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

Press: Dated: 30 Nov, 2023

Subject: Current Weather Status and Extended range Forecast for next two weeks (30 Nov-13 Dec 2023)

1. Salient Observed Features for week ending 29 Nov 2023

- Movement of active WD and its interaction with easterly caused severe weather over various parts of West and adjoining parts of northwest and central India during 2nd half of the week. Due to high moisture feed from Arabian Sea, such interactions caused fairly widespread to widespread rainfall with isolated heavy to heavy rainfall along with thunderstorm & hailstorm activity over Gujarat, south Rajasthan, West Madhya Pradesh and north Maharashtra during 25-27 Nov. With east-ward movement of the WD during later dates, it also caused cloudy conditions and isolated light to moderate rain and thunderstorms accompanied with lightning over other parts of northwest India and Uttar Pradesh including Delhi on 28 and 29 Nov.
- **Formation and Persistence a cyclonic circulation over** south Sri Lanka & neighbourhood at lower levels and its slow west-wards movement also caused isolated heavy to very rainfall over coastal Tamil Nadu during 27-29 Nov.
- **Analysis of Weekly overall Rainfall distribution during the week ending on 29 Nov 2023 and monsoon Season's Rainfall Scenario (1 Oct-29 Nov 2023):** It shows for the country as a whole, the weekly cumulative All India Rainfall in % departure from its long period average (LPA) till week ending on 29 Nov 2023 was +112%, over south Peninsula, it was +55%, central India as +682% while over northwest India had -3% and east & northeast India had got -99%. All India Seasonal cumulative rainfall % departure during this year's **Post monsoon Season's Rainfall**

during **1 Oct to 29 Nov 2023** is -20% and over northwest India, it is +32%. 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 Annex II and III respectively.

Table 1: Rainfall status (Week and season)

Region	WEEK			SEASON		
	23.11.2023 TO 29.11.2023			01.10.2023 TO 29.11.2023		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	0	3.8	-99%	148.4	145.3	2%
NORTH-WEST INDIA	3.3	3.4	-3%	43.9	33.3	32%
CENTRAL INDIA	17.2	2.2	682%	43.1	70.6	-39%
SOUTH PENINSULA	23.7	15.3	55%	162.7	240.8	-32%
Country as a whole	11.5	5.4	112%	83.6	104.5	-20%

2. Large scale features

- Currently, the Sea Surface Temperatures (SSTs) and the atmospheric conditions over the Equatorial Pacific Ocean indicate moderate El Niño conditions. The latest forecasts from MMCFS and other global models suggest that these El Niño conditions are likely to continue during the upcoming season. In addition to ENSO conditions over the Pacific, other factors such as the Indian Ocean Sea Surface Temperatures (SSTs) also influence Indian climate. Currently, positive Indian Ocean Dipole (IOD) conditions are prevailing over the Equatorial Indian Ocean. The latest MMCFS forecast indicates that the positive IOD conditions are likely to weaken during the upcoming months.
- Most of the models are indicating that currently the MJO signal lay in phase 3 with amplitude

more than 1. They also suggest that MJO index is likely to progress eastward to enter into phase 4 during 2nd half of the week 2 with amplitude more than 1 and further into phase 5 during 1st half of the week 1 and then into 6 during 2nd half of the week 2. Thus, MJO is likely to support gradually convective activity over the North Indian Ocean (NIO) including the Bay of Bengal (BoB) and the Arabian Sea (AS) for week 1 and 1st half of the week 2.

3. Forecast for next two week

Weather systems & associated Precipitation during Week 1 (30 November to 06 December, 2023) and Week 2 (07 to 13 December, 2023)

Weather systems & associated Precipitation during Week 1 (30 November to 06 December, 2023)

Weather Systems and Forecast & Warnings during next one week:

- A Cyclonic Circulation over north Sri Lanka & neighbourhood now lies over Southwest Bay of Bengal & adjoining south Sri Lanka in lower & middle tropospheric levels.
- A Western Disturbance as a trough in middle tropospheric levels runs between Lat. 37°N/Long. 65°E & Lat. 30°N/Long. 75°E and induced cyclonic circulation lies over northwest Rajasthan in lower tropospheric levels.
- **There is confluence between easterly winds from Bay of Bengal and winds associated with induced cyclonic circulation over northwest Rajasthan at lower tropospheric levels.**
- Under the influence of the above systems:

- Scattered to fairly widespread light/moderate rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 30th November. **Heavy rainfall/snowfall** at isolated places also likely over Kashmir-Gilgit-Baltistan-Muzaffarabad on 30th November. Light rainfall very likely at isolated places over the plains of Northwest India during next 48 hours. Thunderstorm & lightning very likely at isolated places over entire Northwest India except Rajasthan on 30th November. **Isolated hailstorm** very likely over Jammu-Kashmir-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab and Haryana-Chandigarh on 30th November.

- Scattered to fairly widespread light to moderate rainfall with thunderstorm& lightning during next 48 hours and **isolated hailstorm** during next 24 hours very likely over Madhya Pradesh and Vidarbha.
- Light isolated rainfall with thunderstorm activity very likely over Madhya Maharashtra and Marathwada on 30th November& 01st December.
- Light to moderate scattered to fairly widespread rainfall with thunderstorm activity at isolated places very likely over Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during next 5 days.
- **Isolated heavy rainfall** very likely over coastal Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe on 30th November & 01st December and over Rayalaseema on 30th November. **Isolated heavy to very heavy rainfall** also very likely over coastal Tamil Nadu, Puducherry & Karaikal on 30th November.

Well Marked Low Pressure Area over Southeast Bay of Bengal:

A **Well Marked Low Pressure Area** lies over Southeast Bay of Bengal at 0830 hours IST of today, the 30th November, 2023. It is likely to move west-northwestwards and intensify into a **Depression** over Southeast Bay of Bengal during next 24 hours. Continuing to move further west-northwestwards, it would intensify gradually into a **Cyclonic Storm** over Southwest Bay of Bengal around 03rd December. Thereafter, it would move northwestwards and reach North Tamil Nadu and South Andhra Pradesh coasts around the early morning of 04th December as a cyclonic storm.

Warnings in association with the above Well Marked Low Pressure Area:

(i) Rainfall Warning:

- Light to moderate rainfall at most places with **isolated heavy rainfall** is likely over Andaman & Nicobar Islands on 30th November & 1st December.
- Light to moderate rainfall at most places with **isolated heavy rainfall** is likely over north Coastal Tamil Nadu & Puducherry during 1st to 4th December with **isolated very heavy rainfall** during 2nd to 4th December.
- Light to moderate rainfall at most places with **isolated heavy to very heavy rainfall** is likely over south Coastal Andhra Pradesh during 3rd to 4th December.

- Light to moderate rainfall at most places with **isolated heavy rainfall** is likely over Rayalaseema on 3rd& 4th December.

(ii) Wind warning:

- **Andaman Sea and Andaman & Nicobar Islands:** Strong wind speed reaching 25-35 kmph gusting to 45 kmph is likely to prevail over South Andaman Sea and adjoining Andaman & Nicobar Islands on 30th November.
- **Southeast Bay of Bengal:** Squally weather with wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail over Southeast Bay of Bengal from 1st December morning and likely to increase becoming 50-60 kmph gusting to 70 kmph on 2nd December morning and decrease thereafter.
- **Southwest Bay of Bengal:** Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely over Southwest Bay of Bengal from 1st December morning and 50-60 kmph gusting to 70 kmph from 2nd December morning. It would increase becoming Gale Wind speed reaching 60-70 kmph gusting to 80 kmph from 3rd December morning for subsequent 24 hours.
- **Westcentral Bay of Bengal:** Squally wind speed reaching 35-45 kmph gusting to 55 kmph is likely over westcentral Bay of Bengal from 2nd December evening and is likely to increase becoming 45-55 kmph gusting to 65 kmph from 3rd December morning.

(iii) Fishermen Warning (graphics attached): Fishermen are advised not to venture into:

- South Andaman Sea on 30th November.
- Southeast Bay of Bengal during 30th November to 2nd December.
- Southwest Bay of Bengal during 1st to 4th December.
- Westcentral Bay of Bengal from 2nd December morning to 5th December.

The Fishermen out at sea are advised to return to Andaman & Nicobar Islands and those off east coast of India (from Tamil Nadu coast to Odisha coast) are advised to return to coast by 1st December.

Rainfall for week 2 (07 to 13 December, 2023):

- ✓ No active Western Disturbance likely to affect northwest India during the week.
- ✓ Overall, rainfall activity is likely to be **below normal** over all the regions of India except east & northeast India, where rainfall is likely to be normal to above normal.

Minimum temperature forecast for Week 1 (30 November to 06 December, 2023) and Week 2 (07 to 13 December, 2023)

Minimum temperature forecast for Week 1 (30 November to 06 December, 2023):

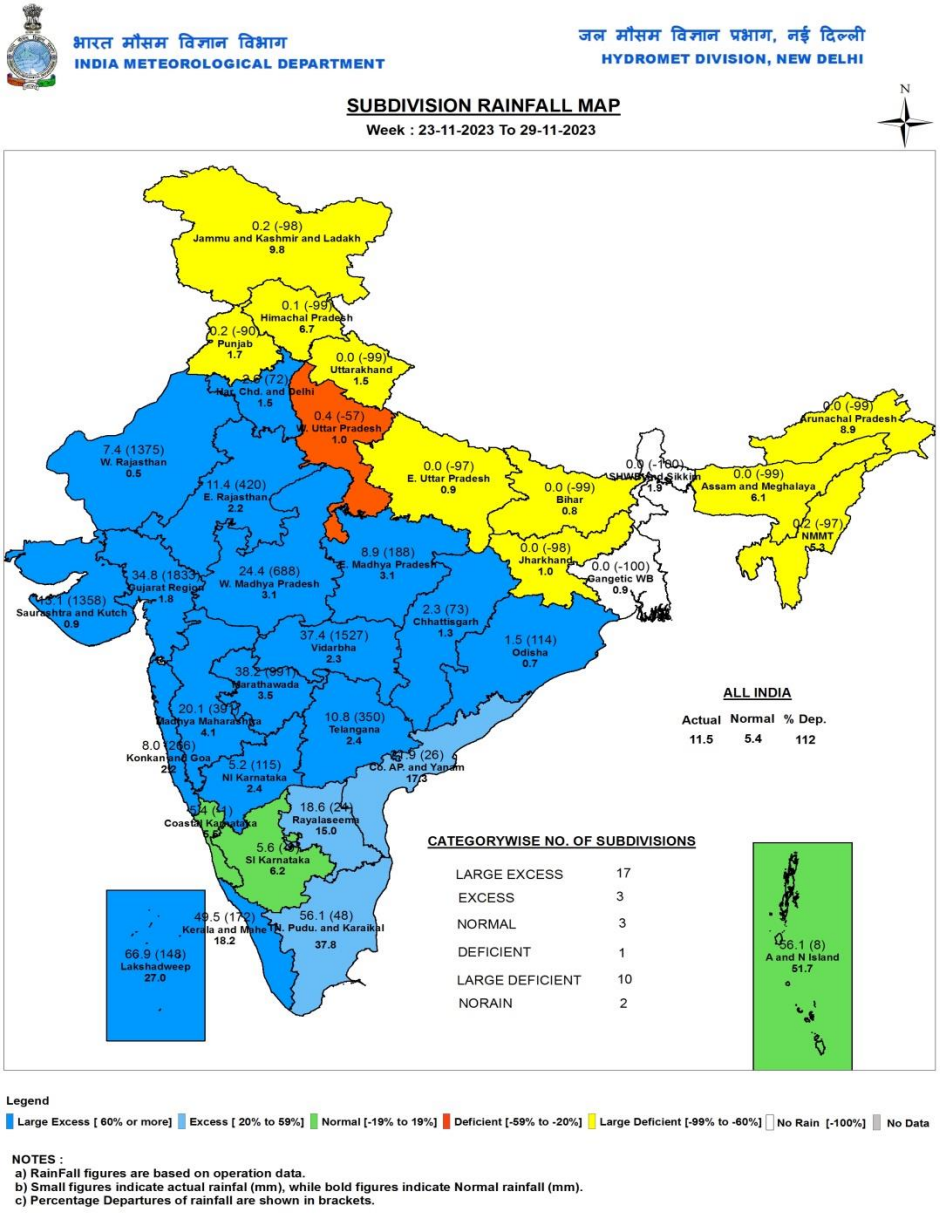
- ✓ **Minimum Temperature (as on 30-11-2023):** Minimum temperatures are between 12°C to 16°C over most parts of plains of northwest India & over northeast India and over some parts of central India. These are more than 16°C over rest parts of plains of India.
- ✓ Minimum temperatures are markedly above normal (5.1°C or more) at a few places over Madhya Maharashtra; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Haryana, Chandigarh & Delhi, West Rajasthan, Madhya Pradesh, Marathwada and Telangana; appreciably above normal (3.1°C to 5.0°C) at most places over Punjab and North Interior Karnataka; at many places over Uttar Pradesh, Jharkhand, Chhattisgarh and Vidarbha; at a few places over Bihar, Odisha and Coastal Karnataka; at isolated places over East Rajasthan, Konkan & Goa, South Interior Karnataka and Andhra Pradesh & Yanam; above normal (1.6°C to 3.0°C) at most places Uttarakhand; at many places over Gujarat Region; at a few places over West Bengal & Sikkim, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Andaman & Nicobar Islands; at isolated
- ✓ places over Saurashtra & Kutch, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura and near normal over rest parts of the country.
- ✓ Minimum temperatures are likely to be above normal by 2 to 4°C over the most parts of the country during the week.

Minimum temperature forecast for Week 2 (07 to 13 December, 2023):

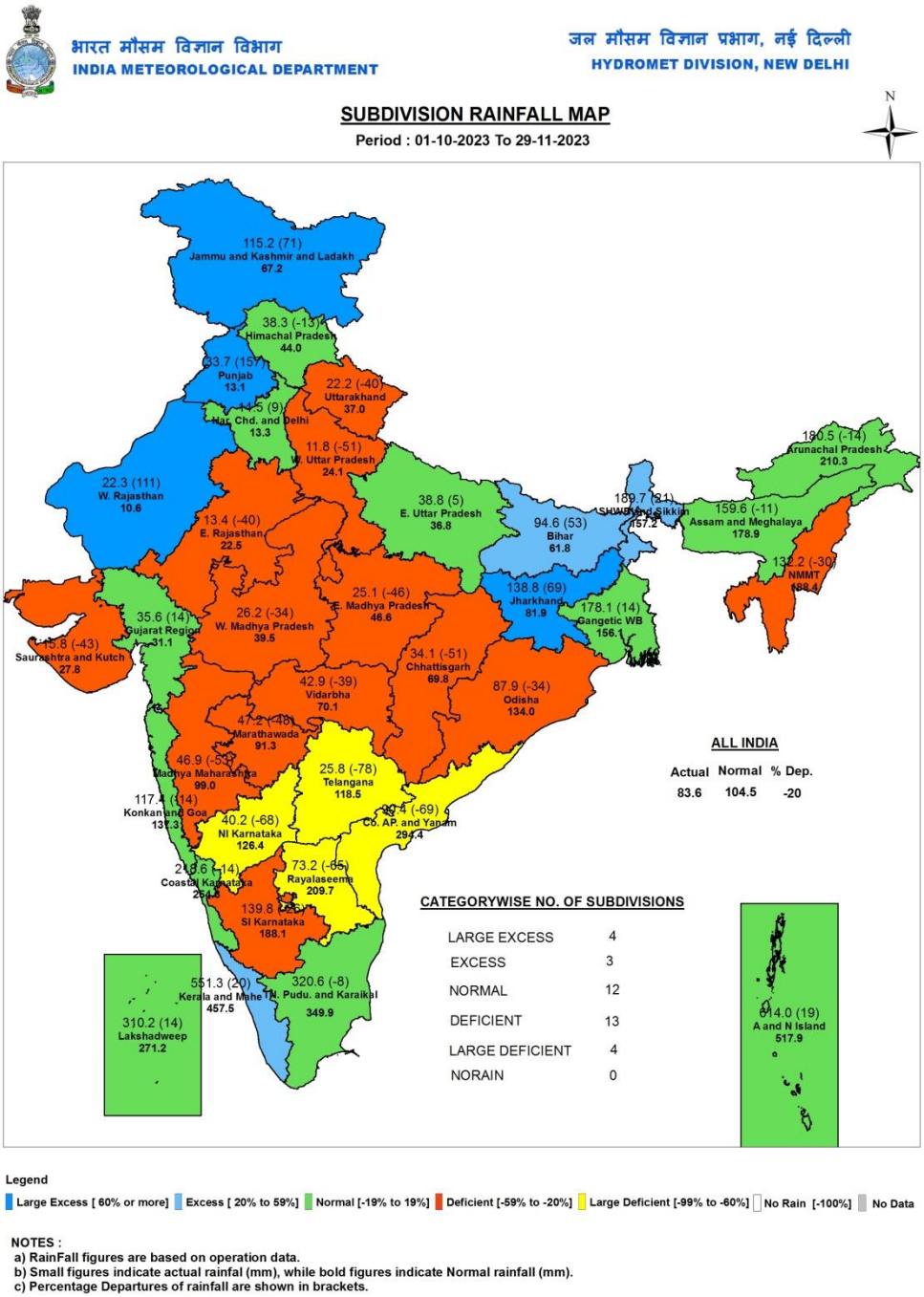
- ✓ **Minimum Temperature** are likely to fall gradually over most parts of the country during the week and become near normal or below normal by 1-2°C over most parts of the country except northeastern states and parts of Western Himalayan Region, where these are likely to be above normal by 1-3°C.

Legends: **Heavy Rain:** 64.5 to 115.5 mm **Very Heavy Rain:** 115.6 to 204.4 mm, **Extremely Heavy Rain**> 204.4 mm

Annex: I

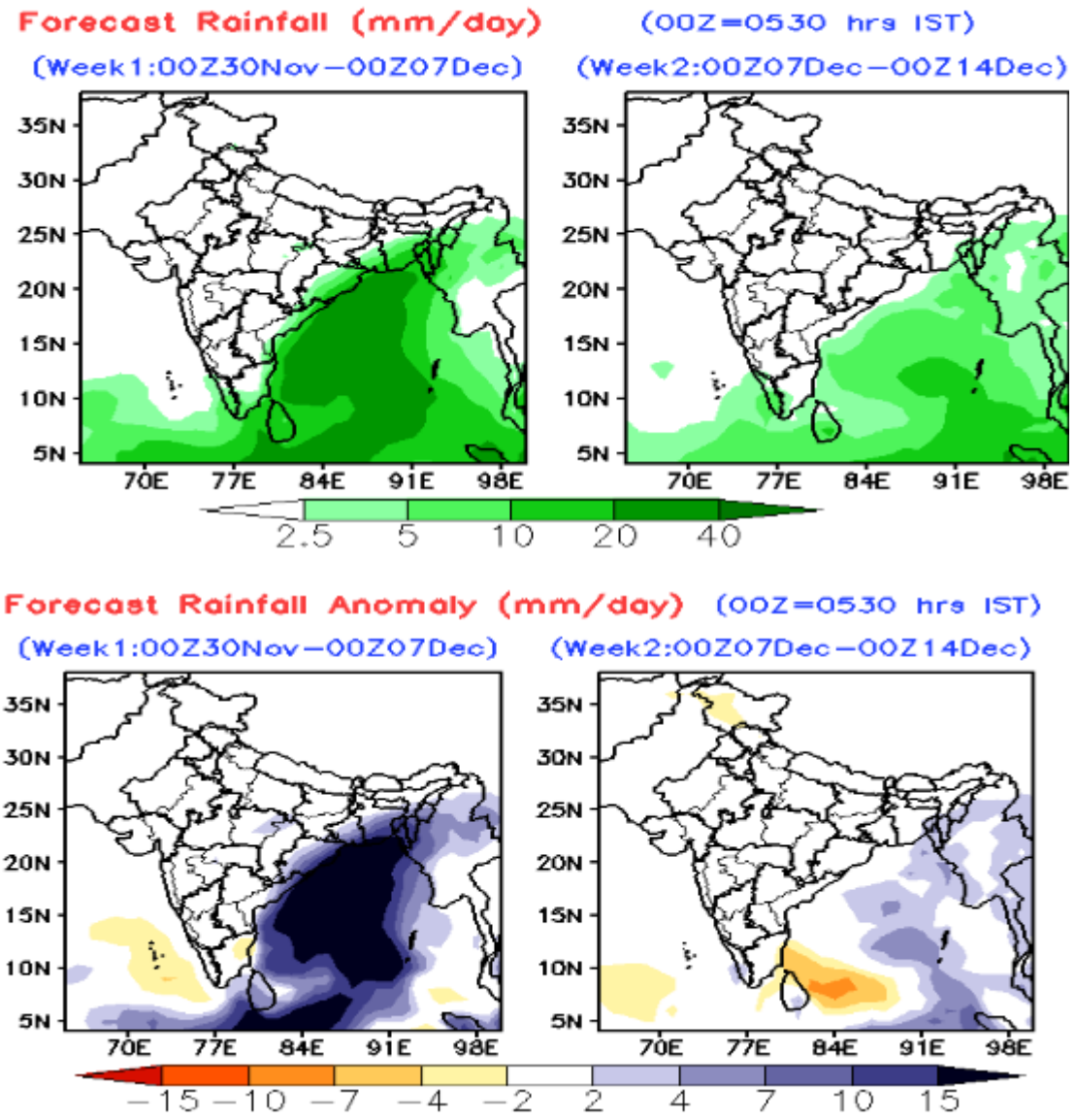


Annex II



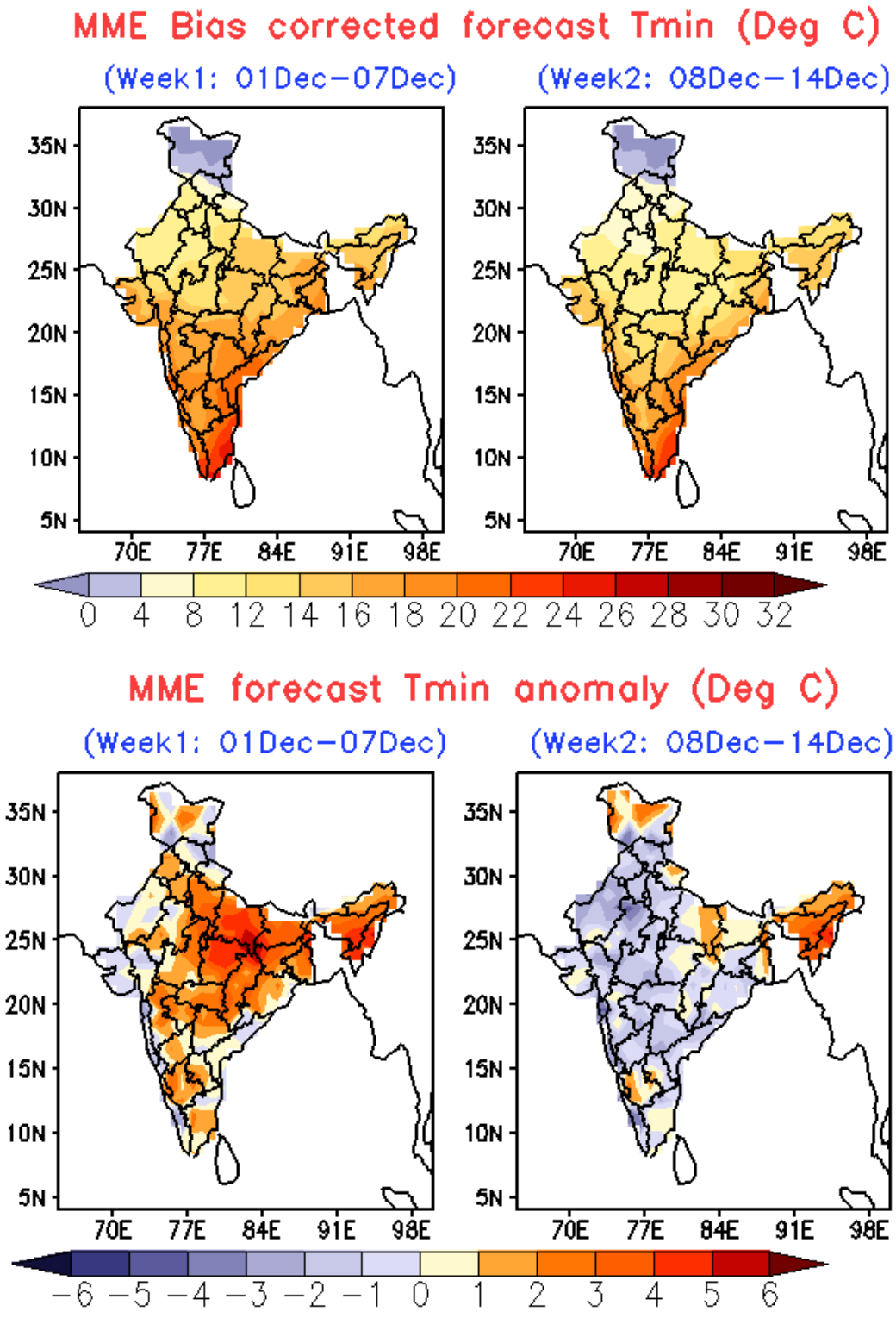
NOTES :
a) RainFall figures are based on operation data.
b) Small figures indicate actual rainfal (mm), while bold figures indicate Normal rainfall (mm).
c) Percentage Departures of rainfall are shown in brackets.

Annexure III



Extended range froecast of weekly dsitirubtion of rainfall in mm per day (top panel) and anomalies(lower panesl) from IMD MME

Annexure IV



Extended range froecast of Minimum Tmperature (top panel) and anomalies(lower panesl) from IMD MME