



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

Press: Dated: 29 June, 2023

**Subject: Current Weather Status and Extended range Forecast for next two weeks
(29 June-12 July 2023)**

1. Salient Observed Features for week ending on 28 June 2023

- **Rapid advance of the southwest monsoon towards central and northwest India and along west coast during the week:** On 22 June, the Northern Limit of Monsoon (NLM) passed through Lat. 16.5°N/ Long. 55°E, Lat. 17.0°N/ Long. 60°E, Lat. 17°N/ Long. 65°E, Lat. 17°N/ Long. 70°E, Ratnagiri, Raichur, Khammam, Malkangiri, Paralakhemundi, Lat. 21.5°N/Long. 87.5°E, Haldia, Bokaro, Patna, Raxaul and Lat. 28°N/ Long. 84°E and then towards end of the week on 28th June, Northern Limit of Monsoon(NLM) passed through Lat. 29.4°N/ Long. 70.7°E, Bikaner, Narnaul, Firozpur and Lat. 32.5°N/ Long. 72.5°E on 28th June (**refer Annex I for respective dates and areas covered by monsoon**).
- Last week's Low Pressure Area (Remnant of Cyclonic Storm 'Biparjoy') over central parts of Uttar Pradesh with the associated cyclonic circulation extended upto middle tropospheric levels persisted over the same area during 22nd to 24th June and then lay over central parts of south Uttar Pradesh with associated cyclonic circulation extended upto 1.5 km above mean sea level on 25th and then merged with the lower levels trough ran from northwest Rajasthan to Northeast Bay of Bengal on 26th June.
- **Formation of Season's 1st monsoonal low pressure area over Bay of Bengal:** A Low Pressure Area was formed over Northwest Bay of Bengal & adjoining north Odisha-West Bengal coasts with associated cyclonic circulation extended upto 7.6 km above mean sea level on 25th. It moved west-northwestwards and lay over north interior Odisha and adjoining south Jharkhand & north Chhattisgarh on 26th & 27th and over northeast Madhya Pradesh and neighbourhood on 28th June with the associated cyclonic circulation extended upto 7.6 km above mean sea level for all dates.
- Due to slow west-northwestwards movement of low pressure system and associated cyclonic circulation from Northwest Bay of Bengal adjoining north Odisha-West Bengal coasts to northeast Madhya Pradesh

during 24th-28th June and persistence of a trough that ran at lower levels from northwest Rajasthan to north Bay of Bengal, along northern plains of India during the week, isolated heavy to very heavy rainfall occurred over Odisha during 24th to 27th June; Chhattisgarh during 23rd-29 June with isolated extremely heavy rainfall on 27th; Jharkhand received isolated heavy to very heavy rainfall on 27th June; East Madhya Pradesh during 24th -29th June with isolated extremely heavy rainfall on 28th & 29th and isolated heavy to very heavy rainfall occurred over Vidarbha on 28th June. In addition, due to last week's Low Pressure Area (Remnant of Cyclonic Storm 'Biparjoy') further persisted and moved from central parts of Uttar Pradesh towards southeast Uttar Pradesh during 22nd-25th June, West Madhya Pradesh received isolated heavy to very heavy rainfall in all dates in the week during 22nd -29th June.

- With a cyclonic circulation lay over Northeast Arabian sea adjoining Gujarat coast during 23rd-28th June at middle level and formation and persistence of the off-shore trough at mean sea level ran along west coast of India, the Arabian Sea branch of the monsoon also became active and under their influence, Coastal Karnataka received isolated heavy to very heavy rainfall on 23rd, 26th, 27th & 28th June; Konkan & Goa during 25th to 29th June with isolated extremely heavy rainfall on 25th & 29th; Madhya Maharashtra received isolated heavy to very heavy rainfall on 29th June and Gujarat Region received during 26th to 29th June.
- **Analysis of Weekly overall Rainfall distribution during the week ending on 28 June 2023 and monsoon Season's Rainfall Scenario (1 -28 June 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 28th June 2023 was 18%, over south Peninsula as -11%, central India as +52% while over northwest India had +51 %. All India Seasonal cumulative rainfall % departure during this year's **monsoon Season's Rainfall** during **1st-28th June 2023** is -16% and over northwest India, it is +42%. 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		
	22.06.2023 TO 28.06.2023			01.06.2023 TO 28.06.2023		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	69	95.1	-27%	238.4	302.7	-21%

NORTH-WEST INDIA	38.7	25.7	+51%	96.3	67.7	+42%
CENTRAL INDIA	89.2	58.7	+52%	127.3	153	-17%
SOUTH PENINSULA	35.7	40.1	-11%	82.1	149	-45%
Country as a whole	60	50.6	18%	126.6	149.8	-16%

2. Large scale features

- Currently, ENSO-neutral conditions are observed across the equatorial Pacific with near to above average sea surface temperatures (SSTs) over most of the central and the east equatorial Pacific. The latest forecast from MMCFS and other global models indicates high probabilities for the development El Niño conditions during the monsoon season. Currently, neutral Indian Ocean Dipole (IOD) conditions are also prevailing over the Indian Ocean and the latest forecast from MMCFS and other global climate models indicates the development of positive IOD conditions over the Indian ocean during the monsoon season.
- The Madden Julian Oscillation (MJO) Index is currently in Phase 3 with amplitude less than 1. Thereafter, it would like to then retreats eastward to 1 across phase 2 with amplitude less than 1 during week 1 and likely to remain in Phase 1 during week 2 with amplitude increasing to near 1 towards end of the week 2. Hence, MJO is likely to support strongly further the enhancement of current convective activity over both the Bay of Bengal (BoB) and Arabian Sea (AS) during week 1.

3. Forecast for next two week

Forecast for next two week

Weather systems & associated Precipitation during Week 1 (29 June to 05 July, 2023) and Week 2 (06 to 12 July, 2023)

Weather systems & associated Precipitation during Week 1 (29 June to 05 July, 2023)

Advance of Southwest Monsoon (Annexure I)

- ❖ Conditions are favourable for further advance of Southwest Monsoon into remaining parts of the country (i.e. remaining parts of Rajasthan and Haryana and Punjab) during next 2 days.

Significant Weather features, Forecast and Warning during the week

- ❖ The **Low Pressure Area** now lies over central parts of north Madhya Pradesh & neighbourhood.
- ❖ An east-west trough runs from northwest Rajasthan to Nagaland across the centre of Low Pressure Area in lower tropospheric levels.
- ❖ The off-shore trough at mean sea level runs from Maharashtra coast to Kerala coast.
- ❖ A cyclonic circulation lies over south Gujarat & neighbourhood in middle tropospheric levels.

Weather Forecast and Warning:

Northwest India:

- ❖ Light/moderate fairly widespread to widespread rainfall very likely the region during 1st half of the week and decrease thereafter. Isolated **Heavy rainfall** very likely over Himachal Pradesh, Haryana on 29th; East Rajasthan during 29th June -03rd July and Uttarakhand & West Rajasthan on 29th&30th June.
- ❖ Light/moderate scattered to fairly widespread rainfall very likely over the rest parts of central India during the week.

Central India:

- ❖ Light/moderate fairly widespread to widespread rainfall with isolated **heavy to very heavy falls very likely** over Madhya Pradesh on today and isolated heavy for subsequent 2 days.
- ❖ Light/moderate scattered to fairly widespread rainfall very likely over the rest parts of central India during the week.

West India:

- ❖ Light/moderate fairly widespread to widespread rainfall with **isolated Heavy to very Heavy rainfall** is very likely over Konkan & Goa and Ghat areas of Madhya Maharashtra during the week and Gujarat State during next 2 days. Isolated **extremely heavy rainfall** also very likely over Konkan and Gujarat region on 29th June.
- ❖ Light/moderate scattered to fairly widespread rainfall very likely over the rest parts of central India during the week.

East & adjoining Northeast India:

- ❖ Fairly widespread to widespread light/moderate rainfall with isolated **Heavy to Very Heavy falls** very likely over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Arunachal Pradesh during the week. Isolated **heavy rainfall** also likely over Gangetic West Bengal on 29th & 30th and Bihar on 29th, 30th June & 03rd to 05th July.
- ❖ Light/moderate scattered to fairly widespread rainfall very likely over the rest parts of East & adjoining Northeast India during the week.

South India:

- ❖ Light/moderate fairly widespread to widespread rainfall very likely over Kerala & Mahe, Coastal & South Interior Karnataka during the week. **Isolated heavy rainfall** also likely over Coastal Karnataka & Kerala during the week; Coastal Andhra Pradesh on 02nd & 03rd July and South Interior Karnataka & Tamil Nadu on 03rd & 04th July. Isolated **very heavy rainfall** also likely over Coastal Karnataka & Kerala on 03rd & 04th July.
- ❖ Light/moderate scattered to fairly widespread rainfall very likely over the rest parts of south

India during the week.

Rainfall for week 2 (06 to 12 July, 2023):

- ✓ Light to moderate fairly widespread to widespread rainfall/thunderstorm is likely over South Peninsular India during most days of the week. Isolated heavy to very heavy rainfall likely over Kerala & coastal Karnataka and isolated heavy rainfall over rest parts of South Peninsular India during many days of the week.
- ✓ Light to moderate scattered/fairly widespread rainfall/thunderstorm is likely over central, east & northeast India during the week. Isolated heavy rainfall is also likely over northeast & adjoining east India during many days of the week.
- ✓ Isolated to scattered rainfall/thundershower is also likely over rest parts of the country during the week.
- ✓ **Overall, rainfall activity is likely to be above normal over south Peninsular India; near normal over central, east & northeast India and below normal over parts of northwest India and Gujarat state during the week.**

Maximum Temperatures and its forecast during Week 1 (29 June to 05 July, 2023) and Week 2 (06 to 12 July, 2023):

Maximum Temperature Forecast and Heat Wave Warnings for week 1 (29 June to 05 July, 2023):

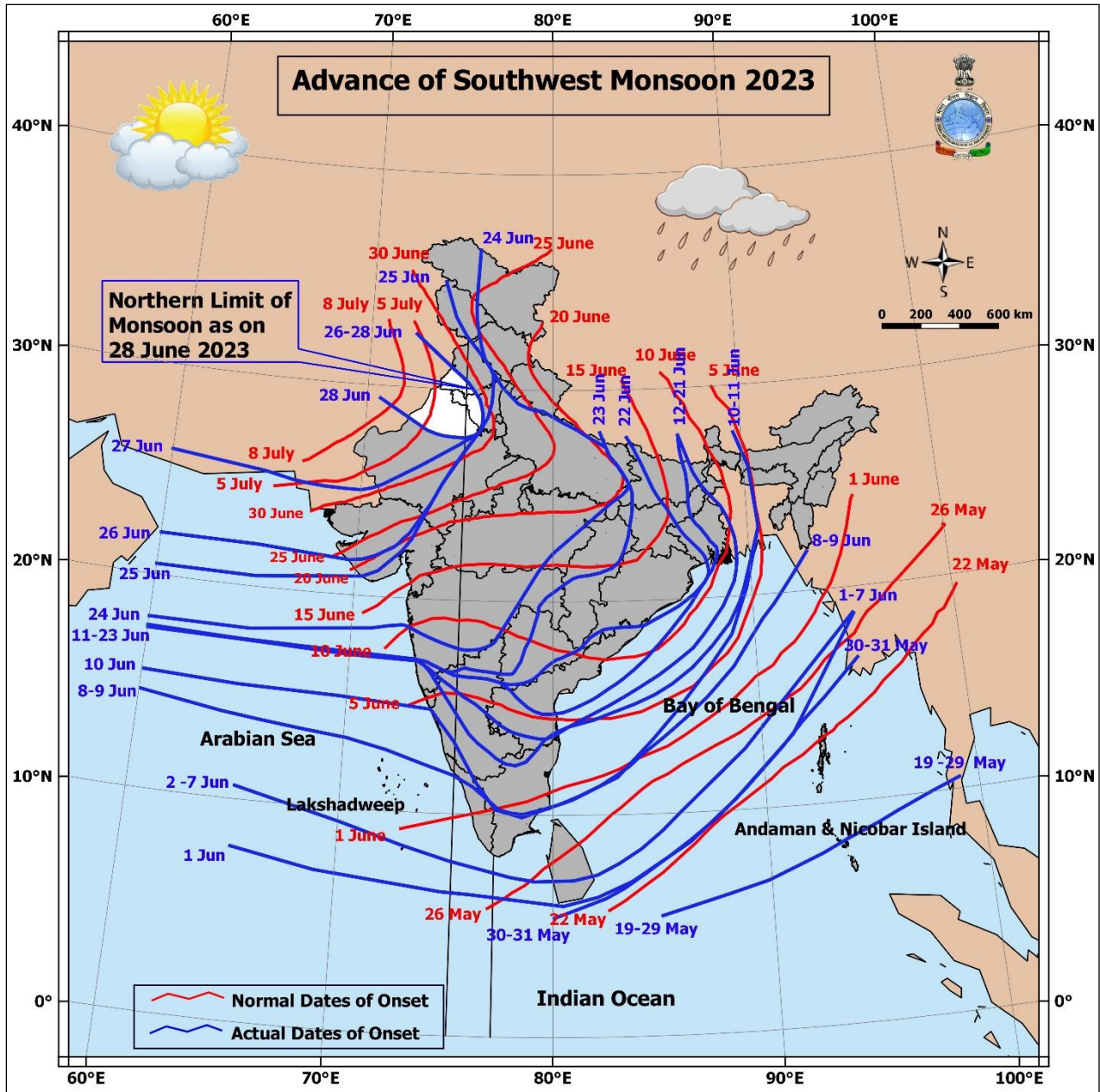
- Yesterday, Maximum temperatures were above normal (1.6°C to 3.0°C) at many places over Coastal Andhra Pradesh & Yanam and at isolated places over Tamil Nadu, Puducherry & Karaikal. They were below normal over rest parts of the country. Yesterday, the highest maximum temperature of 40.4°C was reported at Madurai (Tamil Nadu).
- Maximum temperatures likely to be below normal to near normal over most parts of the country except parts of east India, where these are likely to be above normal by 2-3°C during the week.
- **No Heat wave conditions likely to occur over any part of the country.**

Maximum Temperature for week 2 (06 to 12 July, 2023):

- Maximum temperatures likely to be below normal to near normal over most parts of the country except east & adjoining northwest India, where these are likely to be above normal by about 2°C during the week.
- **No Heat wave conditions likely to occur over any part of the country.**

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

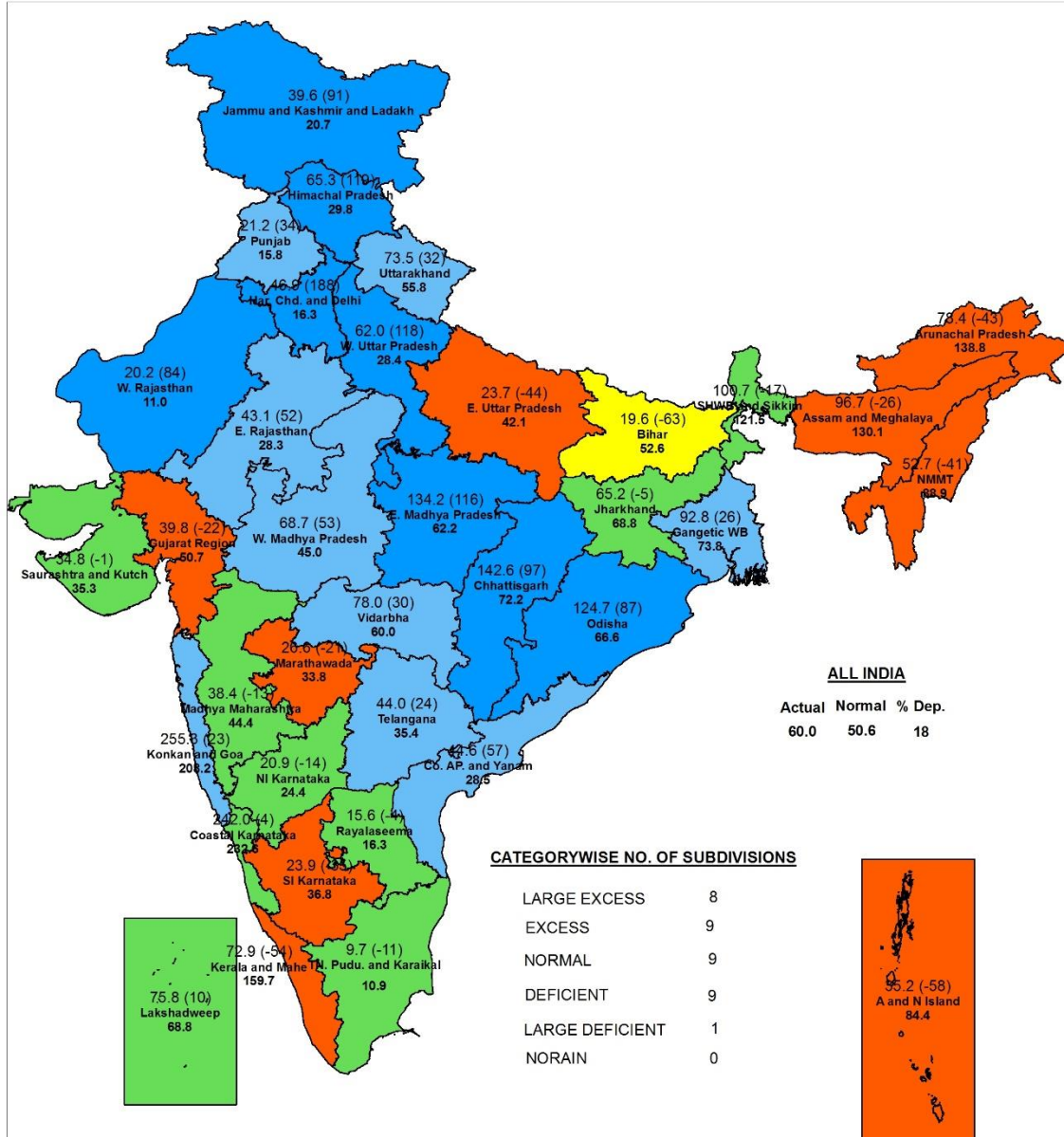


भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

जल मौसम विज्ञान प्रभाग, नई दिल्ली
HYDROMET DIVISION, NEW DELHI

SUBDIVISION RAINFALL MAP

Week : 22-06-2023 To 28-06-2023



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 :

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

Annex III

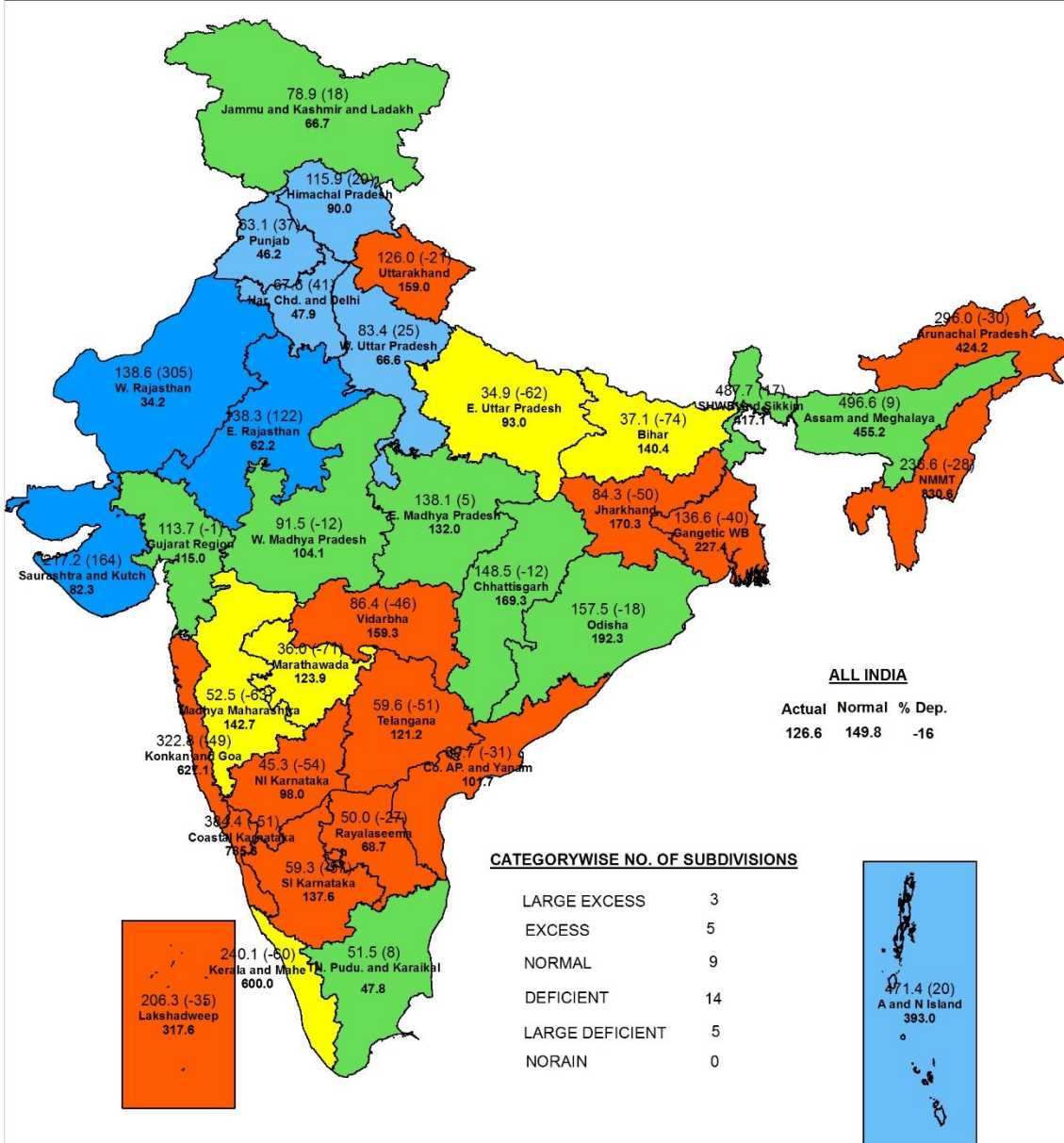


भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

जल मौसम विज्ञान प्रभाग, नई दिल्ली
HYDROMET DIVISION, NEW DELHI

SUBDIVISION RAINFALL MAP

Period : 01-06-2023 To 28-06-2023



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

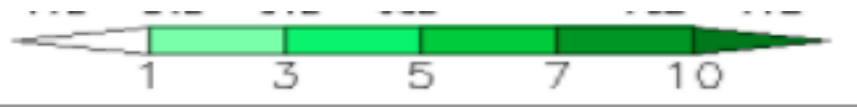
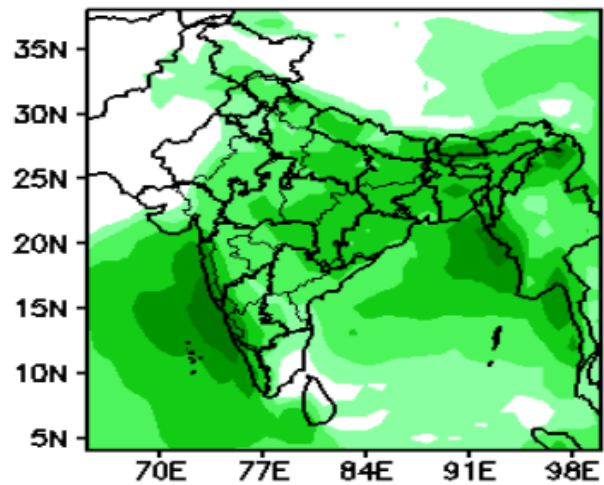
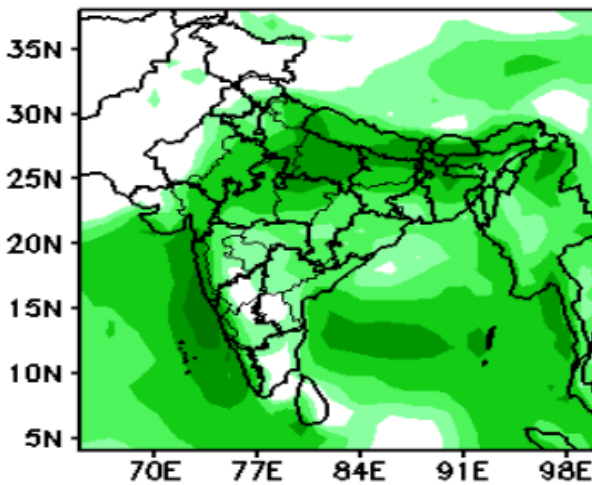
NOTES :

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

Forecast Rainfall (mm/day)

(Week1: 30Jun-06Jul)

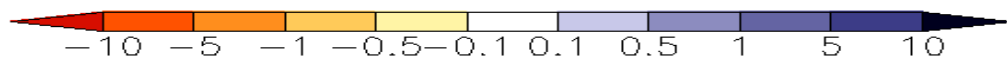
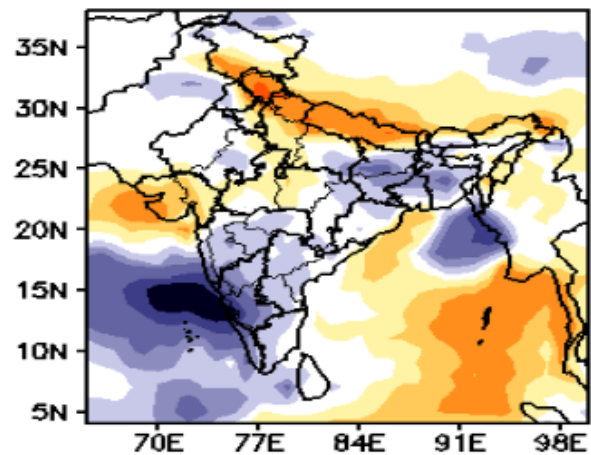
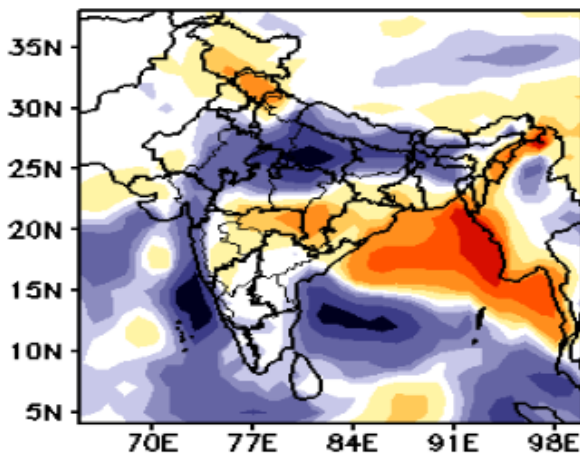
(Week2: 07Jul-13Jul)



Forecast Rainfall Anomaly (mm/day)

(Week1: 30Jun-06Jul)

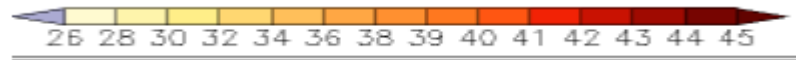
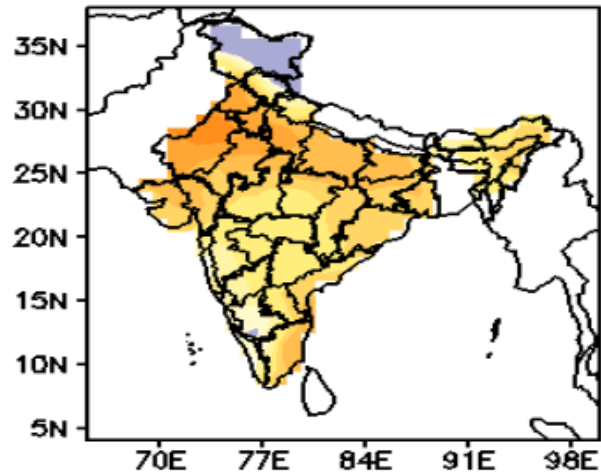
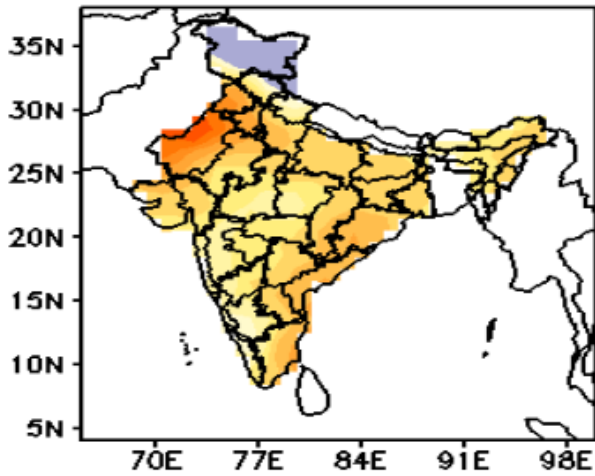
(Week2: 07Jul-13Jul)



MME Bias corrected forecast Tmax (Deg)

(Week1: 30Jun-06Jul)

(Week2: 07Jul-13Jul)



MME forecast Tmax anomaly (Deg C)

(Week1: 30Jun-06Jul)

(Week2: 07Jul-13Jul)

