



**Government of India  
Earth System Science Organization  
Ministry of Earth Sciences  
India Meteorological Department**

**Dated: 3 January, 2019**

**Current Weather Status & Outlook for next two weeks (4 to 17 January, 2019)**

**Significant Features**

- In the absence of active Western Disturbances, the severe cold wave conditions persisted over major parts of northwest India during the first half of the week. It also extended towards central India, interior parts of peninsular India and east India during this period. However, the severity and spatial extent of the cold wave conditions gradually reduced during the second half of the week, in association with the changes in wind, humidity and cloud cover resulted from an active Western Disturbance, which affected western Himalayan region and adjoining plains towards the end of the week.
- **Cold wave/cold day:** Severe cold wave conditions occurred in some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi and north Rajasthan on a few days and at isolated pockets over west Madhya Pradesh, Jharkhand, Bihar, Saurashtra & Kutch, Odisha, Vidarbha, Telangana and north interior Karnataka on one or two days; cold wave conditions occurred in many parts of Punjab, north Rajasthan and Haryana, Chandigarh & Delhi on a few days, in some parts on one or two days and at isolated pockets on many days over west Uttar Pradesh, east Madhya Pradesh, Chhattisgarh and on a few days over Gujarat state, Bihar, Jharkhand, Gangetic west Bengal, Odisha, Marathwada, Vidarbha, north coastal Andhra Pradesh, Telangana and north interior Karnataka.

**The lowest minimum temperature of (minus) 1.0° C was recorded at Bhilwara (East Rajasthan) on 29<sup>th</sup> December 2018.**

- **Fog:** Dense to very dense fog observed at isolated places over Punjab on most of the days during the week and over Assam & Meghalaya, Chhattisgarh, West Uttar Pradesh and South Interior Karnataka on one or two days during the week.
- **Northeast monsoon:** A persistent change in the wind pattern was noticed during the week. Maritime air over the south peninsular India has been replaced by dry continental air during the week. Thus the northeast monsoon rains ceased over Tamil Nadu & Puducherry, Kerala and adjoining parts of Andhra Pradesh and Karnataka from 2<sup>nd</sup> January 2019.
- **Heavy rain:** Heavy rain was recorded at isolated places over Tamil Nadu on the 30<sup>th</sup> December 2018 and over Andaman & Nicobar Islands on 2<sup>nd</sup> January 2019.

### Weekly Rainfall Scenario (27 December 2018-02 January, 2019)

During the week, rainfall was below Long Period Average (LPA) by 88 % over the country as a whole. Details are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	0.5	4.1	-88%
Northwest India	0.4	7.8	-95%
Central India	0.1	1.2	-95%
South Peninsula	1.2	3.5	-65%
East & northeast India	0.8	3.4	-77%

The Meteorological sub-division-wise rainfall for the week is given in **Annexure I**.

### Post-monsoon Seasonal Rainfall Scenario (01 October to 31 December, 2018)

For the country as a whole, cumulative rainfall during post-monsoon season 2018 (01 October to 31 December, 2018) was below LPA by -44% over the country as a whole. Details of the rainfall distribution over the four broad geographical regions of India are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	71.2	127.2	-44%
Northwest India	34.8	62.7	-45%
Central India	38.6	79.6	-51%
South Peninsula	173.9	273.3	-36%
East & northeast India	83.8	171.4	-51%

Cumulative seasonal rainfall is given in **Annexure II**.

### Chief synoptic conditions as on 3 January, 2019

- The western disturbance as an upper air cyclonic circulation lies over eastern parts of Jammu & Kashmir and neighbourhood between 3.1 & 3.6 km above mean sea level.
- A fresh western disturbance as an upper air cyclonic circulation extending upto 3.6 km above mean sea level lies over Iran & neighbourhood.
- A trough in mid-tropospheric westerlies with its axis at 5.8 km above mean sea level runs roughly along Long. 89°E to the north of Lat. 27°N.
- A cyclonic storm 'PABUK' lies over south China Sea today morning. It is very likely to move west-northwestwards and emerge into Andaman Sea around the forenoon of 5th January 2019. Thereafter, it is very likely to move northwestwards and cross Andaman Islands around evening/night of 6th January. Thereafter, it is very likely to move north-northwestwards and then re-curve northeastwards towards Myanmar coast and weaken further during 7<sup>th</sup>-8th January.

## Large scale features as on 3 January, 2019

- Currently, ENSO neutral conditions are prevailing over equatorial Pacific Ocean and the latest Monsoon Mission Climate Forecast System (MMCFS) generated forecast indicates ENSO neutral conditions are likely to continue during the forecast period.
- At present, positive Indian Ocean Dipole (IOD) conditions are observed over Indian Ocean and the latest MMCFS forecast indicates that the present positive IOD conditions are likely to turn into neutral IOD conditions during the next couple of months and neutral IOD conditions are likely to persist.
- Madden Julian Oscillation (MJO) index is in Phase 5 with amplitude more than 1, it is likely to move in phase 6 during the week and likely to propagate further into phase 7 during week-2 with amplitude more than 1. However, there is wide variation among different model solutions, regarding the eastward propagation as well as amplitude.

## Forecast for next two week

### Weather systems & associated Precipitation during Week 1 (4-10 January & 11-17 January 19)

- An active Western Disturbance (WD) is very likely to cause significant weather in the form of fairly widespread to widespread rain / snowfall over western Himalayan region and scattered to fairly widespread rainfall over the plains of northwest India in general during 4<sup>th</sup> – 6<sup>th</sup> January 2019. It could be accompanied with isolated heavy falls as well as hailstorms over this region during the above period. This is very likely to be succeeded by a few more active WDs causing normal to above normal rain / snowfall over the western Himalayan region during weeks 1 & 2. **(Annexures III & IV).**
- Easterly wave activity is likely to remain subdued resulting in below normal rainfall over south peninsula, Lakshadweep and Nicobar Islands. Likely emergence of the Tropical Cyclone 'PABUK' from south China Sea into Andaman Sea and its subsequent movement across Andaman Islands could cause fairly widespread to widespread rainfall with isolated heavy falls over Andaman Islands during 5<sup>th</sup> – 7<sup>th</sup> January. **(Annexure III & IV).**
- Cold wave conditions in general have abated from most parts of India, as on today. Cooler than normal night temperatures are likely to prevail over parts of Chhattisgarh, interior Odisha, east Madhya Pradesh, Vidarbha, north Telangana, Kerala and north interior Tamil Nadu during week -1. Normal to slightly below normal minimum temperatures are likely to prevail over the rest of the regions of India during this period.
- Appreciably to markedly above normal night minimum temperatures are likely to prevail over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, west Uttar Pradesh, Rajasthan, Gujarat state and northern parts of Maharashtra

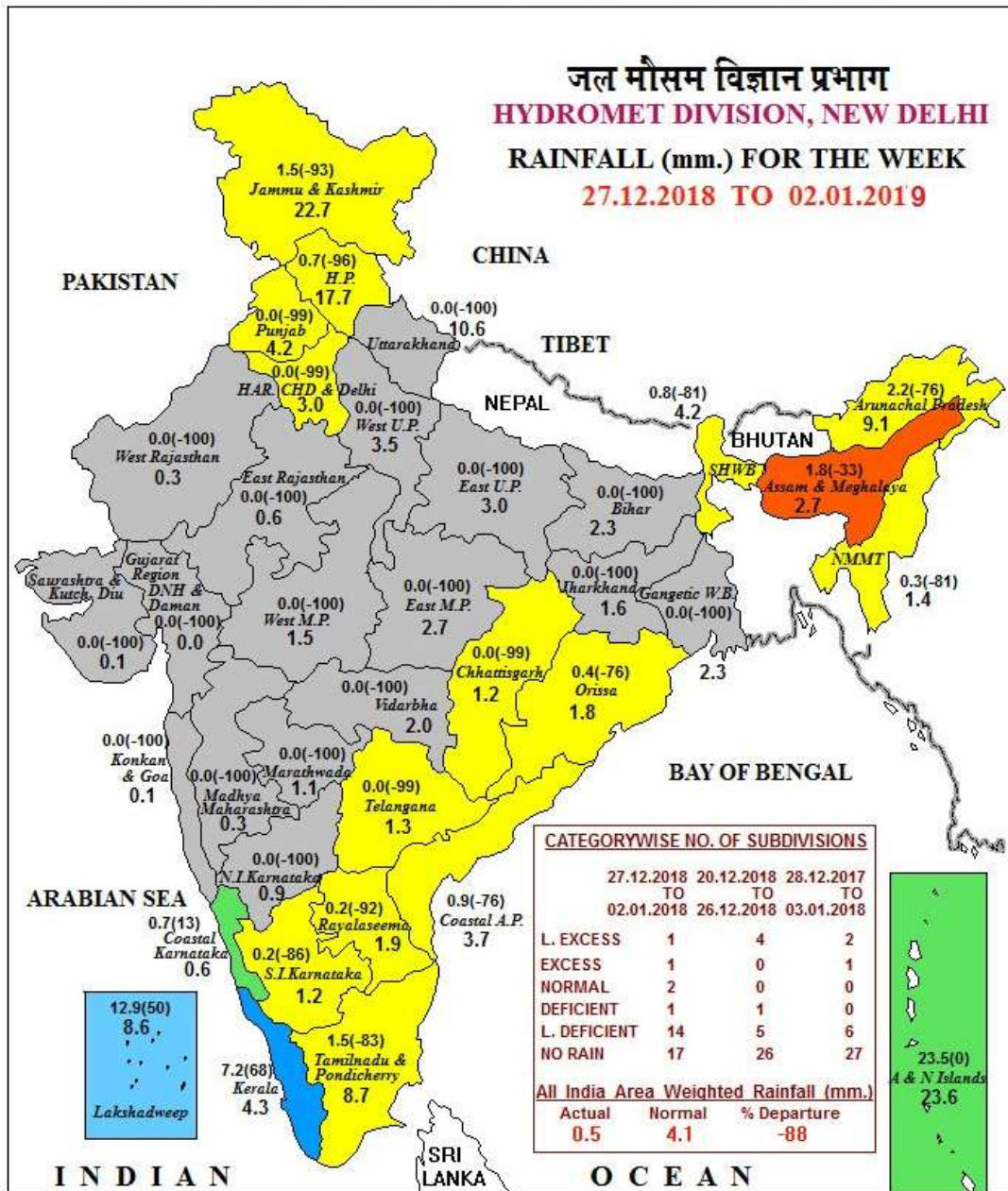
during week – 2 (especially from 12<sup>th</sup> / 13<sup>th</sup> January 2019 onwards). Normal to slightly below normal minimum temperatures are likely over the remaining states of the country during this period. **(Annexure V).**

- o Dense to very dense fog is likely to prevail over major parts of northwest India during the morning hours of tomorrow. A re-appearance of dense fog is likely over these regions once again from 7<sup>th</sup> January. Shallow to moderate fog likely at isolated pockets over northern plains and northeast India during next 4-5 days.

**Cyclogenesis:** Apart from the likely emergence of the Cyclonic Storm ‘PABUK’ from south China Sea into Andaman Sea during the beginning of Week -1, no other cyclo-genesis is likely over the Indian Seas during next week.

**Next weekly update will be issued on next Thursday i.e. 10<sup>th</sup> January 2019.**

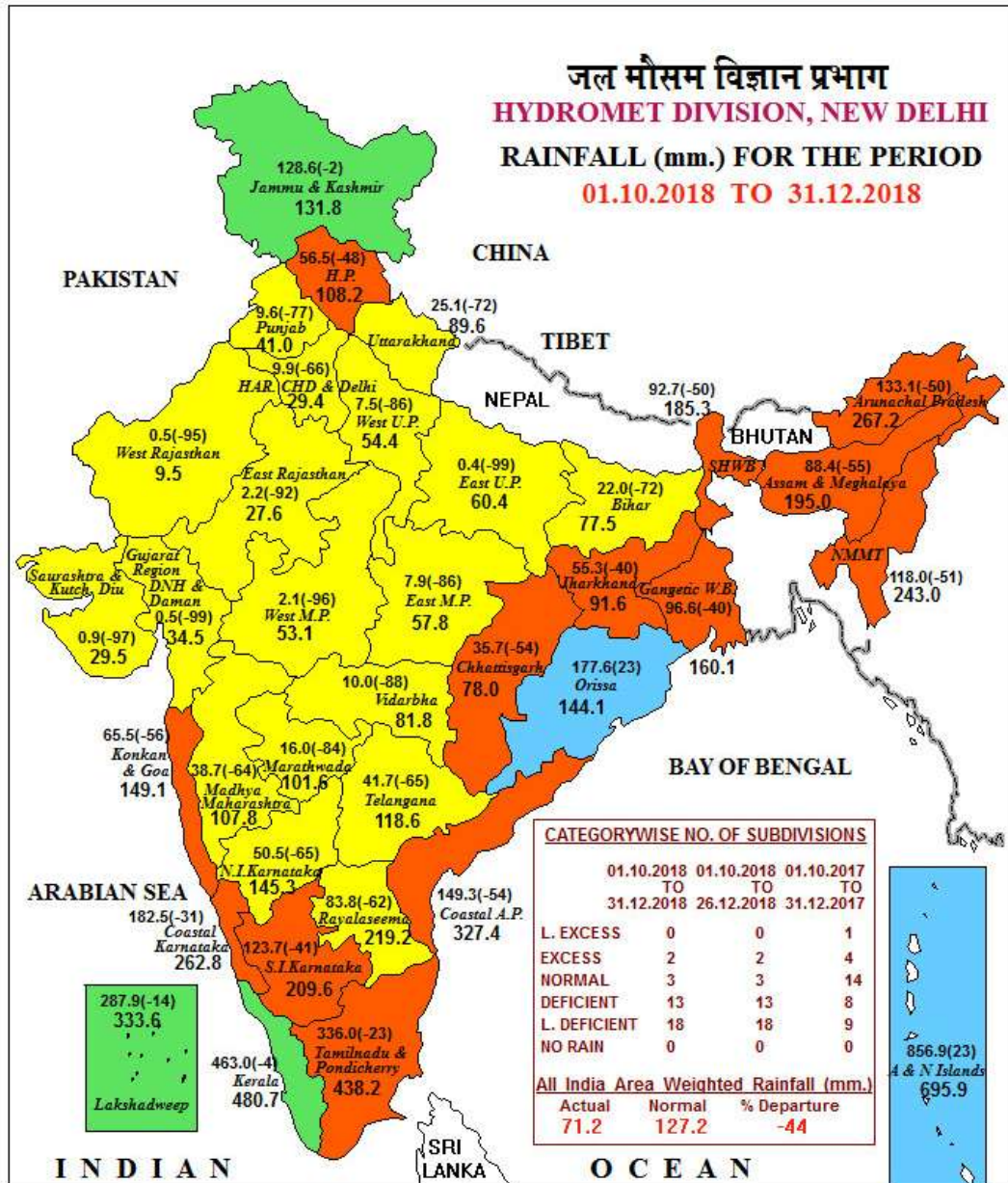
# भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



**LEGEND:** ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)  
■ DEFICIENT (-20% TO -59%) ■ L. DEFICIENT (-60% TO -99%) ■ NO RAIN (-100%)  NO DATA

**NOTES:**  
 (a) Rainfall figures are based on operational data.  
 (b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)  
 Percentage Departures of Rainfall are shown in Brackets.

# भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



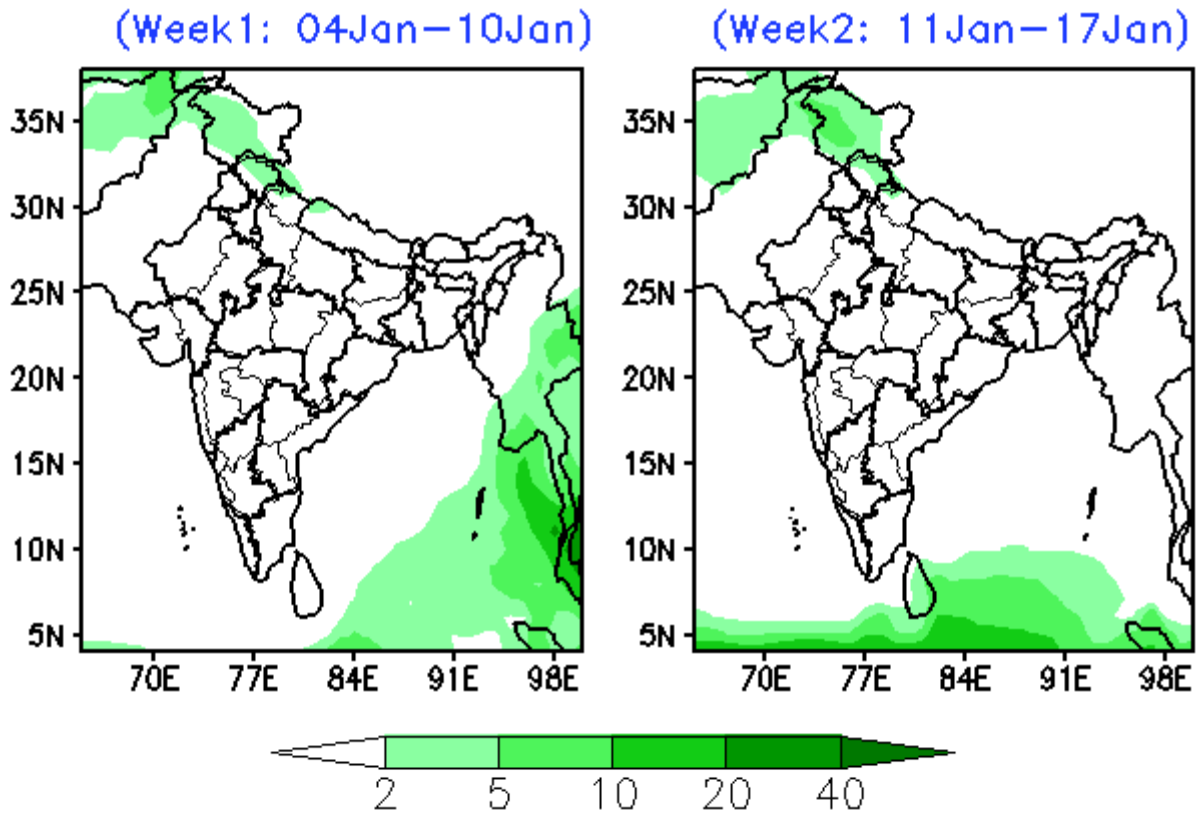
**LEGEND:** ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)  
 ■ DEFICIENT (-20% TO -59%) ■ L. DEFICIENT (-60% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

**NOTES:**  
 (a) Rainfall figures are based on operational data.  
 (b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)  
 Percentage Departures of Rainfall are shown in Brackets.

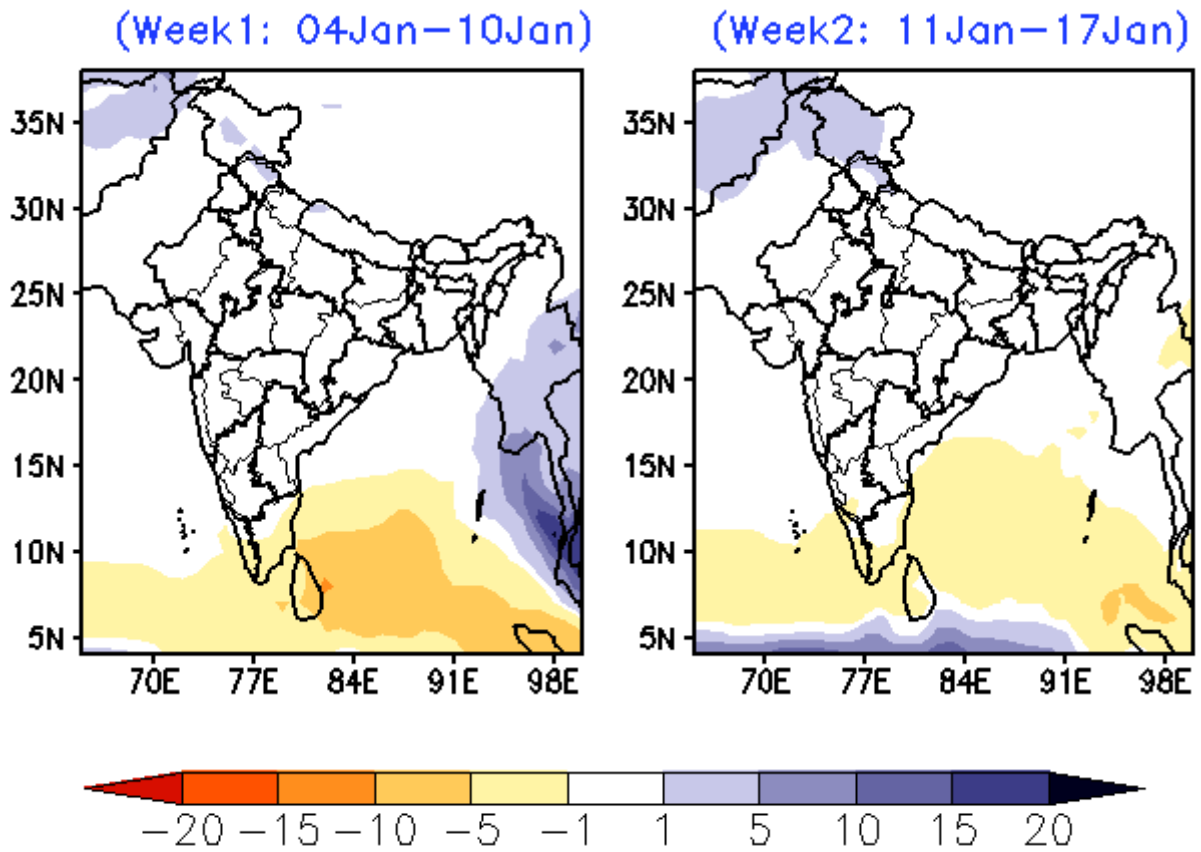
## Annexure III

METEOROLOGICAL SUB-DIVISIONWISE INTENSITY OF REALISED MINIMUM TEMPERATURE-2018-19								
S.No	MET.SUB-DIVISIONS	27 DEC	28 DEC	29 DEC	30 DEC	31 DEC	01 JAN	02 JAN
1	ANDAMAN & NICO.ISLANDS	N	N	N	BN	N	N	N
2	ARUNACHAL PRADESH	N	N	N	N	N	N	N
3	ASSAM & MEGHALAYA	N	N	N	BN	N	N	N
4	NAGA.MANI.MIZO.& TRIPURA	N	N	N	N	N	N	N
5	SUB-HIM.W. BENG. & SIKKIM	N	BN	N	BN	N	N	N
6	GANGETIC WEST BENGAL	N	ABN	N	BN	N	BN	N
7	ODISHA	N	BN	N	MBN	N	ABN	N
8	JHARKHAND	N	N	ABN	MBN	N	BN	N
9	BIHAR	N	BN	N	N	N	BN	N
10	EAST UTTAR PRADESH	BN	BN	N	ABN	N	BN	N
11	WEST UTTAR PRADESH	N	BN	N	MBN	N	BN	N
12	UTTARAKHAND	N	N	N	N	N	N	N
13	HARYANA CHD. & DELHI	N	N	N	ABN	N	BN	N
14	PUNJAB	N	N	N	ABN	N	N	N
15	HIMACHAL PRADESH	BN	ABN	N	N	N	N	N
16	JAMMU & KASHMIR	ABN	ABN	N	N	N	N	N
17	WEST RAJASTHAN	N	BN	N	N	N	N	N
18	EAST RAJASTHAN	N	ABN	N	N	N	N	N
19	WEST MADHYA PRADESH	N	ABN	N	ABN	N	N	N
20	EAST MADHYA PRADESH	N	ABN	N	MBN	N	N	N
21	GUJARAT REGION D.D. & N.H.	N	BN	N	BN	N	N	N
22	SAURASTRA KUTCH & DIU	N	ABN	N	BN	N	N	N
23	KONKAN & GOA	N	BN	N	BN	N	BN	N
24	MADHYA MAHARASHTRA	N	BN	N	N	N	N	N
25	MARATHAWADA	N	N	N	MBN	N	BN	N
26	VIDARBHA	N	ABN	N	MBN	MBN	N	BN
27	CHHATTISGARH	N	N	ABN	ABN	N	BN	N
28	COASTAL ANDHRA PRADESH	N	N	N	N	N	ABN	N
29	TELANGANA	AAN	N	N	MBN	N	N	N
30	RAYALASEEMA	AAN	N	N	N	N	N	N
31	TAMILNADU & PUDUCHERRY	N	N	N	N	N	N	N
32	COASTAL KARNATAKA	N	N	N	N	N	N	N
33	NORTH INT. KARNATAKA	N	N	N	BN	N	N	N
34	SOUTH INT. KARNATAKA	AAN	N	N	N	N	N	N
35	KERALA	N	N	N	AN	N	N	N
36	LAKSHADWEEP	N	N	N	BN	N	N	N
<b>Lowest Minimum Temperature (°C) Over the plains of the Country.</b>		<b>1.0</b>	<b>0.8</b>	<b>-1.0</b>	<b>0.6</b>	<b>1.8</b>	<b>0.7</b>	<b>3.4</b>
<b>Station(s) observed LMT</b>		Amritsar	Bhatinda	Bhilwara	Bhilwara	Hissar	Bhatinda	Khajuraho
<b>Station(s) lies in Met-Subdivision(s)</b>		Punjab	Punjab	East Raj.	East Raj.	Haryana	Punjab	East MP
<b>LEGENDS:</b>								
N	NORMAL (N+1,N-1)°C	BN	BELOW NORMAL (N-2)°C	ABN	APRECIABLY BELOW NORMAL (N-3.1 to -4.9)°C			
AN	ABOVE NORMAL (N+2)°C	MBN		MARKEDLY BELOW NORMAL (N-5 AND BELOW ) °C				
AAN	APRECIABLY ABOVE NORMAL (N+3.1 to +4.9)°C	MAN		MARKEDLY ABOVE NORMAL (N+5 AND ABOVE ) °C				
<b>REMARK:- Intensity of Minimum Temperature has been assigned as realised over at least Most/Many (51-100%) parts of the Sub-division.</b>								

### Forecast rainfall (mm per day)



### Forecast rainfall anomaly (mm per day)





(Week1: 04Jan-10Jan)

(Week2: 11Jan-17Jan)

