

departure during this year’s post-monsoon Season Rainfall (01st – 09th October 2024) is -27%. 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 II & III** respectively.

Table 1: Rainfall status (Week and season)

REGION	WEEK			SEASON		
	03-10-2024 TO 09.10.2024			01-10-2024 TO 09.10.2024		
	ACTUAL	NORMAL	% DEP.	ACTUAL	NORMAL	% DEP.
EAST & NORTH EAST INDIA	62.2	47.7	30%	70.9	59.1	20%
NORTH WEST INDIA	2.4	7.1	-66%	2.5	8.8	-71%
CENTRAL INDIA	5.4	21.4	-75%	7.4	27.6	-73%
SOUTH PENINSULA	38.1	38.0	0%	42.2	51.2	-18%
COUNTRY AS A WHOLE	20.0	24.5	-19%	22.9	31.5	-27%

2. Large scale features:

- Currently, neutral El Nino-Southern Oscillation (ENSO) conditions are observed over the equatorial Pacific Ocean with below average sea surface temperatures in the east equatorial Pacific Ocean. The probability forecast indicates a higher chance of development of La Niña conditions during Post-Monsoon season, 2024.
- Above-average sea surface temperatures (SSTs) are currently seen across most of the Indian Ocean. Currently, neutral Indian Ocean Dipole (IOD) conditions prevail over the Indian Ocean. The latest MMCFS forecast indicates that the neutral IOD conditions are likely to continue during post-monsoon season, 2024. Presently, neutral Indian Ocean Dipole (IOD) conditions are prevailing over the Indian Ocean. The climate models forecast indicates that these neutral IOD conditions are likely to continue until the end of the monsoon season.
- The Madden Julian Oscillation (MJO) index is currently in Phase 3 with an amplitude < 1. It is likely to continue to move in phase 4 during the first half of week 1 with amplitude nearly 1. Thereafter, it is likely to propagate across phase 5 with amplitude > 1 during the later part of week 1 and most days of week 2. It is likely to enter into Phase 6 with amplitude > 1 by end of the week 2.

3. Forecast for next two week

Weather systems & associated Precipitation during Week 1 (10 to 16 October, 2024) and Week 2 (17 to 23 October, 2024)

Weather systems & associated Precipitation during Week 1 (10 to 16 October, 2024)

Withdrawal of Southwest Monsoon

- ❖ The line of withdrawal of Southwest Monsoon continues to pass through 29°N/84°E, Nautanwa, Sultanpur, Panna, Narmada Puram, Khargaon, Nandurbar, Navsari and 20°N/70°E (**Annexure I**).
- ❖ Conditions are favourable for further withdrawal of Southwest Monsoon from remaining parts of Gujarat, Madhya Pradesh, Uttar Pradesh, some more parts of Maharashtra and some parts of Bihar & Jharkhand during 1st half of the week.
- ❖ Southwest Monsoon likely to withdraw from some more parts of Central & East India and some parts of northeastern states during the 2nd half of the week.

Weather Systems:

- ✓ A Well Marked Low pressure area and lay centred over eastcentral Arabian Sea off Karnataka- Goa coasts at 0830 hours IST of today the 10thOctober 2024. It is likely to move northwestwards and intensify into a Depression over central Arabian Sea during next 2-3 days.
- ✓ A cyclonic circulation lies over Southwest Bay of Bengal off Tamil Nadu coast and extends upto middle tropospheric levels tilting southwestwards with height.
- ✓ Another fresh cyclonic circulation very likely to develop over central parts of south Bay of Bengal around 12th October at lower & middle tropospheric levels.
- ✓ A cyclonic circulation over east Assam & neighbourhood at lower tropospheric levels.

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

South Peninsular India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Lakshadweep, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Coastal& South Interior Karnataka; Isolated to Scattered light to moderate rainfall very

likely over North Interior Karnataka, Rayalaseema, Telangana, Coastal Andhra Pradesh & Yanam during the week.

- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal during 10th -15th October; over Kerala & Mahe during the week; over Lakshadweep on 10th; over Coastal Andhra Pradesh & Yanam & Rayalaseema during 14th – 16th October; over North Interior Karnataka on 10th&11th; over South Interior Karnataka during 10th-12th and on 14th October.
- ✓ **Isolated very heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal on 10th and on 13th&14th October; Kerala& Mahe on 13th& 14th October.

Northeast India:

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Arunachal Pradesh during next 4 days and Scattered to Fairly widespread light to moderate rainfall over remaining days during the week; Scattered to Fairly widespread light to moderate rainfall very likely over the remaining region during the week.
- ✓ **Isolated heavy rainfall** very likely over Arunachal Pradesh during 10th -12th October and Assam & Meghalaya during 10th -11thOctober.
- ✓ **Isolated very heavy rainfall** very likely over Arunachal Pradesh on 10th October

West India:

- ✓ Scattered to Fairly widespread light to moderate rainfall very likely over Konkan & Goa and Gujarat Region during the week; Isolated to scattered light to moderate rainfall over remaining region during the week.
- ✓ **Isolated very heavy rainfall** very likely over Konkan & Goa on 10th& 11th October.
- ✓ **Isolated heavy rainfall** very likely over Konkan & Goa &Gujarat Region during 10th-13th October, over Madhya Maharashtra on10th-12th October; over Saurashtra & Kutch on 11th-13th October.

Northwest, East &Central India:

- ✓ Fairly widespread to wide spread light to moderate rainfall very likely over Andaman & Nicobar Islands; Scattered to Fairly widespread light to moderate rainfall very likely over Sub-Himalayan West Bengal &Sikkim; Isolated to Scattered light rainfall over the northwest India during the week;
- ✓ No significant rainfall likely over these regions during next one week.

Fishermen warning:

- ✓ Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph is likely to prevail over Maldives, Lakshadweep Comorin areas, southeast Arabian sea during 10th- 12th October, adjoining southwest Arabian sea, along and off Kerala, Karnataka coasts, off Maharashtra coast, most parts of east central Arabian sea on 11th – 12th. Gulf of Mannar during 10th-14th October, Comorin area and Tamil Nadu Coast during 13th 14th October, South Bay of Bengal during 12th -14th October and many parts of Southwest Bay of Bengal on 13th- 14th October. Fishermen are advised not to venture into these areas during the period.

- ❖ **Overall, rainfall is likely to be normal to above normal over central and south Peninsular India; below normal over rest parts of the country during the week (Annexure IV).**

Rainfall for week 2 (17 to 23 October, 2024):

- ❖ Scattered to fairly widespread rainfall likely over most parts of Central and South Peninsular India during the week.
- ❖ Isolated heavy also likely over many parts of Central and South Peninsular India (Maharashtra, Karnataka, Tamilnadu and Kerala) during many days of the week.
- ❖ **Overall, rainfall is likely to be above normal over most parts of Central and South Peninsular India; below normal over remaining parts of the country (Annexure IV).**

Annexure I

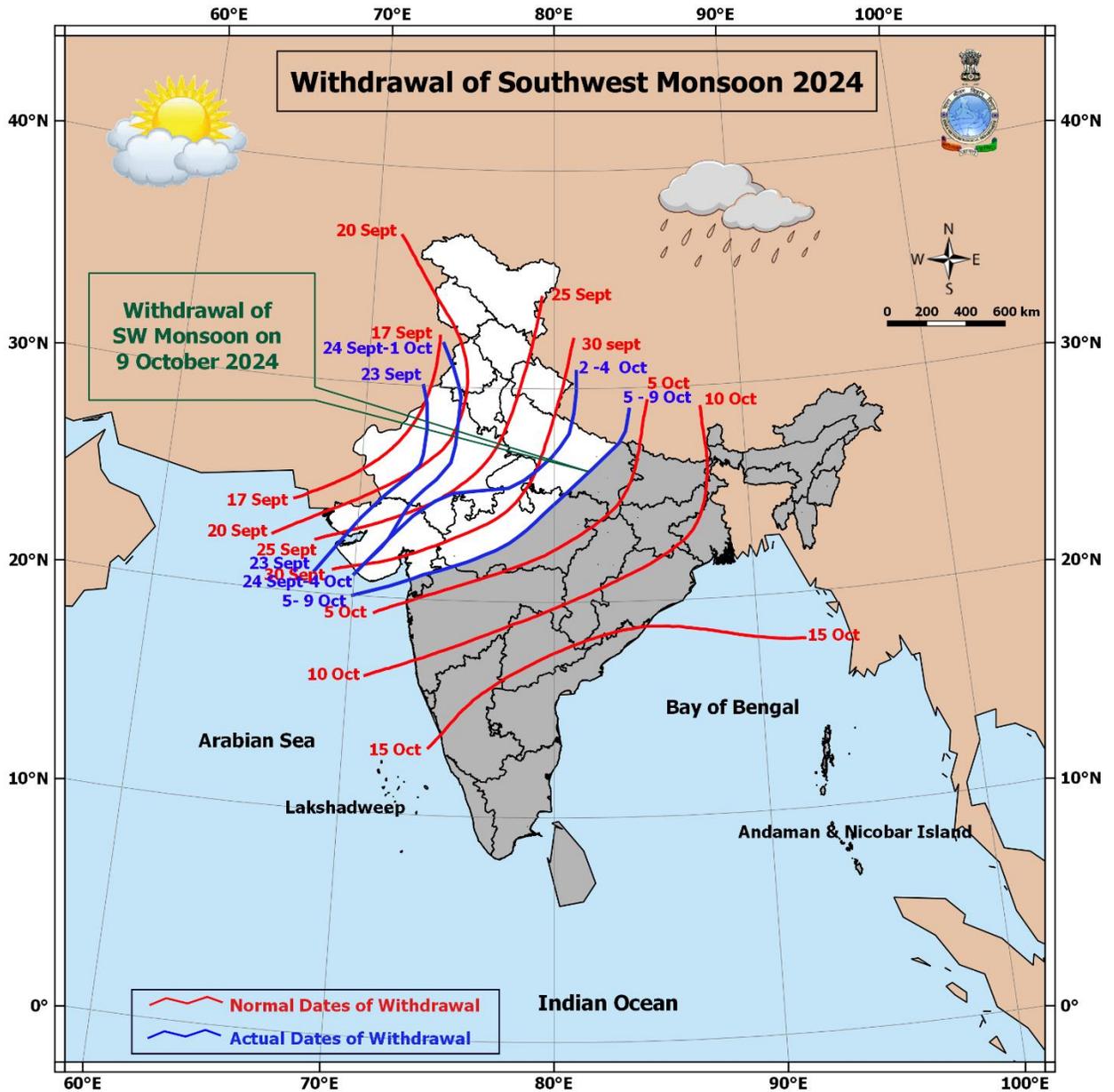


Figure 1: Withdrawal of Southwest Monsoon 2024 during the week 03.10.24 to 09.10.24



Figure 2: Weekly rainfall over India during the week 03.10.24 to 09.10.24

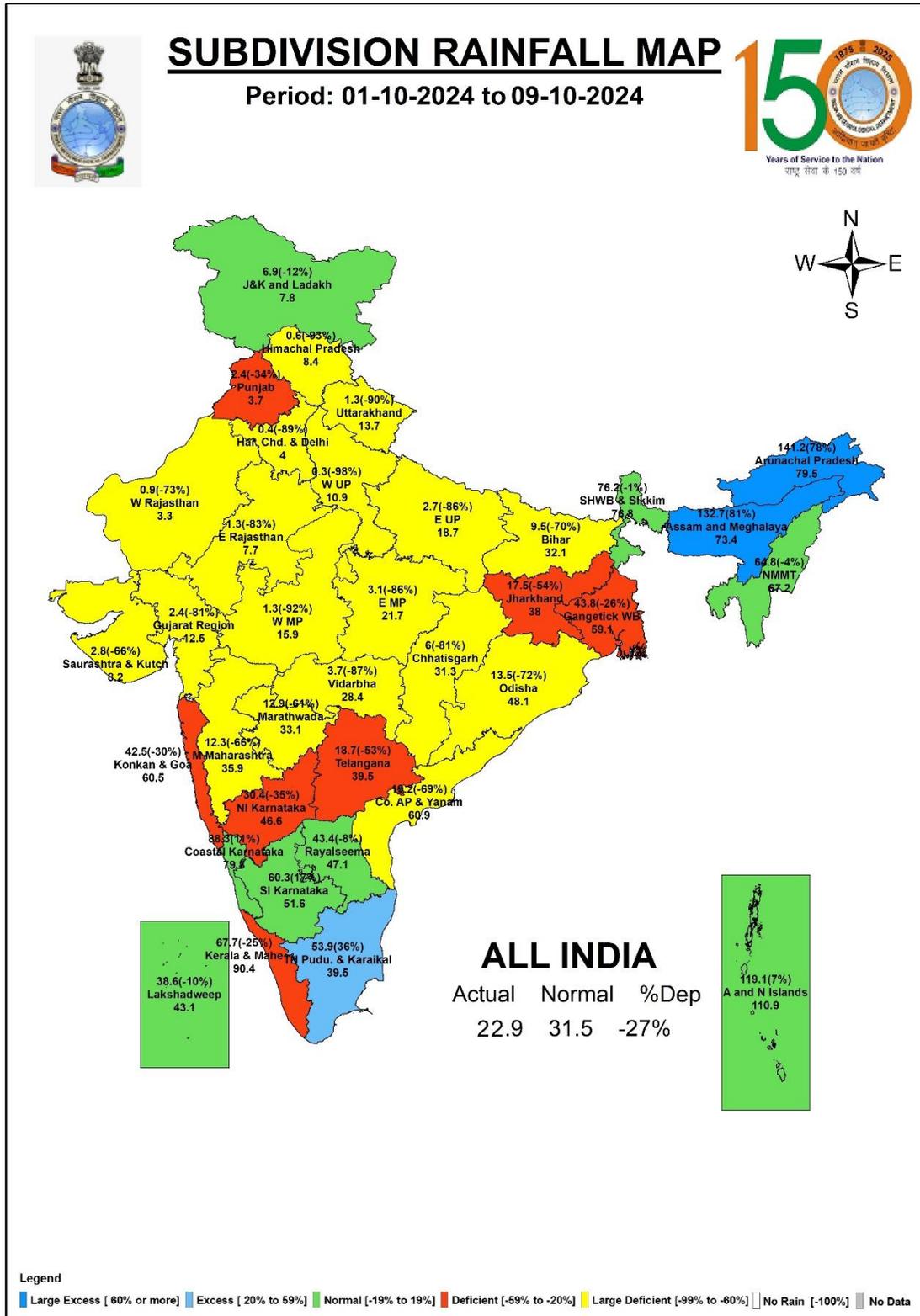


Figure 3: Seasonal rainfall over India during 01st – 09th October 2024.

Annexure IV

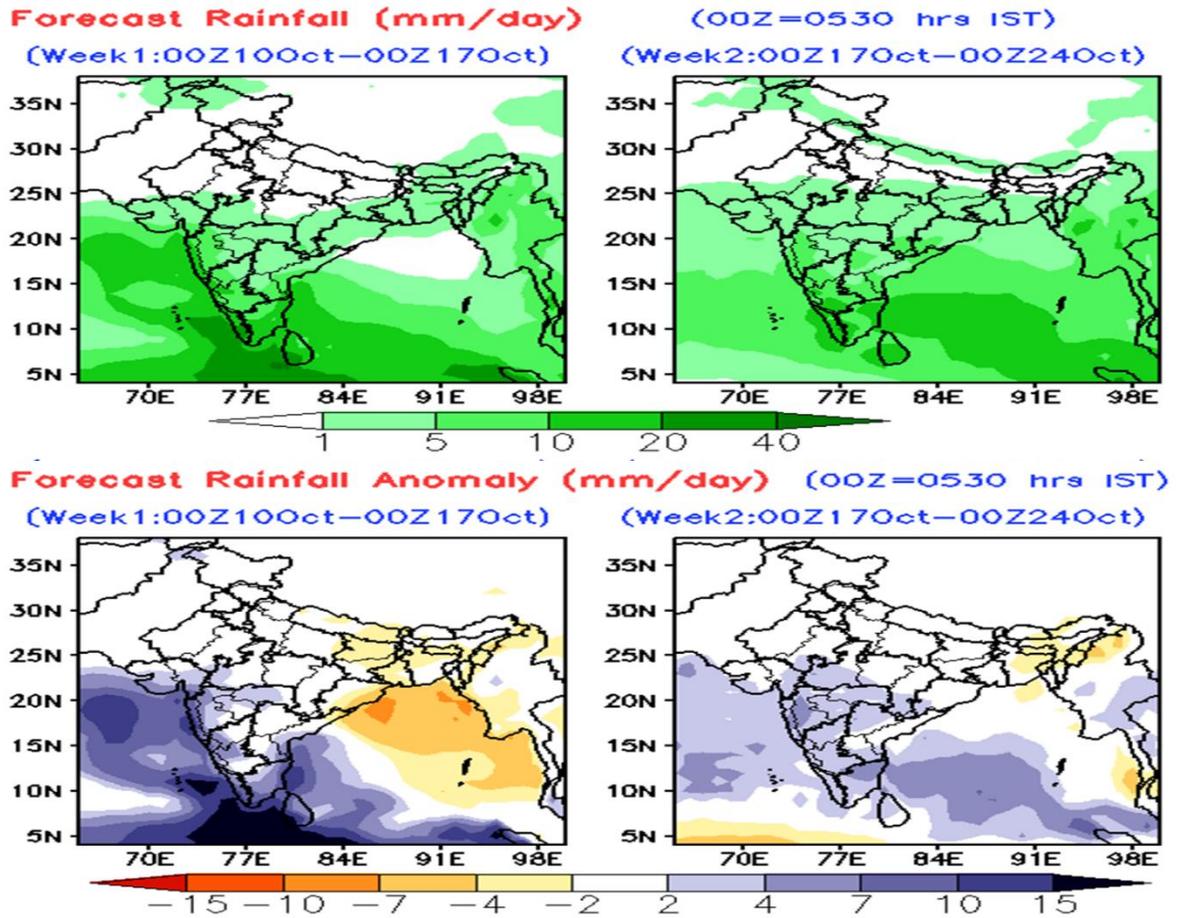


Figure 4: Extended range forecast of weekly rainfall distribution in mm per day (top panel) and anomalies (lower panel) from IMD MME.