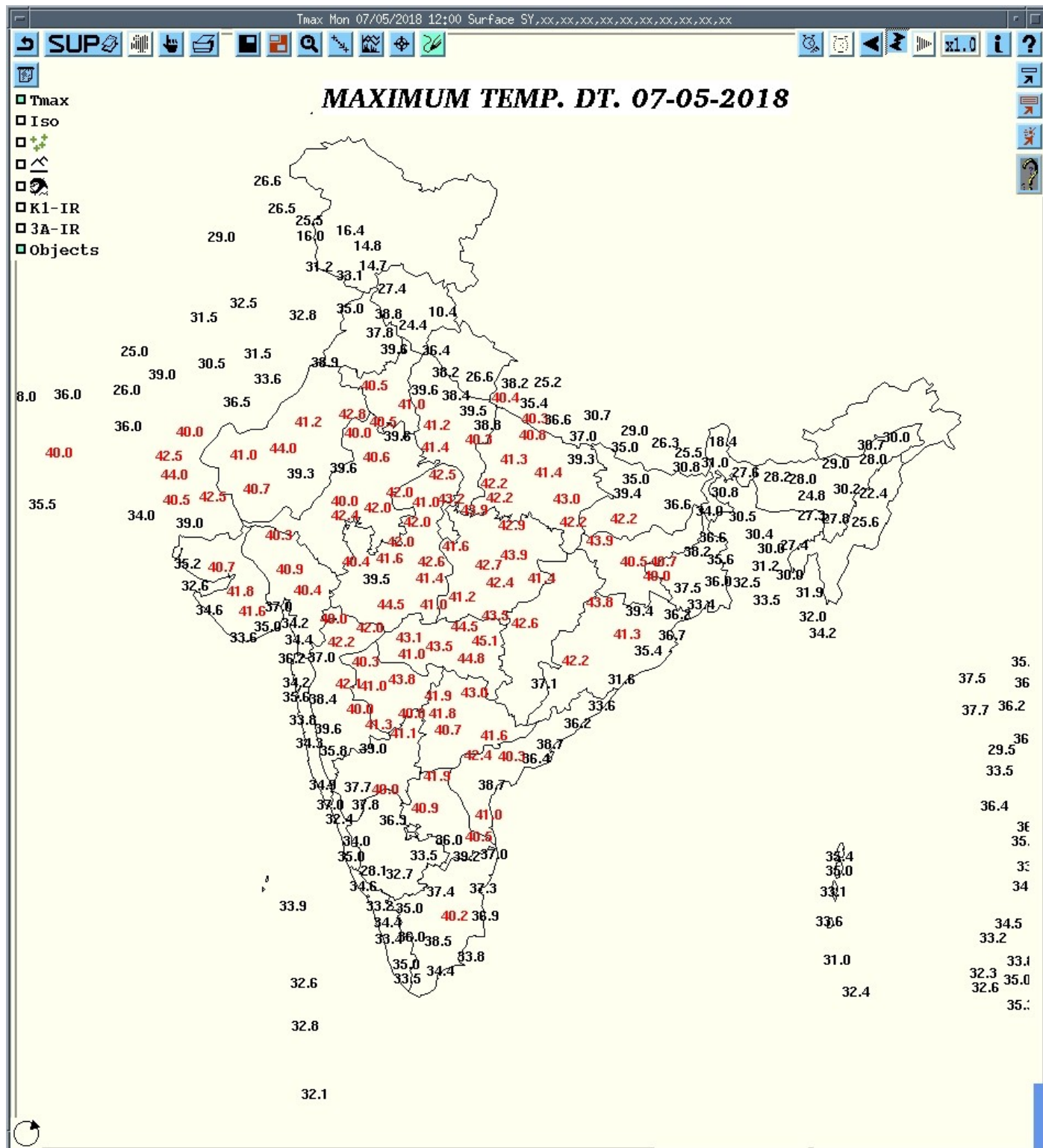
\* Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day

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**Fig. 1: Maximum Temperature during past 24 hours**



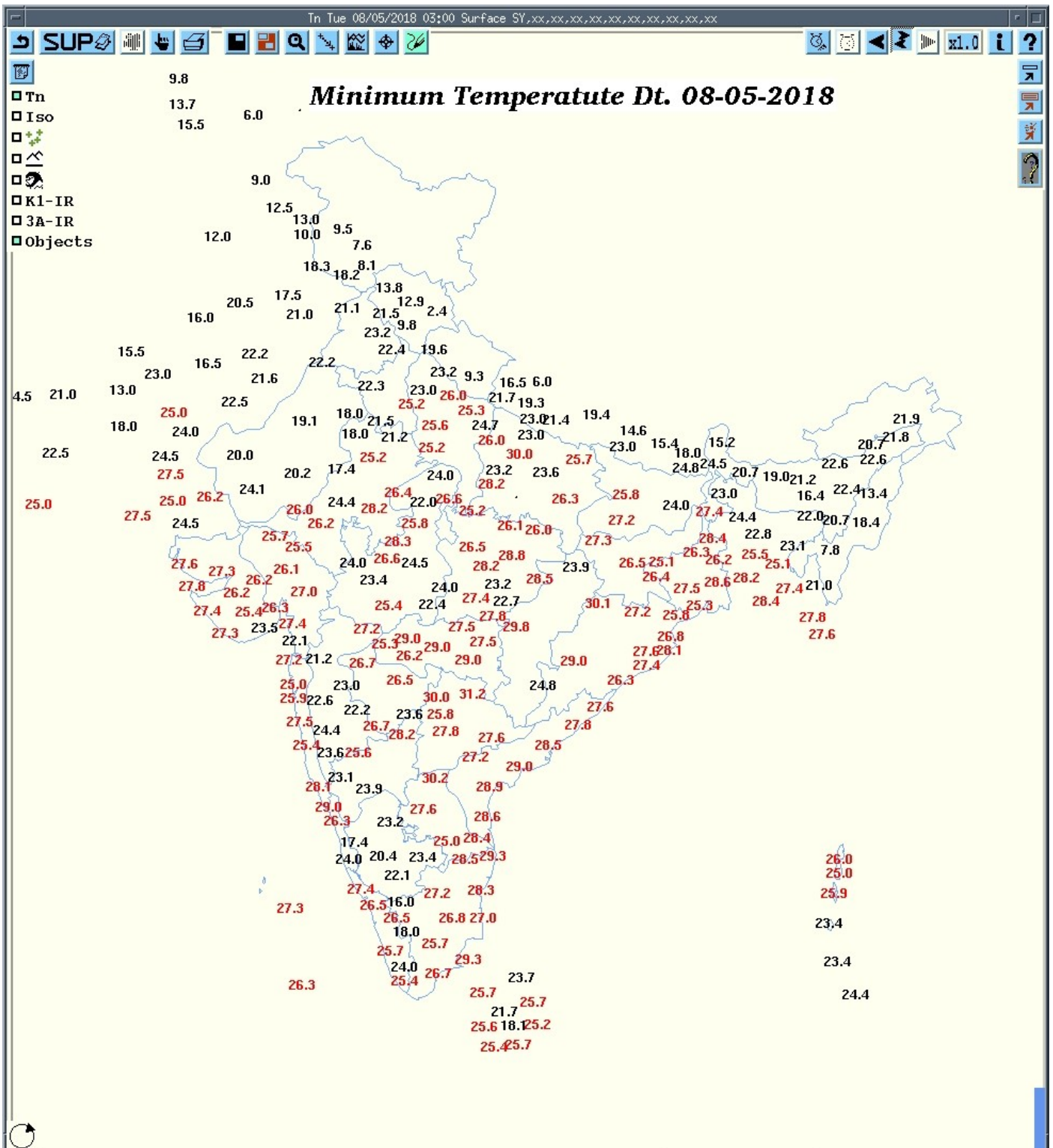
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Fig. 2: Minimum Temperature during past 24 hours



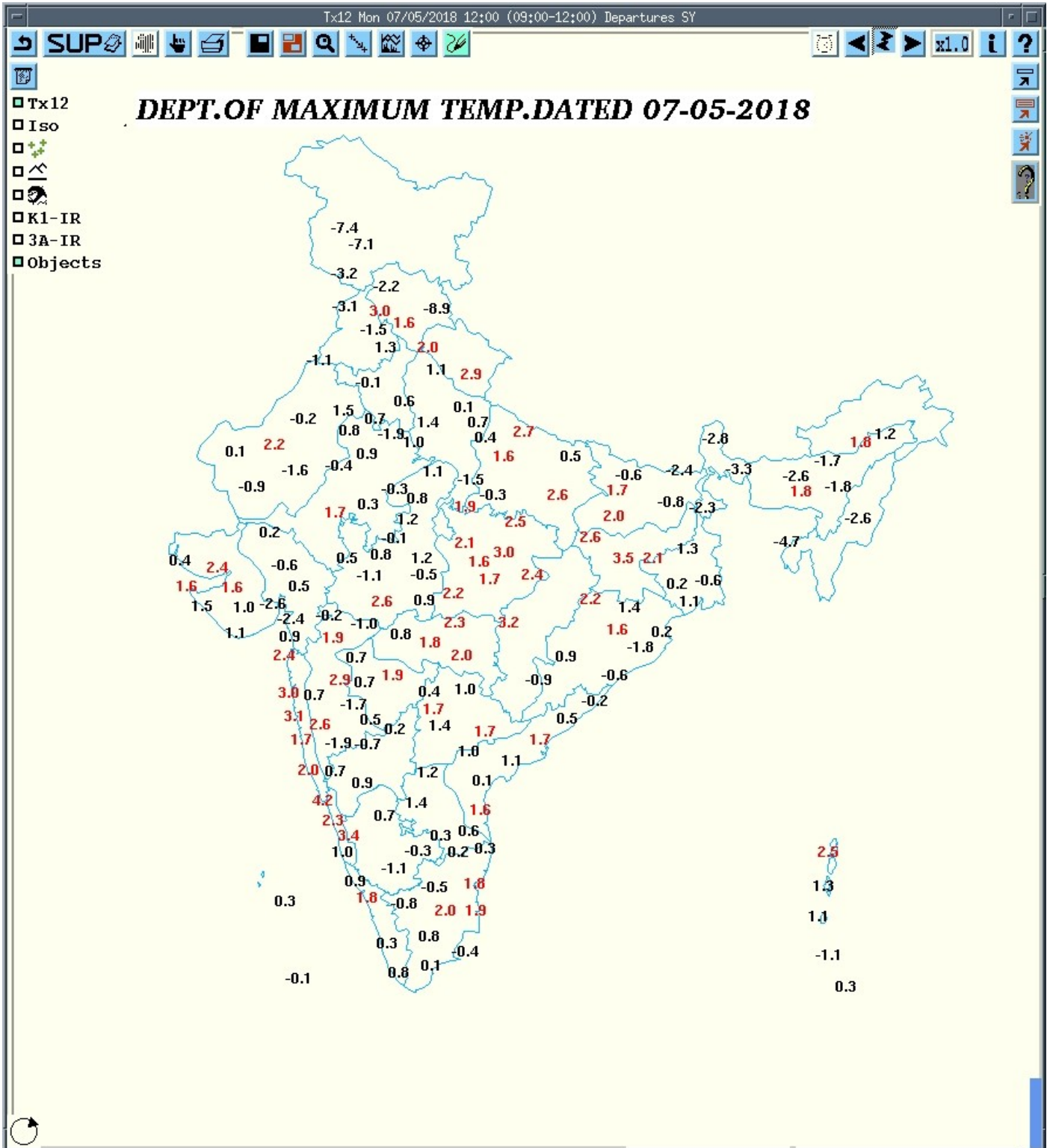
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Fig. 3 : Departure from Normal of Maximum Temperatures



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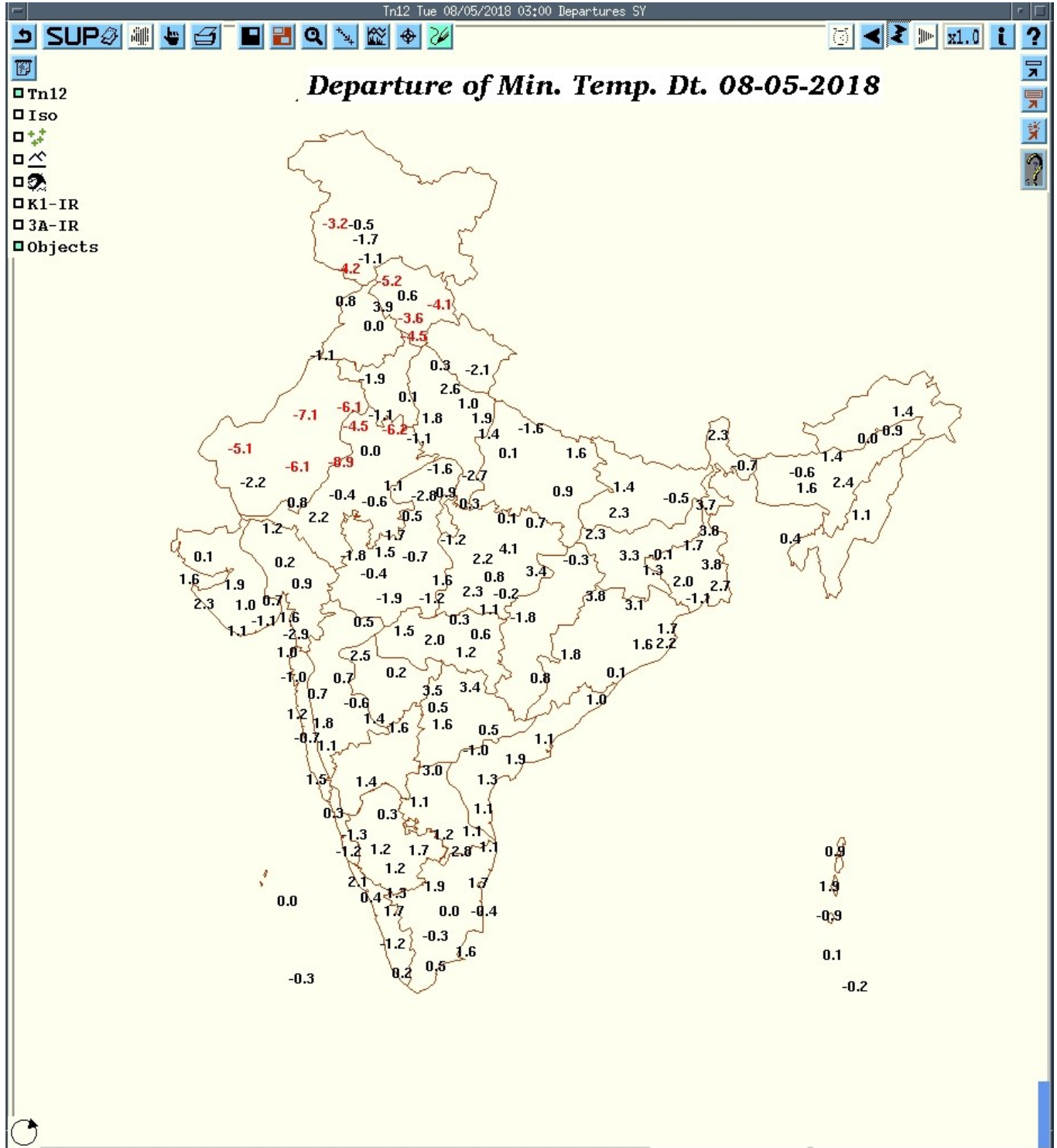
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Fig. 4 : Departure from Normal of Minimum Temperatures



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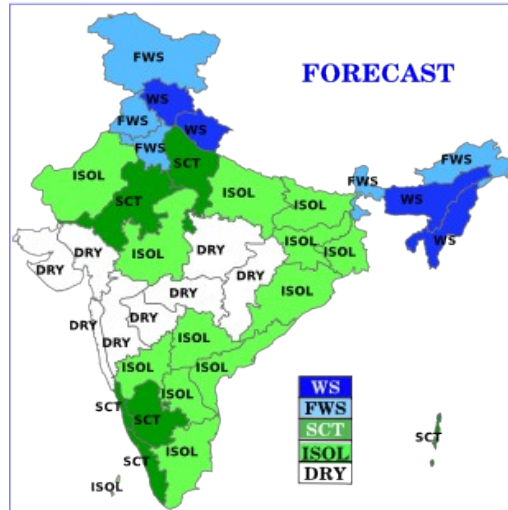
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**Tuesday 08 May 2018**



**08 May (Day 1): ♦Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) **and hail** very likely at isolated places over Himachal Pradesh and Uttarakhand.

♦ **Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) very likely at isolated places over Jammu & Kashmir, Punjab, Haryana, Chandigarh & Delhi and West Uttar Pradesh.

♦ **Thunderstorm accompanied with gusty winds** very likely at isolated places over East Uttar Pradesh, West Bengal & Sikkim, Bihar, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, West Madhya Pradesh, East Uttar Pradesh, South Interior Karnataka, north Coastal Andhra Pradesh, Telangana, Rayalaseema, Tamilnadu and Kerala.

♦ **Thunderstorm/ duststorm accompanied with squall** very likely at isolated places Rajasthan.

♦ **Heavy rain** very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamilnadu, South Interior Karnataka and Kerala.

♦ **Heat wave conditions** likely at one or two pockets over Vidarbha, interior Odisha and west parts of Jharkhand.

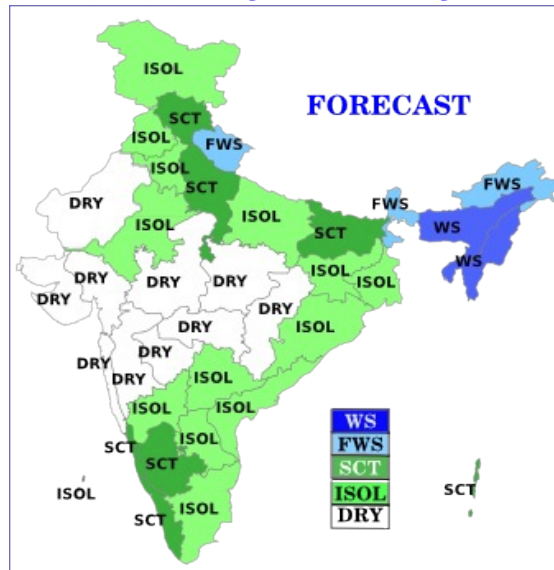
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**Wednesday 09 May 2018**



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**09 May (Day 2): ♦ ♦ Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) **and hail** very likely at isolated places over Uttarakhand, Bihar and Sub-Himalayan West Bengal & Sikkim.

♦ **Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) very likely at isolated places over Jharkhand, Gangetic West Bengal.

♦ **Thunderstorm accompanied with gusty winds** very likely at isolated places over Himachal Pradesh, Uttar Pradesh, East Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, South Interior Karnataka, north Coastal Andhra Pradesh, Rayalaseema, Tamilnadu and Kerala.

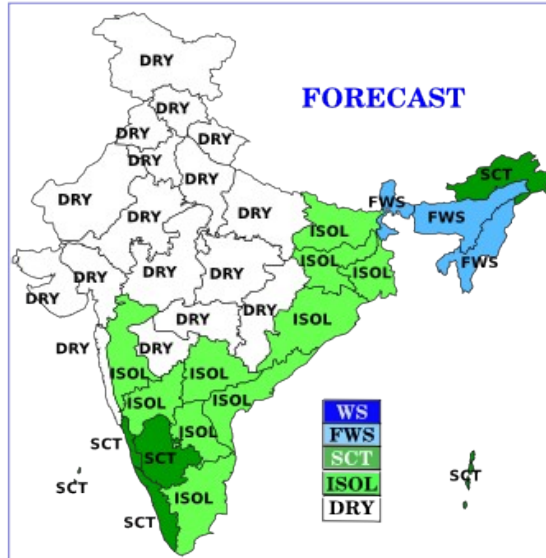
♦ **Thunderstorm/ duststorm** very likely at isolated places West Rajasthan.

♦ **Heavy rain** very likely at isolated places over Tamilnadu, South Interior Karnataka and Kerala.

♦ **Heat wave conditions** likely at one or two pockets over Vidarbha, interior Odisha and west parts of Jharkhand.



**Thursday 10 May 2018**



**10 May (Day 3): ♦Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) **and hail** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim.

♦ **Thunderstorm accompanied with squall** (wind speed reaching 50-70 kmph) very likely at isolated places over Gangetic West Bengal.

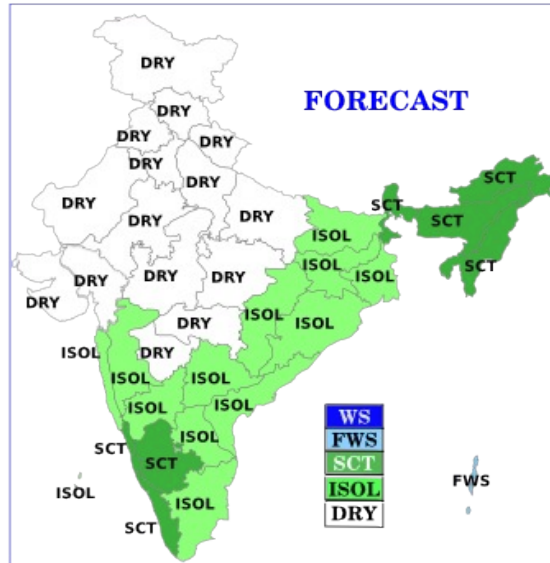
♦ **Heavy rain** very likely at isolated places over Assam & Meghalaya.

♦ **Heat wave conditions** likely at one or two pockets over Vidarbha.





**Friday 11 May 2018**



**11 May(Day 4): ♦ Heat wave conditions** likely at one or two pockets over Vidarbha.

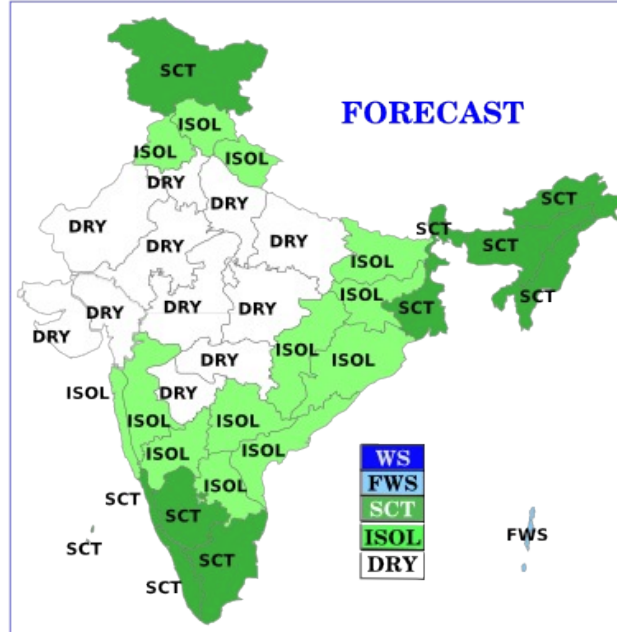
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**Saturday 12 May 2018**



**12 May (Day 5): ♦ Heavy rain** very likely at isolated places over Coastal & South Interior Karnataka, Kerala and Tamilnadu.

♦ **Heat wave conditions** likely at one or two pockets over Vidarbha.

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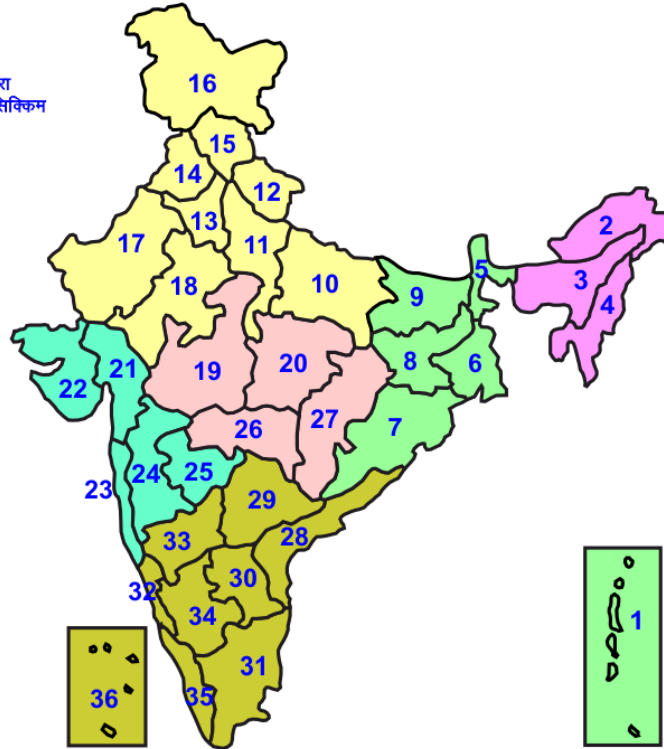
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## LEGENDS

- 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 ओडिसा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा चंडीगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर
- 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 मराठावाड़ा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटिय आंध्र प्रदेश
- 29 तेलंगाना
- 30 रायलसीमा
- 31 तमिलनाडु
- 32 तटिय कर्नाटक
- 33 आंतरिक उत्तरी कर्नाटक
- 34 आंतरिक दक्षिणी कर्नाटक
- 35 केरल
- 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
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
29. Telangana
30. Rayalaseema
31. Tamilnadu & Pondi
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala
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)
Dry (No station reported Rainfall)			

## 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)

\* 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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