

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

Press Release: Dated: 05th December, 2024

Subject: Current Weather Status and Extended range Forecast for next two weeks (05th to 18th December 2024)

1. Salient Observed Features for the week ending 04th December 2024:

- **Deep Depression over Southwest Bay of Bengal intensified into Cyclonic storm “FENGAL” (pronounced as FEINJAL) over Southwest Bay of Bengal (28 Nov to 3 Dec 2024 and crossed north Tamil Nadu coast on 30th Nov night.** It caused extremely heavy rainfall spell over North Tamil Nadu and Puducherry on 1 and 2 Dec 2024. Exceptionally heavy rainfall also occurred at isolated places on 1 Dec: over the districts of Villupuram and Puducherry (Mylam AWS (dist Villupuram) 51, Puducherry (dist Puducherry) 49, Puducherry (dist Puducherry) 48, Patthukannu (dist Puducherry) 45, Thirukkanur (dist Puducherry) 43, Puducherry Town (dist Puducherry) 40 and on 2 Dec: over the districts of Krishnagiri & Villupuram of North Tamil Nadu (Uthangarai (dist Krishnagiri) 50, RSCL-2 Kedar (dist Villupuram) 42(all in cm). Its remnant moved across coastal Karnataka as a well-marked low pressure area and caused isolated heavy to very heavy rainfall and isolated extremely heavy rainfall on 3 Dec over Coastal Karnataka: Mulki (dist Dakshina Kannada) 26, Mangaluru (dist Dakshina Kannada) 19; Kerala & Mahe: Enamakal (dist Thrissur) 20, Hosdurg (dist Kasaragod) 20.
- **Western Disturbance (WD) over North India:** A WD moved during 28-30 Nov 2024 across western Himalayan region which caused isolated light to moderate rainfall with no impact on plains of northwest India.
- **Minimum Temperature:** Minimum temperatures were below normal by 3 to 5°C over most places over Madhya Maharashtra on 29th Nov. It was above normal by 4-7°C on 3rd and 4th December over Maharashtra, adjoining parts of Peninsula India, East India and parts of plains of North West India. During the week
- **Temperature Scenario:** The lowest minimum temperature of **6.0°C** had been recorded at **Adampur IAF (Punjab)** on **29th November 2024** and the highest maximum temperature of **37.3°C** had been recorded at **Mumbai Santacruz (Konkan & Goa)** on **04th December 2024** over the plains of the country during the week.

- **Analysis of weekly overall rainfall distribution during the week ending on 05th December and Post-monsoon Season's Rainfall Scenario (1st October – 05th December, 2024):** The country as a whole, the weekly cumulative All India Rainfall (for 28th November – 04th December, 2024) in % departure from its long period average (LPA) is +137%. All India Seasonal cumulative rainfall % departure during this year's post-monsoon Season Rainfall (01st October - 05th December, 2024) is -09%. Details of the rainfall distribution over the four broad geographical regions of India are given in Table 1 and Meteorological sub-division-wise rainfall both for week and season are given in **Annexure I & II** respectively.

Table 1: Rainfall status (Week and season)

Cumulative Rainfall (mm)	Weekly Rainfall (28.11.2024 TO 04.12.2024)			Seasonal Rainfall (01.10.2024 TO 04.12.2024)		
	Actual (mm)	Normal (mm)	Departure (%)	Actual (mm)	Normal (mm)	Departure (%)
East & northeast India	1.7	2.9	-43%	149.2	147.0	+1%
Northwest India	0.1	1.9	-96%	7.8	34.3	-77%
Central India	1.0	2.0	-48%	56.4	71.7	-21%
South Peninsula	42.6	10.8	+294%	266.5	248.3	+7%
Country as a whole	9.0	3.8	137%	97.5	106.9	-9%

2. Large scale features:

- Currently, neutral El Nino-Southern Oscillation (ENSO) conditions are observed over the equatorial Pacific. The probability forecast indicates a highest probability of La Niña conditions during the NDJ and DJF seasons.
- Above-average sea surface temperatures (SSTs) are currently seen across most of the Indian Ocean. Currently, neutral Indian Ocean Dipole (IOD) conditions are observed over the Indian Ocean. The latest MMCFS forecast indicates that the neutral IOD conditions are likely to continue for the next several months.
- The Madden Julian Oscillation (MJO) index is currently in Phase 5 with an amplitude > 1. It is likely to continue to move in phase 5 during week 1 with amplitude > 1. Thereafter, it is likely to propagate across phase 6 with amplitude > 1 during the start of week 2 and will propagate in phase 6 for remaining part of week 2.

3. Forecast for next two week

Weather systems & associated Precipitation during Week 1 (05 to 11 December, 2024) and Week 2 (12 to 18 December, 2024)

Weather systems & associated Precipitation during Week 1 (05 to 11 December, 2024):

Weather Systems:

- ❖ A fresh Western Disturbance is likely to affect Western Himalayan Region and adjoining plains of Northwest India from 08th December. It is very likely to cause light/moderate rainfall/snowfall over Western Himalayan Region and light isolated rainfall over Punjab & Haryana on 08th & 09th December, 2024.

Forecast & Warnings (upto 7 days) (Annexure II&III):

- ✓ A fresh Western Disturbance is likely to affect Western Himalayan Region and adjoining plains of Northwest India from 08th December. It is very likely to cause light/moderate rainfall/snowfall over Western Himalayan Region and light isolated rainfall over Punjab & Haryana on 08th & 09th December, 2024.
- ✓ Light/moderate isolated to scattered rainfall very likely over South Peninsular India during the week and light isolated rainfall likely over adjoining central India during 1st half of the week.
- ✓ **Overall, rainfall is likely to be normal to above normal over south Peninsular India & adjoining central India and below normal over rest part of the country during the week.**

Precipitation for week 2 (05 to 11 December, 2024):

- ❖ No active western disturbance is likely to affect northwest India during the week.
- ❖ Overall, rainfall is likely to be normal to above normal over most parts of south Peninsular & central India; below normal over northwest, east & northeast India during the week.

Minimum temperature and Fog forecast & warning for Week 1 (05 to 11 December, 2024) and Week 2 (12 to 18 December, 2024)

Minimum temperature and Fog forecast & warning for Week 1 (05 to 11 December, 2024):

Temperature Conditions during past 24 hours till 0830 hours IST of today, 14 November, 2024:

Minimum temperatures are in the range of 10-15° C in the plain of Northwest India and 15-20° C over Central India, Gujarat State, Maharashtra and eastern parts of India. Minimum temperatures are **markedly above normal (5°C or more)** at many places over Telangana; at a few places over Madhya Maharashtra, Marathwada and Chhattisgarh; at isolated places over Odisha and Konkan & Goa; **appreciably above normal (3°C to 5°C)** at many places over Coastal Andhra Pradesh & Yanam, Vidarbha, Rayalaseema and North Interior Karnataka; and at isolated places over Uttar Pradesh, Bihar, Gujarat state and South Interior Karnataka; **above normal (1°C to 3°C)** at most places over Coastal Karnataka; at many places over Madhya Pradesh, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal; at a few places over Jharkhand; at isolated places over Rajasthan, Punjab, Haryana, Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura and near normal over rest parts of the country. Today, **the lowest minimum temperature of 6.0°C** is reported at **Hissar (Haryana)** over the plains of the country.

Forecast of temperature:

- ❖ Gradual fall in minimum temperatures by 2-3°C likely over parts of Northwest India during the week.
- ❖ Gradual fall in minimum temperatures by 2°C likely over East India during 1st half of the week and gradual rise by 2-3°C thereafter.
- ❖ No significant change in minimum temperatures over Central India during most days of the week (**Annexure V**)
- ❖ **There is a low probability of cold wave conditions over north Rajasthan and adjoining Punjab and Haryana during the second half of week.**

Dense fog Warnings:

- ❖ **Dense fog conditions** very likely to prevail during late night/early morning hours in isolated pockets of Punjab, Haryana and Chandigarh during 07th-10th December.

Minimum temperature forecast and dense fog warning for Week 2 (12 to 18 December, 2024):

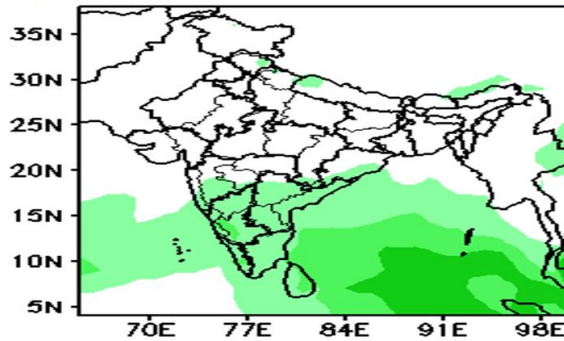
- ❖ Minimum temperatures are likely to be less than 10°C over most parts of northwest, central & adjoining east India during the week.
- ❖ Minimum temperatures are likely to be below normal by 2-4°C over most parts of northwest, central & adjoining east India; near normal are above normal by 1-2°C over parts of Western Himalayan Region, northeastern states and south Peninsular India during the week (**Annexure V**).
- ❖ **There is low probability of isolated cold wave conditions over Punjab, Haryana, southwest Uttar Pradesh, north Rajasthan and northwest Madhya Pradesh during some days of the week.**
- ❖ **No significant dense to very dense fog is likely over Indo Gangetic plains during the week.**



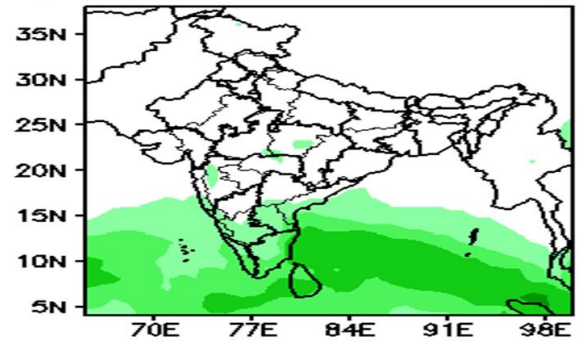


Annexure III

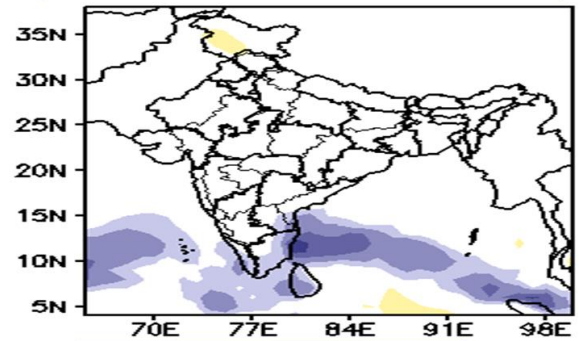
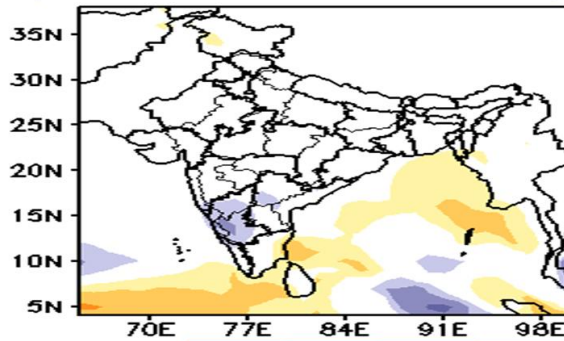
Forecast Rainfall (mm/day)
(Week1:00Z05Dec-00Z12Dec)



(00Z=0530 hrs IST)
(Week2:00Z12Dec-00Z19Dec)



Forecast Rainfall Anomaly (mm/day) (00Z=0530 hrs IST)
(Week1:00Z05Dec-00Z12Dec) (Week2:00Z12Dec-00Z19Dec)

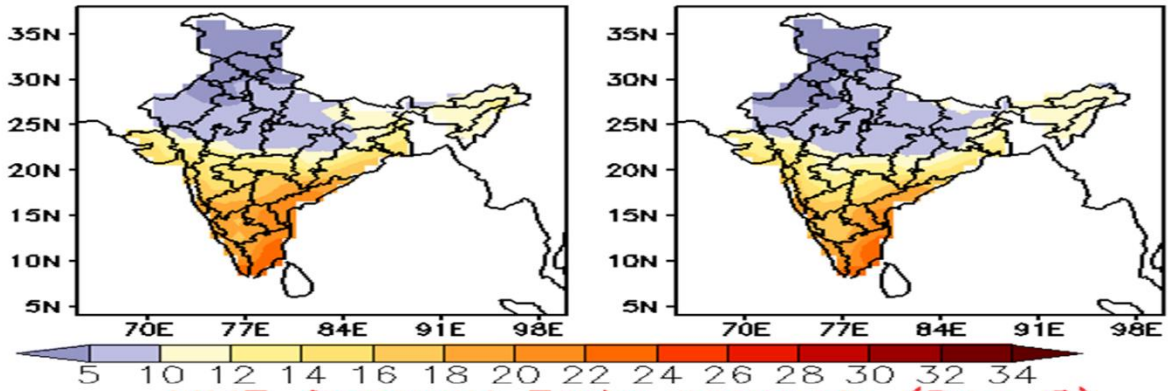


Annexure IV

MME Bias corrected forecast Tmin (Deg C)

(Week1: 06Dec-12Dec)

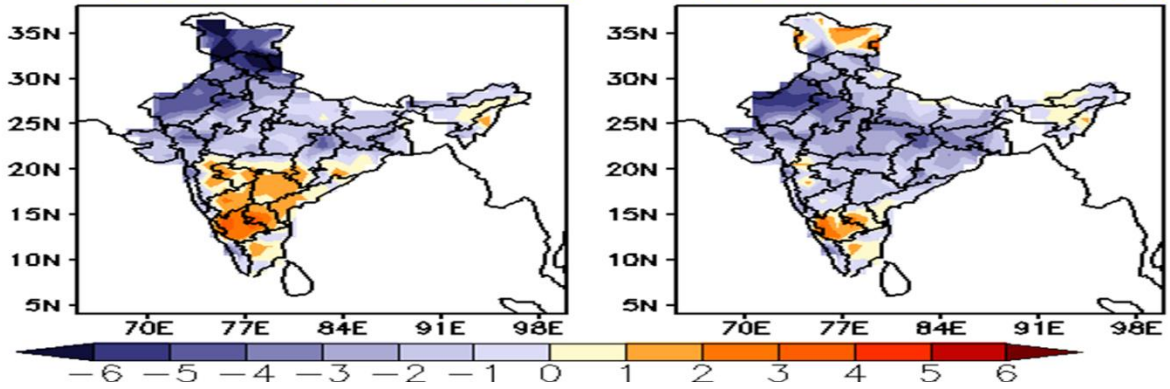
(Week2: 13Dec-19Dec)



MME forecast Tmin anomaly (Deg C)

(Week1: 06Dec-12Dec)

(Week2: 13Dec-19Dec)

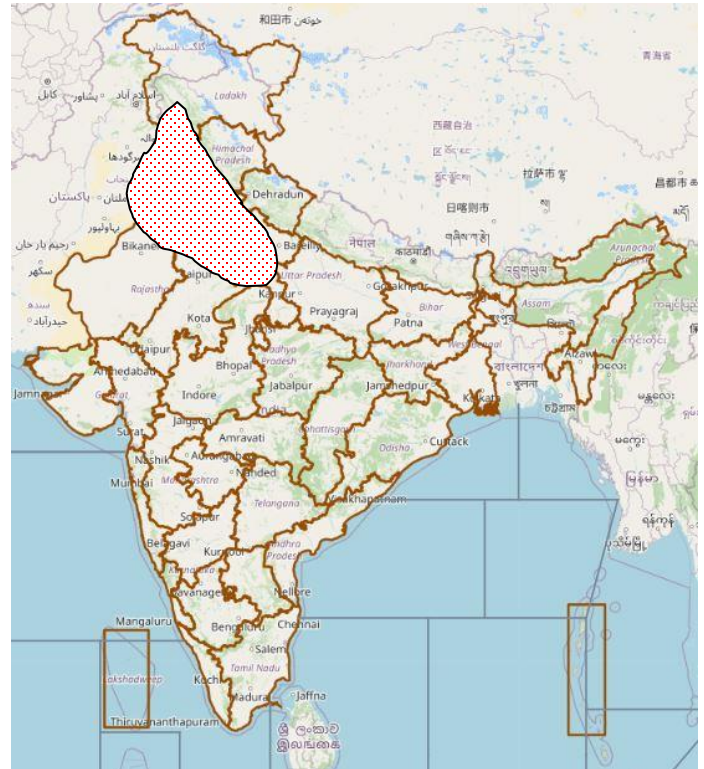


Cold Wave forecast during next 2 weeks

EXTENDED RANGE OUTLOOK FOR COLDWAVE

Week 1: 06.12.2024-12.12.2024

Week2: 13.12.2024-19.12.2024



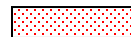
PROBABILITY OF COLD WAVE

CONFIDENCE

LOW (1-33% PROBABILITY)

MODERATE (34-67% PROBABILITY)

HIGH (68-100% PROBABILITY)



Cold wave warning:

Week 1 (06.12.2024- 12.12.2024)

Due to the passing away of a western disturbance on 9th December, there is a low probability of cold wave conditions **over north Rajasthan and adjoining Punjab and Haryana during the second half of week 1.**

Week 2 (13.12.2024- 19.12.2024)

Due to likely northwesterly winds over plains of northwest India, there is low probability of isolated cold wave conditions over Punjab, Haryana, southwest Uttar Pradesh, north Rajasthan and northwest Madhya Pradesh during some days of the week.