



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

Press Release: Dated: 20 June 2024

Subject: Current Weather Status and Extended range Forecast for next two weeks (20 June-3 July, 2024)

1. Salient Observed Features for week ending 19 June 2024

- **Heat wave to severe Heat wave spell continued to prevail over north and adjoining central India during the week and further intensified and extended spatially:** Last week's Heat wave to severe heat wave conditions over northern parts of India and adjoining central India continued to prevail during all dates of the week till 19 June and was further intensified and extended during 2nd half of the week. During beginning of the week, on 13 June, it was mainly observed over most parts of Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Jharkhand; many parts of north Rajasthan; in some parts of Himachal Pradesh, southwest Bihar, north Odisha and in isolated pockets of Gangetic West Bengal. During 2nd half of the week, it was extended spatially with north-wards to Jammu region and Uttarakhand and south-wards to Madhya Pradesh and Vidarbha. **The maximum temperature across plains of these areas was remained at the range of 43-47degC, above normal by 5-8degC, in most dates during the week. Minimum temperature was also remained significantly higher than normal with actual minimum reported at the range of 30-35degC over these areas which was above normal by 4-7degC in most dates. It may be noted that this heat wave spell was started since 7th June, mainly covering few pockets in southern parts of Uttar Pradesh and northwest Madhya Pradesh.**
- **Temperature Scenario:** The highest maximum temperature of **47.6°C** had been recorded at **Prayagraj (East Uttar Pradesh)** on **16th & 17th June, 2024** and the lowest minimum temperature of

20.6°C had been recorded at **Rajgarh (West Madhya Pradesh)** on **13th June 2024** over the plains of the country during the week.

- **About Further Advance of Southwest Monsoon during the week:** There was no further advance of Monsoon during the week. The Northern Limit of Monsoon continued to pass through 20.5°N/60°E, 20.5°N/63°E, 20.5°N/70°E, Navsari, Jalgaon, Amravati, Chandrapur, Bijapur, Sukma, Malkangiri, Vizianagaram, 19.5°N/88°E, 21.5°N/89.5°E, 23°N/89.5°E and Islampur from 13 June till 19th June. Hence, monsoon advance, was stagnated during the week till 19th June 2024(Refer Monsoon advance map in Figure).
- **Heavy rainfall**
 - ✓ Isolated extremely heavy rainfall observed in most dates over Meghalaya and Sub-Himalaya West Bengal during the week and over Assam on 13th and 17th June.
 - ✓ **Exceptional heavy rainfall was also observed over Meghalaya on 15th and 18th June(Mawsynram-64cms, Cherrapunji-51cm and Shella-40 cm on 15th June; and Mawsynram-78, Cherrapunji(Rkm)-43, Cherrapunji-39, Mawkyrwat-30 on 18th June). Such extremely heavy rainfall spells also caused flood conditions and impacted lives in the region. Reasons of this extreme and exceptional heavy rainfall:** a) Presence of cyclonic circulation in lower tropospheric level in the region b) Strong southwesterly/southerly winds and moisture incursion from Bay of Bengal to northeast India in lower tropospheric levels.
- **Analysis of Weekly overall Rainfall distribution during the week ending on 19 June 2024 and Monsoon Season's Rainfall Scenario (1-19 June 2024):** 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 19 June was -33 %. All India Seasonal cumulative rainfall % departure during this year's **Summer Season's** during **1 to 19 June 2024** is -18 % and over northwest India, it is -70%. 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 I and II respectively.

Table 1: Rainfall status (Week and season)

Region	WEEK			SEASON		
	13.06.2024 TO 19.06.2024			01.06.2024 TO 19.06.2024		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	99.7	80.6	+24%	168.5	183.6	-8%
NORTH-WEST INDIA	1.8	17.4	-90%	10.8	36.4	-70%
CENTRAL INDIA	19.7	45.2	-56%	54.6	80.2	-32%
SOUTH PENINSULA	24.6	42.2	-42%	112.6	98.0	+15%
Country as a whole	27.9	41.7	-33%	70.7	86.7	-18%

2. Large scale features

The Madden Julian Oscillation (MJO) index is currently located in phase 8 with very weak amplitude less than 1. The forecasts from different models are in general very much incoherent. The GEFS and ECMWF ensemble members are showing lack of consensus amongst them with very large spreads. However, dynamical models predict a very weak MJO signal within phase 1 during first week. Subsequently, there is a sign of gradual amplification, emergence from western hemisphere and propagation towards Indian Ocean during the later part of second week. Thus MJO, phase and amplitude are not favourable for the convective activity and cyclogenesis over the North Indian Ocean region during the entire first week. It is likely to support enhancement of the convective activity over Arabian Sea (AS) and subsequently over Bay of Bengal (BoB) during second week. The forecast from different models indicate that it would move across phases 7 and 8 during the entire forecast period with weak amplitude (less than 1). Dynamical models predict a very weak MJO signal over the next two weeks. Thus

MJO, phase and amplitude are not favourable for enhancement of convective activity and cyclogenesis over the North Indian Ocean region during the entire forecast period.

3. Forecast for next two week

Weather systems & associated Precipitation during Week 1 (20 to 26 June, 2024) and Week 2 (27 June to 03 July, 2024)

Weather systems & associated Precipitation during Week 1 (20 to 26 June, 2024)

Advance of Southwest Monsoon:

- ❖ Southwest Monsoon has further advanced into some more parts of Vidarbha, Chhattisgarh, Odisha, Northwest Bay of Bengal, Sub-Himalayan West Bengal and some parts of Bihar.
- ❖ The Northern Limit of Monsoon now passes through 20.5°N/60°E, 20.5°N/63°E, 20.5°N/70°E, Amravati, Gondia, Durg, Rampur (Kalahandi), 19.5°N/86.5°E, 23°N/89.5°E, Malda, Bhagalpur and Raxaul.
- ❖ Conditions are favourable for further advance of Southwest Monsoon into some more parts of North Arabian Sea, Gujarat State, Maharashtra, Madhya Pradesh, Odisha, Northwest Bay of Bengal, some parts of Gangetic West Bengal, remaining parts of Sub-Himalayan West Bengal, some parts of Jharkhand, some more parts of Bihar and some parts of East Uttar Pradesh during next 3-4 days.
- ❖ It is likely to cover some more parts of central India and northwest India (including Western Himalayan Region) for subsequent days of the week.

Weather Systems and Forecast & Warnings:

- ❖ A cyclonic circulation lies over Assam & neighbourhood and another over Bihar & neighbourhood in lower tropospheric levels. Strong southwesterly/southerly winds are prevailing from Bay of Bengal to northeast India in lower tropospheric levels. Under their influence:
 - Widespread light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 Kmph)** likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal during the week.
 - Isolated **heavy to very heavy rainfall** very likely over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh during most days of the week and isolated heavy rainfall over Nagaland, Manipur, Mizoram & Tripura on 22nd & 23rd June.
 - Fairly widespread light to moderate rainfall accompanied with **thunderstorm, lightning & gusty winds(30-40 Kmph)** very likely over Gangetic West Bengal, Bihar, Jharkhand, Odisha, Andaman & Nicobar Islands during the week.
 - Isolated **heavy rainfall** very likely over Bihar during most days of the week, Jharkhand on 20th & 21st and Andaman & Nicobar Islands on 23rd & 24th June. Isolated **very heavy rainfall** likely over Bihar today.

- ❖ A trough at mean sea level runs off Karnataka and Kerala coasts and due to strong westerly winds along the West Coast.
- Scattered to fairly widespread light to moderate rainfall accompanied with **thunderstorm, lightning** likely over Gujarat state, Konkan & Goa, Madhya Maharashtra & Marathwada during the week.
- Isolated **heavy to very heavy rainfall** very likely over Konkan & Goa and ghat areas of Madhya Maharashtra during most day of the week and isolated **heavy rainfall** over Gujarat region on 20th & 23rd June, 2024.
- Fairly widespread to widespread light to moderate rainfall accompanied with **thunderstorm, lightning& gusty winds(30-40 Kmph)** likely over Karnataka, Kerala & Mahe, Lakshadweep; isolated to scattered light to moderate rainfall over Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, Tamil Nadu, Puducherry & Karaikal during the week.
- Isolated **heavy to very heavy rainfall** very likely over Kerala & Mahe, Coastal & South Interior Karnataka, Tamil Nadu during most days of the week; Isolated heavy rainfall is also likely over North Interior Karnataka during 22nd-24th; Lakshadweep on 22nd & 23rd June.
- **Isolated extremely heavy rainfall also likely over Coastal Karnataka on 22nd & 23rd and Konkan & Goa, Kerala & Mahe & South Interior Karnataka on 23rd June, 2024.**

- ❖ Scattered to fairly widespread rainfall with **thunderstorm, lightning& gusty winds (40-60 Kmph)** very likely over Madhya Pradesh, Vidarbha, Chhattisgarh during the week. Isolated **heavy rainfall** very likely over Vidarbha, Chhattisgarh on 20th & 21st and West Madhya Pradesh on 22nd June.

- ❖ A Western Disturbance seen as a cyclonic circulation over Jammu-Kashmir & neighbourhood in lower & middle tropospheric levels and an induced cyclonic circulation lies over north Haryana in lower tropospheric levels. Under its influence; Scattered light to moderate rainfall with **thunderstorm, lightning & gusty winds (30-40 Kmph)** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, over Punjab, Haryana-Chandigarh-Delhi, West Uttar Pradesh and Rajasthan today.
- ❖ Scattered to fairly widespread rainfall over Uttarakhand and East Uttar Pradesh during the week. Isolated **heavy rainfall** very likely over Uttarakhand on 23rd & 24th and East Uttar Pradesh on 24th June.
- ❖ **Strong surface winds** (speed reaching 25-35 Kmph) very likely over plains of Northwest India during next 24 hours.

Rainfall for week 2 (27 June to 03 July, 2024):

- ❖ Under the favourable monsoon conditions, rainfall activity is likely to be near normal to above normal over most parts of the country, except Western Himalayan Region and West Rajasthan, where it is likely to be below normal.
- ❖ Southwest Monsoon likely to advance over remaining parts of Central India and most parts of remaining parts of northwest India during the week.

Maximum temperatures for Week 1 (20 to 26 June, 2024) and Week 2 (27 June to 03 July, 2024)

Maximum temperatures for Week 1 (20 to 26 June, 2024):

- ❖ No significant change in maximum temperatures very likely over many parts of Northwest India (except East Uttar Pradesh) during next 2 days and rise by about 2-3°C thereafter.
- ❖ Fall by about 2-3°C in maximum temperatures very likely over East India during next 2 days and no significant change thereafter.
- ❖ No significant change in maximum temperatures very likely over rest parts of the country.

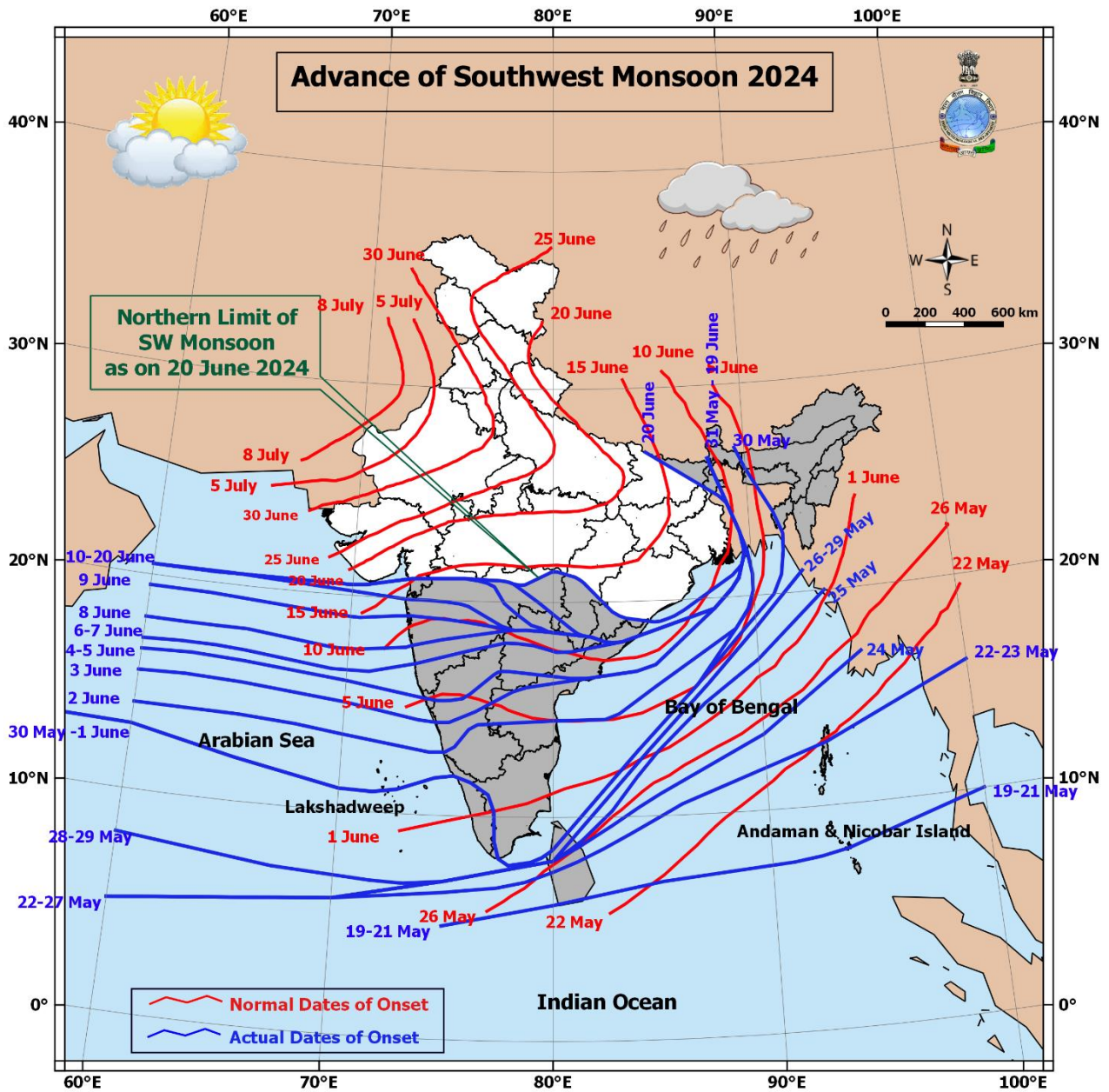
Heat Wave, Hot & Humid Weather and Warm Night warning:

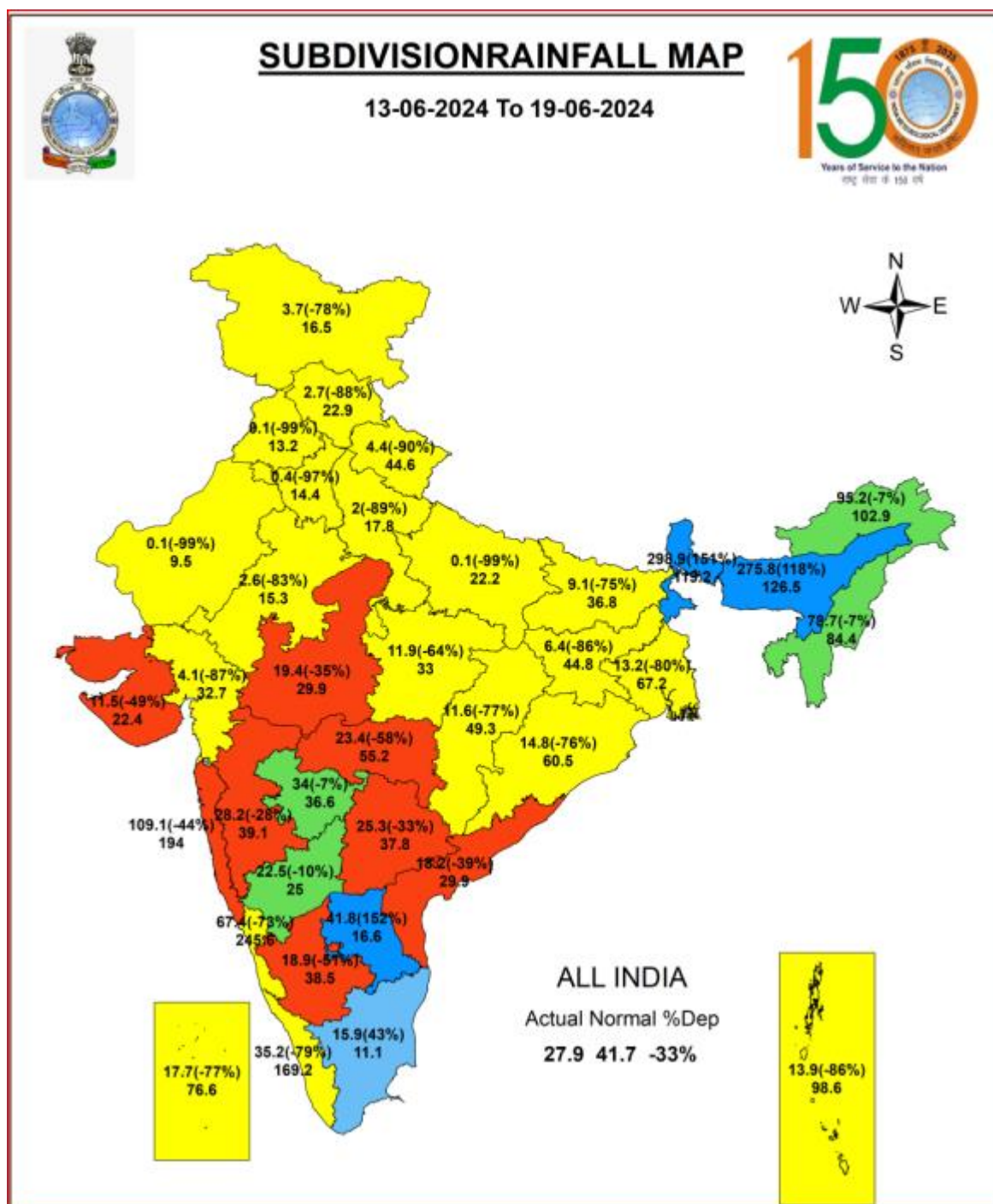
- ❖ **Heat wave conditions** very likely in isolated/some pockets of West Uttar Pradesh during 20th-23rd; East Uttar Pradesh on 20th and **abates thereafter**.
- ❖ **Warm night conditions** very likely in isolated pockets of north Rajasthan during 20th-22nd June, 2024.
- ❖ **Hot & Humid weather** very likely over Odisha on 20th & 21st June, 2024.

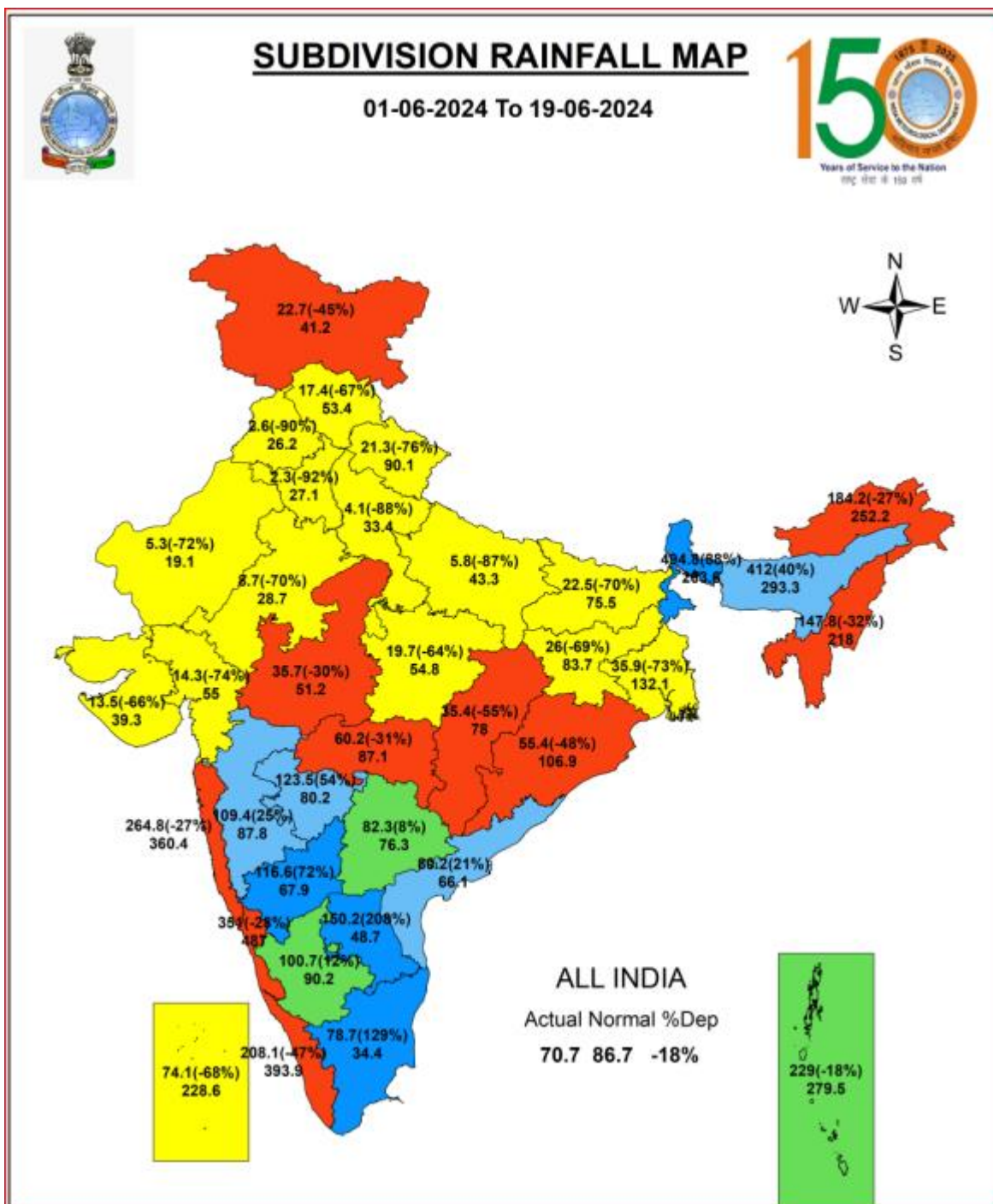
Maximum temperatures and heat wave for Week 2 (27 June to 03 July, 2024):

- Maximum temperatures are likely to fall gradually by 2-3°C over many parts of northwest India. These are very likely to be above normal by 1-3°C over many parts of northwest India and some parts of East India. It is likely to be near normal or below normal over rest parts of the country.
- No significant heat wave likely over any part of the country during the week.
- For detailed Heat wave outlook please visit (https://internal.imd.gov.in/pages/heatwave_mausam.php)

Fig-1





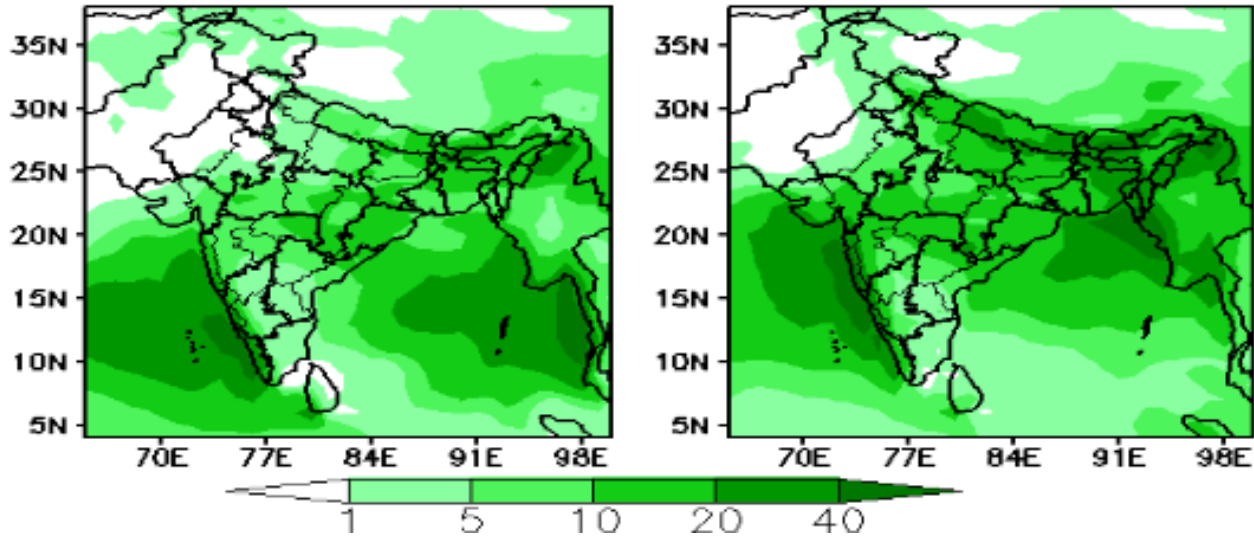


Forecast Rainfall (mm/day)

(00Z=0530 hrs IST)

(Week1:00Z20Jun-00Z27Jun)

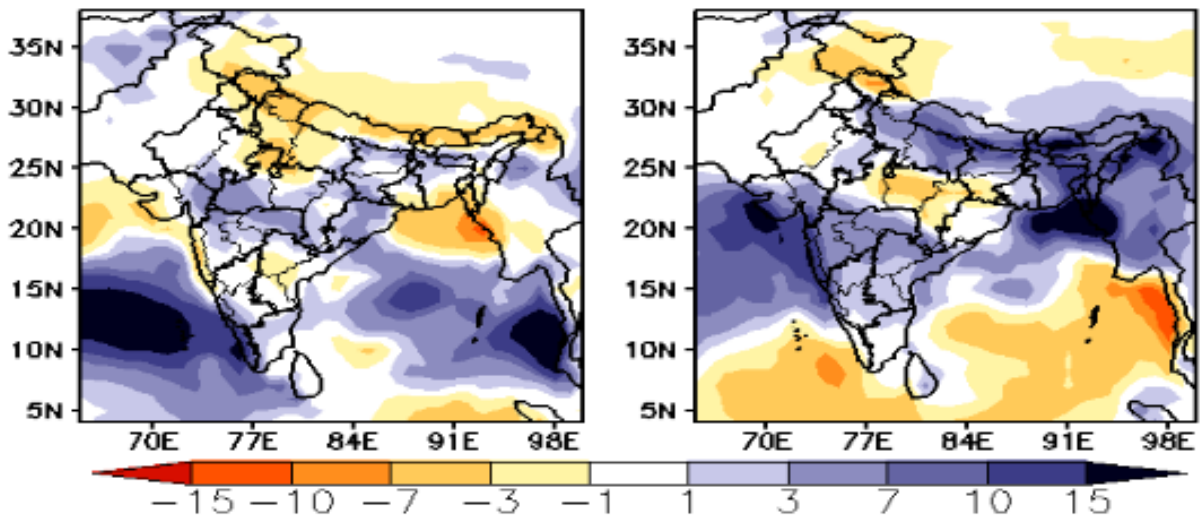
(Week2:00Z27Jun-00Z04Jul)



Forecast Rainfall Anomaly (mm/day) (00Z=0530 hrs IST)

(Week1:00Z20Jun-00Z27Jun)

(Week2:00Z27Jun-00Z04Jul)



Extended range forecast of weekly distribution of rainfall in mm per day (top panel) and anomalies (lower panels) from IMD MME