



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

**Dated: 24 June, 2021**

**Subject: Current Weather Status and Outlook for next two weeks  
(24 June-7 July 2021)**

**a. Significant weather features observed for week ending on 23 June 2021**

**❖ Advance of Southwest Monsoon**

- Southwest Monsoon has further advanced into some more parts of North Arabian Sea, some parts of Saurashtra, most parts of Gujarat region, some parts of southeast Rajasthan and some more parts of Madhya Pradesh and Uttar Pradesh on 18<sup>th</sup> June 2021, after a hiatus of about four days; it has further advanced into remaining parts of North Arabian Sea, Saurashtra, Gujarat region & Madhya Pradesh, entire Kutch, some more parts of Rajasthan and West Uttar Pradesh on 19<sup>th</sup> June 2021; due to lack of favourable conditions, no further advance of Southwest Monsoon has taken place during the remaining part of the week.
- The Northern Limit of Monsoon (NLM) passed through Lat. 20.5°N/ Long. 60°E, Diu, Surat, Nandurbar, Bhopal, Nowgong, Hamirpur, Barabanki, Bareilly, Saharanpur, Ambala and Amritsar in the beginning of the week; it passed through Lat. 21.5°N/ Long. 60°E, Junagarh, Deesa, Guna, Kanpur, Meerut, Ambala and Amritsar on 18<sup>th</sup> June 2021; it passed through Lat. 26°N / Long. 70°E, Barmer, Bhilwara, Dholpur, Aligarh, Meerut, Ambala and Amritsar on 19<sup>th</sup> and remained the same till the end of the week. **(Fig.1)**

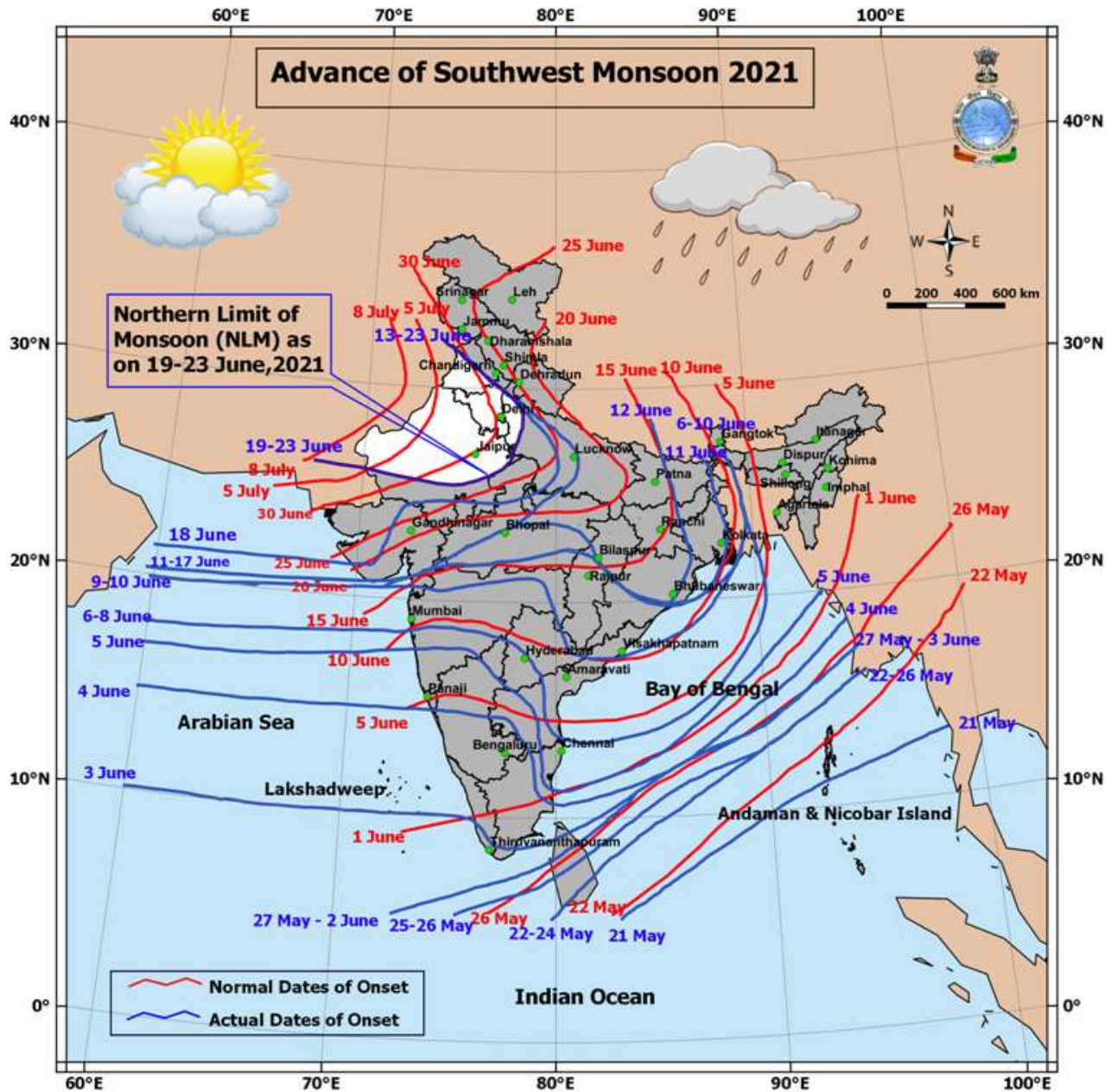


Fig.1

### ❖ Major Weather Systems

- A Low pressure area has formed over southwest Bihar & adjoining southeast Uttar Pradesh on 18<sup>th</sup> June 2021; it lay over southeast Uttar Pradesh & neighbourhood on 19<sup>th</sup> and 20<sup>th</sup>; the Low pressure area has become less marked, however, its remnant cyclonic circulation lay over northwest Bihar & adjoining East Uttar Pradesh extending upto 3.1 km above mean sea level on 21<sup>st</sup> and 22<sup>nd</sup> ; it lay over southwest Bihar & adjoining southeast Uttar Pradesh, extending upto 5.8 km above mean sea level and tilting southwestwards with height on 23<sup>rd</sup> June 2021; under its influence, fairly

widespread to widespread rainfall/thunderstorms had occurred over parts of East India and over parts of East Uttar Pradesh along with isolated heavy/very heavy rainfall activity reported on many days over these areas during the week.

- Under the influence of an off shore trough which persisted on most of the days during the week, fairly widespread to widespread rainfall/thunderstorms had occurred over coastal areas and scattered to fairly widespread rainfall/thunderstorm had occurred over interior parts of South Peninsular India during the week; isolated heavy to very heavy and isolated extremely heavy rainfall also had been reported over these region along with.
- Convergence of westerlies had caused widespread rainfall/thunderstorm activity over coastal areas and scattered to fairly widespread rainfall/thunderstorm activity over interior areas of Maharashtra on many days along with isolated heavy to very heavy rainfall on a few days and isolated extremely heavy rainfall on one or two days over these regions during the week.
- Under the influence of cyclonic circulations in the lower and middle tropospheric levels supported by moisture incursion from Arabian Sea had caused fairly widespread to widespread rainfall/thunderstorm activity over Gujarat State and scattered rainfall activity over West Madhya Pradesh during the week; isolated heavy /very heavy rainfall also had been occurred over Gujarat State on many days and over West Madhya Pradesh on two to three days along with.

### ❖ Heavy Rain:

- ◆ **Heavy to Very heavy rainfall with extremely heavy falls at isolated places** had occurred over Tamil Nadu, Puducherry & Karaikkal and South Interior Karnataka on two days each; over Odisha, Konakan & Goa and Madhya Maharashtra on one day each during the week.
- ◆ **Heavy to Very heavy rainfall at isolated places** had occurred over Coastal Karnataka and Gujarat Region on four days; over Konkan & Goa, East Uttar Pradesh and Bihar on three days each; over Kerala & Mahe, Madhya Maharashtra, Saurashtra & Kutch, Jharkhand and Gangetic West Bengal on two days each; over Sub Himalayan West Bengal & Sikkim, West Uttar Pradesh, Uttarakhand, East & West Madhya Pradesh and North & South Interior Karnataka on one day each during the week.

◆ **Heavy rainfall at isolated places had occurred** over Assam & Meghalaya on six days; over Sub Himalayan West Bengal & Sikkim, Jharkhand, East Rajasthan and Chhattisgarh on four days each; over Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, Odisha, East Madhya Pradesh, Saurashtra & Kutch and Kerala & Mahe on three days each; over Arunachal Pradesh, Bihar, East & West Uttar Pradesh, Uttarakhand, West Rajasthan, West Madhya Pradesh, Konkan & Goa, Tamil Nadu, Puducherry & Karaikkal and South Interior Karnataka on two days each; over Andaman & Nicobar Islands, Himachal Pradesh, Gujarat Region, Madhya Maharashtra, Marathwada, Vidarbha, Telengana and Coastal and North Interior Karnataka on one day each during the week.

### **Temperature Scenario:**

◆ The highest maximum temperature of **44.2°C** had been recorded at **Ganganagar (West Rajasthan)** on **23<sup>rd</sup> June 2021** and the lowest minimum temperature of **17.4°C** had been recorded at **Seoni (East Madhya Pradesh)** on **18<sup>th</sup> June 2021** over the plains of the country during the week.

**LEGEND: A few days- 3 days, Many days- 4 to 5 days and Most days- 6 to 7 days during the week.**

## **b. Weekly rainfall and seasonal rainfall Scenario**

### **Weekly Rainfall Scenario (17-23 June, 2021)**

During the week, rainfall for the country as a whole was above Long Period Average (LPA) by 19%. Details are given in Table 1

The Meteorological sub-division-wise rainfall for the season till 23 June 2021 is given in **Annexure I**.

### **Southwest Monsoon season's Rainfall Scenario (1 June to 23 June, 2021)**

For the country as a whole, cumulative **rainfall during this year's Southwest Monsoon season's Rainfall till 23 June, 2021 is excess with +28 % departure from LPA**. Details of the rainfall distribution over the four broad geographical regions of India are given Table 1

**Table 1: Rainfall status (Week and season)**

Region	WEEK			SEASON		
	17.06.2021 TO 23.06.2021			01.06.2021 TO 23.06.2021		
	Actual	Normal	% Departure	Actual	Normal	% Departure
EAST & NORTH-EAST INDIA	107.0	90.8	+18%	273.2	252.6	+8%
NORTH-WEST INDIA	28.2	19.0	+48%	73.3	46.5	+58%
CENTRAL INDIA	59.7	47.5	+26%	156.5	107.5	+46%
SOUTH PENINSULA	33.1	39.4	-16%	137.6	119.4	+15%
country as a whole	52.3	44.0	+19%	145.8	114.2	+28%

**c. Chief synoptic conditions as on 24 June, 2021**

- ◆ A trough at mean sea level runs from north Punjab to northeast Bay of Bengal across Haryana, West Uttar Pradesh, north Jharkhand and Gangetic West Bengal.
- ◆ A cyclonic circulation lies over Jharkhand & neighbourhood and extends upto 5.8 km above mean sea level tilting southwestwards with height.
  - ◆ A trough from the cyclonic circulation over Jharkhand runs to south Coastal Andhra Pradesh across interior Odisha and extends upto 1.5 km above mean sea level.
  - ◆ An east-west trough runs from cyclonic circulation over Jharkhand to north Gujarat across north Chhattisgarh and south Madhya Pradesh at 3.1 km above mean sea level.
  - ◆ A cyclonic circulation lies over northeast Rajasthan & neighbourhood and extends upto 1.5 km above mean sea level.
    - ◆ A Western Disturbance as a trough in mid & upper tropospheric westerlies runs with its axis at 5.8 km above mean sea level roughly along Long. 71°E to the north of Lat. 25°N.

#### **d. Large scale features as on 24 June, 2021**

- Presently, neutral ENSO conditions are seen over the equatorial Pacific along with substantially 3 warmer subsurface temperatures over the region. Atmospheric patterns also reflect neutral ENSO conditions. The latest MMCFS and other global model forecast indicate that neutral ENSO conditions will continue during the upcoming monsoon season.
- At present, neutral Indian Ocean Dipole (IOD) conditions are prevailing over the Indian Ocean. The latest forecast from the MMCFS and other global models together indicate possibility of development of negative IOD conditions during the monsoon season.
- The Index of Madden Julian Oscillation (MJO) currently lies in Phase 1 with amplitude more than 1. It is likely to propagate eastwards into Phase 2 with amplitude close to 1 during the later part of Week 1 and further into Phase 3 with reduced amplitude (less than 1) during later part of Week 2. Hence the phase of MJO is likely to favour enhancement of convection over the North Indian Ocean (NIO) during Week 2.

#### **e. Forecast for next two week**

#### **Weather systems & associated Precipitation during Week 1 (24 to 30 June, 2021) and Week 2 (01 to 07, 2021)**

##### **Advance of southwest monsoon:**

- The northern Limit of southwest monsoon (NLM) continues to pass through Lat. 26°N / Long. 70°E, Barmer, Bhilwara, Dholpur, Aligarh, Meerut, Ambala and Amritsar (**Annexure I**).
- Present meteorological conditions as well as model forecasts indicate that large scale features as well as prevailing wind patterns over the region are not likely to be favourable during next one week for further advance of southwest monsoon into remaining parts of Rajasthan, west Uttar Pradesh, Haryana, Chandigarh & Delhi and Punjab.

##### **Rainfall for week 1: (24 to 30 June, 2021)**

- A cyclonic circulation lies over Jharkhand & neighbourhood and extends upto mid-tropospheric levels. The circulation is likely to persist over east India during next 3-4 days.

Under its influence, fairly widespread to widespread rainfall with **isolated heavy falls** and thunderstorm & lightning very likely over most parts of East & adjoining Central India (West Bengal, Bihar, Jharkhand, Chhattisgarh, Odisha and East Madhya Pradesh) during 1<sup>st</sup> half of the week and reduce in rainfall intensity thereafter. **Isolated heavy to very heavy rainfall** also very likely over Chhattisgarh on 24th and over Odisha on 25th June, 2021.

- Under the influence of strengthening of moist southwesterly winds; fairly widespread to widespread rainfall very likely over Northeast India during the week. **Isolated heavy rainfall** very likely over Assam & Meghalaya during the week.
- Light/moderate scattered to fairly widespread rainfall activity is very likely over south Peninsular India during the week. However, intensity of the rainfall is very likely to increase in the 2<sup>nd</sup> half. Isolated heavy falls is also likely along the west coast during 2<sup>nd</sup> half of the week.
- Subdue rainfall activity with light to moderate isolated/ scattered rainfall accompanied with thunderstorm & lightning is very likely over most parts of northwest India during the week (**Annexure IV**).
- Overall rainfall activity is very likely to be normal over east & adjoining central India and below normal over northwest India & southwest Peninsula and normal to above normal over northeast India.

#### **Rainfall for week 2: (01 to 07, 2021)**

- **Rainfall activity is likely to increase over most parts of the country in the 2<sup>nd</sup> half of the week 2 covering Peninsular and central India. There is a likely strengthening of westerly winds and off-shore trough along west coast causing widespread rainfall with isolated heavy falls along the west coast during the same period.**
- **Fairly widespread to widespread rainfall with isolated heavy falls is also likely over most parts of northeast and adjoining east India during most days of the week.**

**Overall during week 2, rainfall activity is likely to be normal to above normal over east & northeast India and southeast Peninsula and below normal over northwest India with normal over rest parts of the country.**

#### **Temperature for week 1: (24 to 30 June, 2021)**

- **Maximum Temperature Departures as on 23-06-2021:** Maximum temperatures were

appreciably above normal (3.1°C to 5.0°C) at a few places over Punjab; above normal (1.6°C to 3.0°C) at most places over Haryana, Chandigarh & Delhi, Kerala & Mahe and South Interior Karnataka; at many places over Assam & Meghalaya; at a few places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Saurashtra & Kutch and Coastal Karnataka. **These are below normal or near normal over remaining parts of the country.**

- **These are very likely to be above normal by 2-3°C over most parts of Northwest & adjoining central India and near normal or below normal over remaining parts of the country.**
- **Heat wave conditions are unlikely over any parts of the country. However, due to higher temperatures and high humidity, there will be discomfort over northwest India during the week.**

#### **Temperature for week 2: (01 to 07, 2021)**

- No significant changes in maximum temperatures are likely as compared to week 1. These are very likely to be above normal by 2-3°C over most parts of Northwest & adjoining central India and near normal or below normal over remaining parts of the country. (Annexure III).
- **No heat wave likely over any part of the country during the week.**

#### **f.Cyclogenesis:**

Considering existing environmental features and model guidance, it may be concluded that no cyclogenesis likely over the north Indian Ocean during the ensuing 2 weeks.

[http://www.rsmcnewdelhi.imd.gov.in/uploads/archive/24/24\\_ff1b83\\_Extended%20Range%20Outlook\\_24062021.pdf](http://www.rsmcnewdelhi.imd.gov.in/uploads/archive/24/24_ff1b83_Extended%20Range%20Outlook_24062021.pdf)

**Next weekly update will be issued on next Thursday i.e. 1 July 2021**





# Annexure II

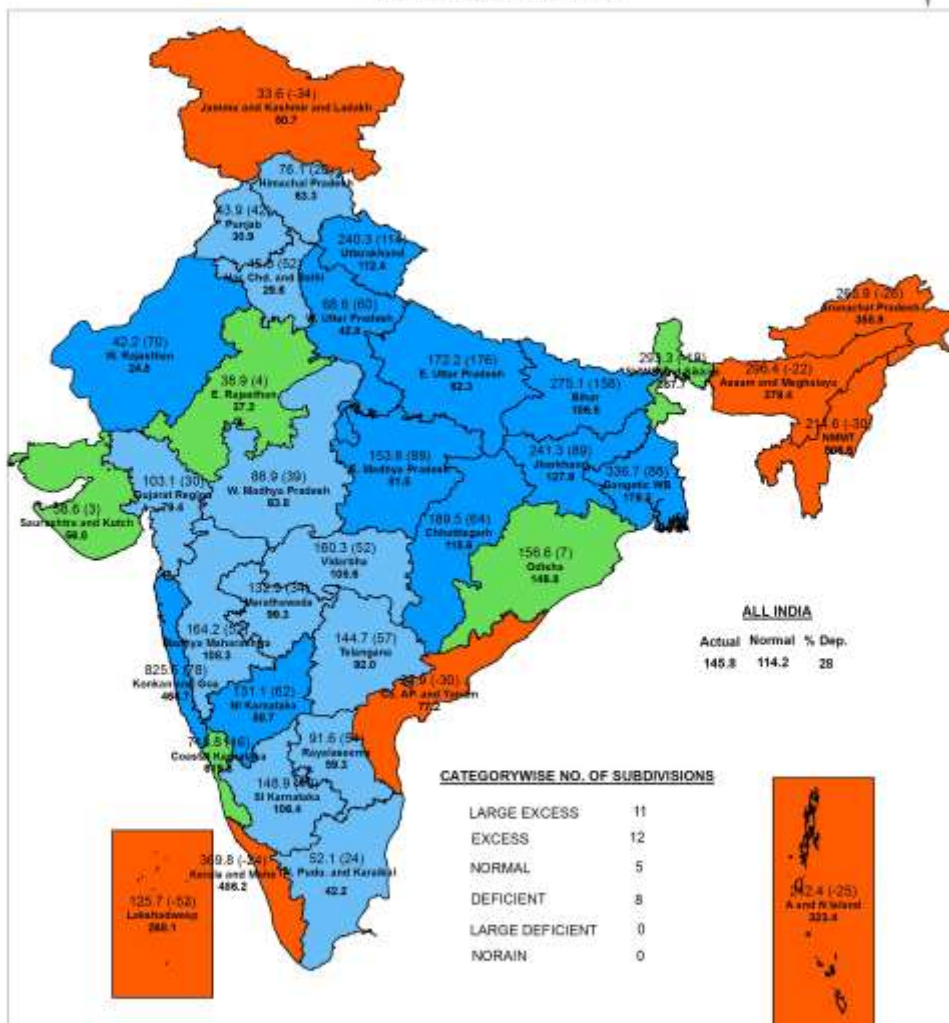


भारत मौसम विज्ञान विभाग  
INDIA METEOROLOGICAL DEPARTMENT

जन मौसम विज्ञान पञ्चाग, नई दिल्ली  
HYDROMET DIVISION, NEW DELHI

## SUBDIVISION RAINFALL MAP

Period : 01-06-2021 To 23-06-2021



### Legend

Large Excess [ 60% or more] Excess [ 20% to 59%] Normal [-19% to 19%] Deficient [-59% to -20%] Large Deficient [-99% to -60%] No Rain [-100%] No Data

### NOTES :

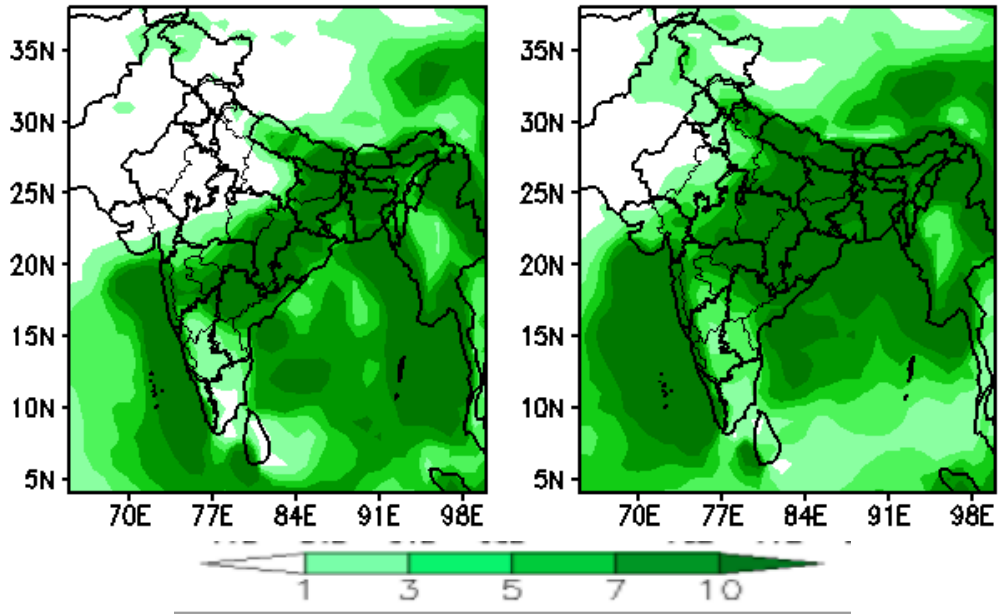
- a) RainFall figures are based on operation data.
- b) Small figures indicate actual rainfall (mm), while bold figures indicate Normal rainfall (mm).
- c) Percentage Departures of rainfall are shown in brackets.

# Annexure III

## Forecast Rainfall (mm/day)

(Week1: 25Jun-01Jul)

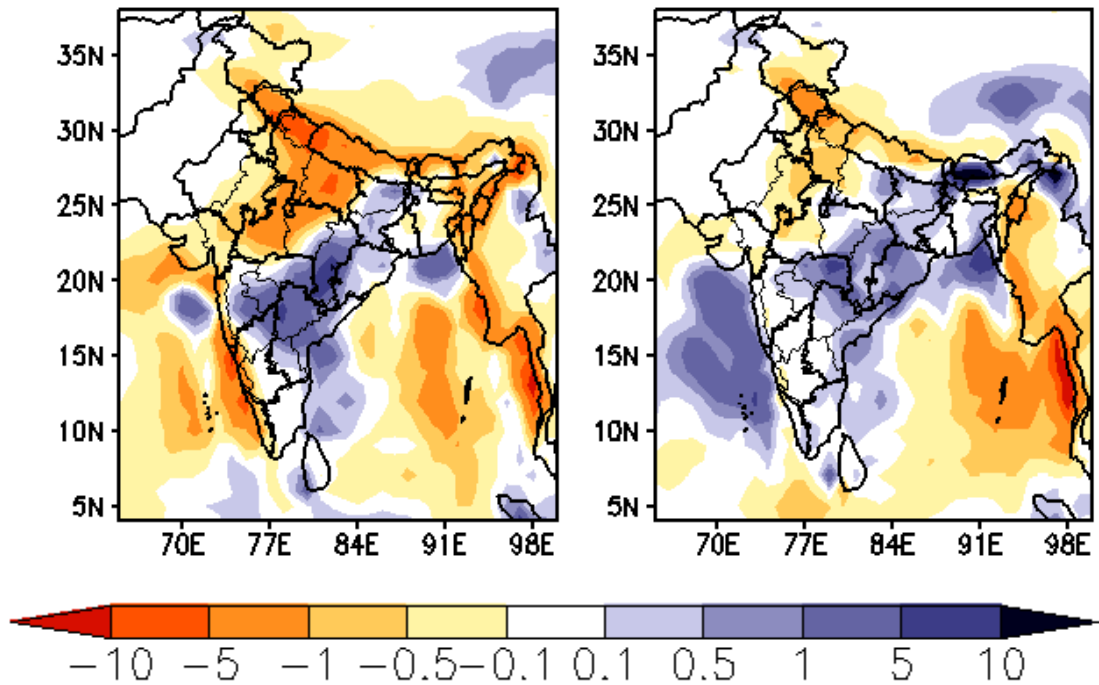
(Week2: 02Jul-08Jul)



## Forecast Rainfall Anomaly (mm/day)

(Week1: 25Jun-01Jul)

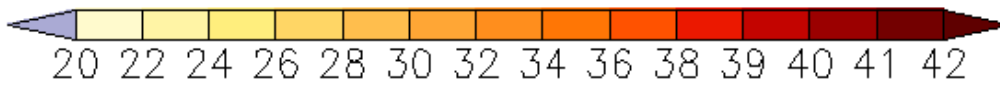
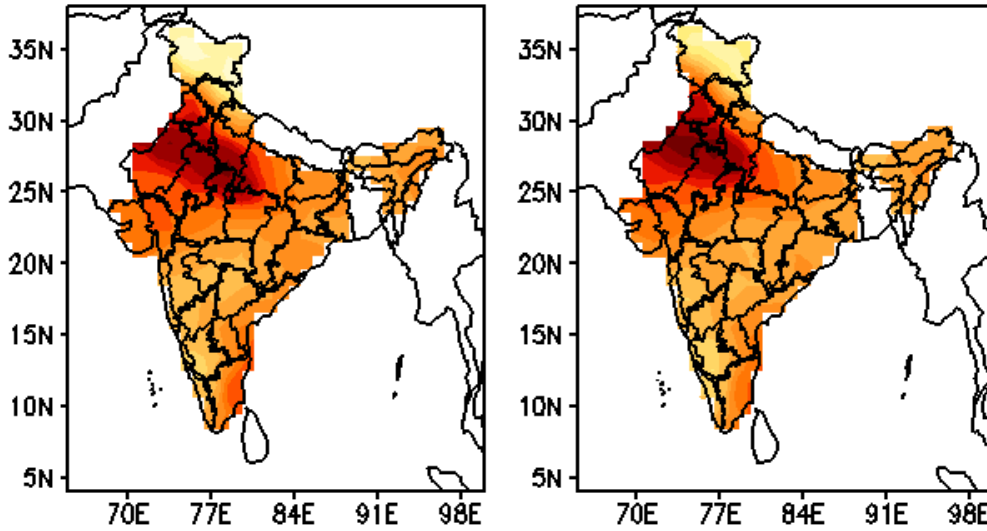
(Week2: 02Jul-08Jul)



**MME Bias corrected forecast Tmax (Deg)**

(Week1: 25Jun-01Jul)

(Week2: 02Jul-08Jul)



**MME forecast Tmax anomaly (Deg C)**

(Week1: 25Jun-01Jul)

(Week2: 02Jul-08Jul)

