SPI and Rainfall Summary of July 2024

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1 Introduction

This monthly bulletin provides statistics and comparison of rainfall and Standard Precipitation Index(SPI) conditions. Developed by McKee in 1993 and extensively detailed by Edwards and McKee in 1997, the SPI is a predominant tool for identifying and characterizing meteorological droughts by assessing precipitation anomalies at a specific location. In a given region, as the SPI value dips below –1.0, it indicates increasingly severe rainfall deficits, signifying meteorological droughts whereas as the SPI value climbs above 1.0, it signifies increasingly severe excess rainfall. This bulletin provides following information:

Table 1: Table of Contents

2 SPI Conditions

2.1 SPI Condition of July 2024, July 2023 and Season (July 2024)

DISTRICTS IN EACH CATEGORY (JULY 2024)	
CONDITION	**STATES(DISTRICTS)**
WET(SPI > 1) (DIST. : 106)	**Andhra Pradesh** (West Godavari, Vizianagaram, East Godavari), **Arunachal Pradesh** (Kurung Kumey, Kra Daadi), **Assam** (N.C Hills), **Chandigarh** (Ut) (Chandigarh), **Chhattisgarh** (Sukma, Rajnandgaon, Narayanpur, Korea, Kondagaon, Kanker, Janjgir Champa, Gariaband, Dhamtari, Bijapur, Balod), **Goa** (South Goa, North Goa), **Gujarat** (Surat, Porbandar, Navsari, Kachchh, Junagarh, Gir Somnath, Devbhoomi Dwarka, Bharuch), **Karnataka** (Uttar Kannada, Udupi, Shimoga, Mysore, Kodagu, Haveri, Dharwad, Davangere, Chitradurga, Chikmagalur, Chamarajanagar), **Kerala** (Palakkad, Kannur), **Madhya Pradesh** (Sheopur, Seoni, Raisen, Mandla, Khargone, Chhindwara), **Maharashtra** (Yavatmal, Wardha, Thane, Sindhudurg, Sangli, Ratnagiri, Raigarh, Pune, Palghar, Nagpur, Mumbai City, Latur, Kolhapur, Jalgaon, Gadchiroli, Dhule, Chandrapur, Bhandara, Ahmadnagar), **Manipur** (Thoubal, Senapati, Kangpokpi, Kakching), **Odisha** (Nuaparha, Malkangiri, Koraput), **Punjab** (Fatehgarh Sahib), **Rajasthan** (Tonk, Karauli, Dausa), **Sikkim** (West, South, North, East), **Tamil Nadu**(Tiruvallur, Tirunelveli, Nilgiri, Dharampuri, Coimbatore), **Telangana** (Peddapalle, Mancherial, Mahabubnagar, Kumarambheem Asifabad, Jayashankar Bhupalpally, Bhadrari Kothagudem), **Uttar Pradesh** (Pilhibhit, Moradabad, Maharajganj, Hamirpur, Basti, Bareilly, Balrampur, Auraiya), **Uttarakhand** (Chamoli, Bageshwar, Almora), **West Bengal** (Purba Bardhaman, Paschim Bardhaman, Malda)
DRY(SPI <-1) (DIST. : 73)	**Arunachal Pradesh** (West Kameng, Tawang, East Siang, Dibang Valley), **Assam** (Sonitpur, Nagaon, Karimganj, Hojai, Biswanath), **Bihar** (Samastipur, Muzaffarpur, Madubani, Madhepura, Drabhanga, Bhabua), **Chhattisgarh** (Surguja), **Haryana** (Rohtak, Karnal, Jind, Ambala), **Himachal Pradesh** (Solan, Lahul & Spiti, Hamirpur), **Jammu And Kashmir** (Ut) (Srinagar, Shupiyan, Reasi, Ramban, Punch, Kupwara, Kulgam, Doda, Baramula, Bandipore, Badgam, Anantnag), **Jharkhand** (Palamu, Pakur, Lohardaga, Hazaribagh, Giridih, Devgarh, Chatra), Karnataka (Kolar), **Madhya Pradesh** (Rewa), **Mizoram** (Serchhip, Champhai), **Nagaland** (Wokha, Tuensang, Phek), **Odisha** (Sundargarh, Jharsuguda, Bhadrak, Baleshwar), **Punjab** (Rupnagar, Nawashahr, Firozpur, Bathinda), **Tamil Nadu** (Tuticorin, Thiruvarur, Namakkal, Nagapattinam, Karur), **Tripura** (Sepahijala, Gomati), **Uttar Pradesh** (Shamli, Raibeareli, Prayagraj, Mirzapur, Mathura, Gautambudhnagar, Chandauli, Amethi, Aligarh)

***All other districts are normal (SPI between -1 and 1)**

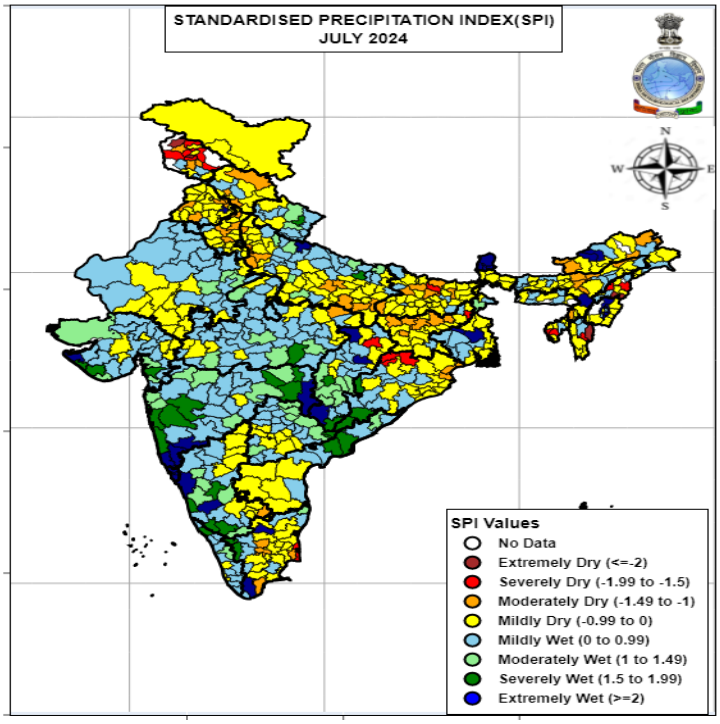

Figure 1: SPI for July 2024

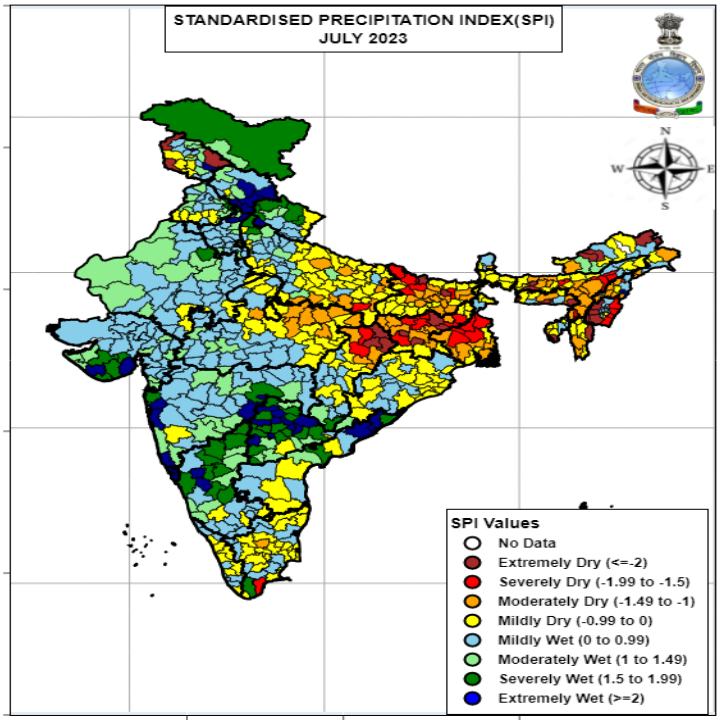

Figure 2: SPI for July 2023

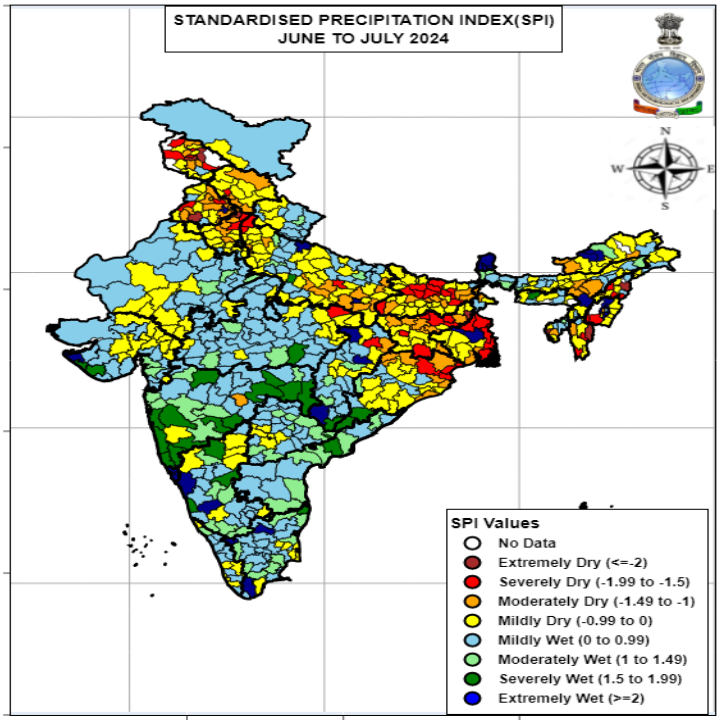

Figure 3: SPI for Season (June To July 2024)

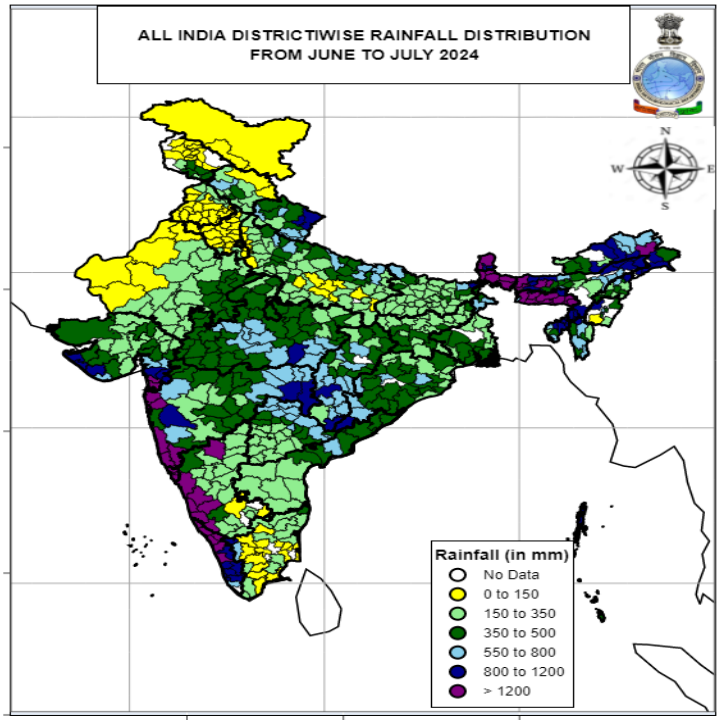

Figure 4: Actual Rainfall in Season(July 2024)

2.2 Districtwise Highest and Lowest Statistics of SPI

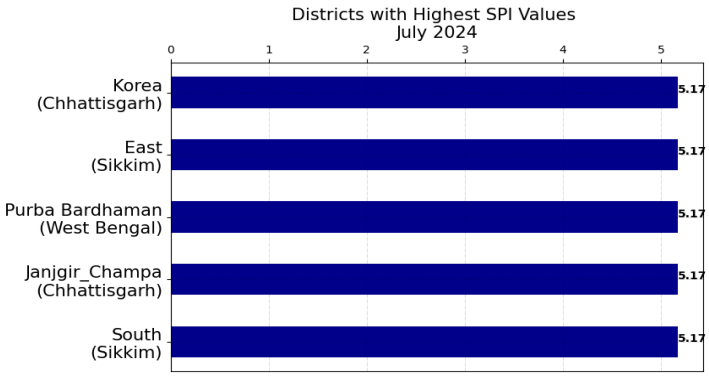

Figure 5: Districts with Highest SPI (July 2024)

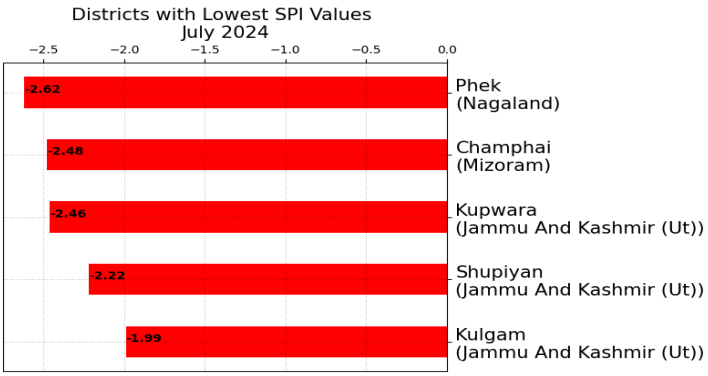

Figure 6: Districts with Lowest SPI (July 2024)

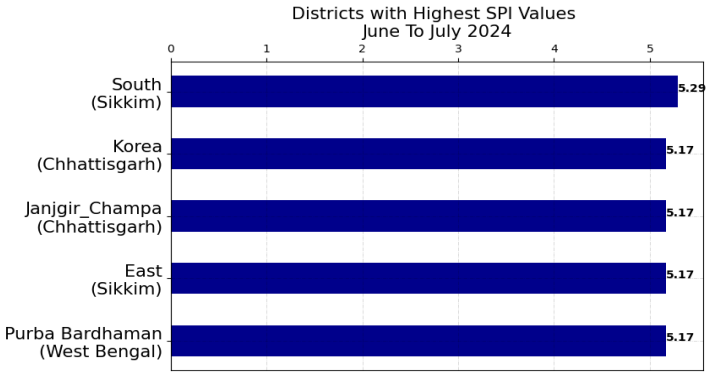

Figure 7: Districts with Highest SPI Season(June To July 2024)

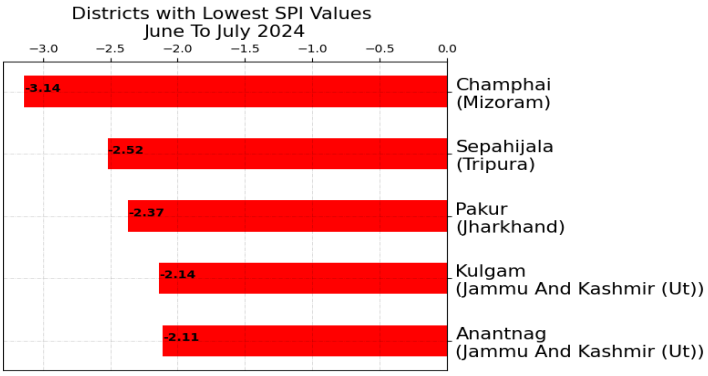

Figure 8: Districts with Lowest SPI Season(June To July 2024)

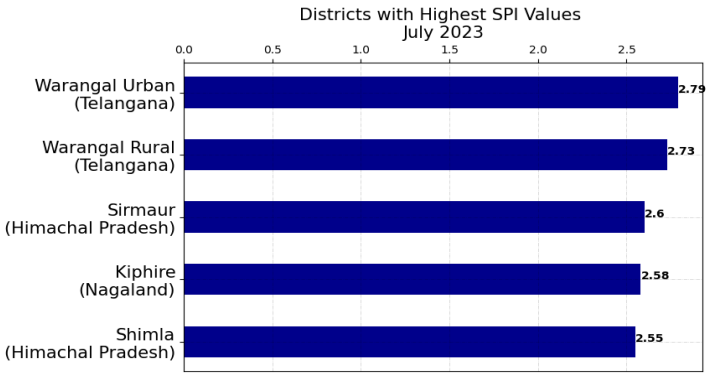

Figure 9: Districts with Highest SPI (July 2023)

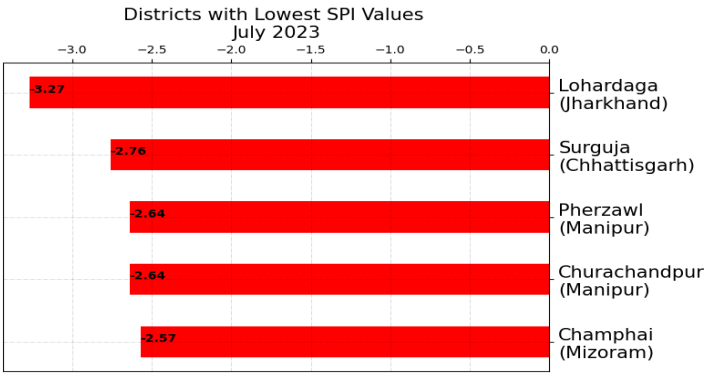

Figure 10: Districts with Lowest SPI (July 2023)

3 Rainfall Condition

3.1 Rainfall Conditions and Departure in July 2024, Normal in July and Rainfall Conditions in Current Season and July 2023

The following maps provide information about actual rainfall, normal rainfall and departure from normal rainfall in July 2024, rainfall in the Season(June to July 2024) and actual rainfall in July 2023.

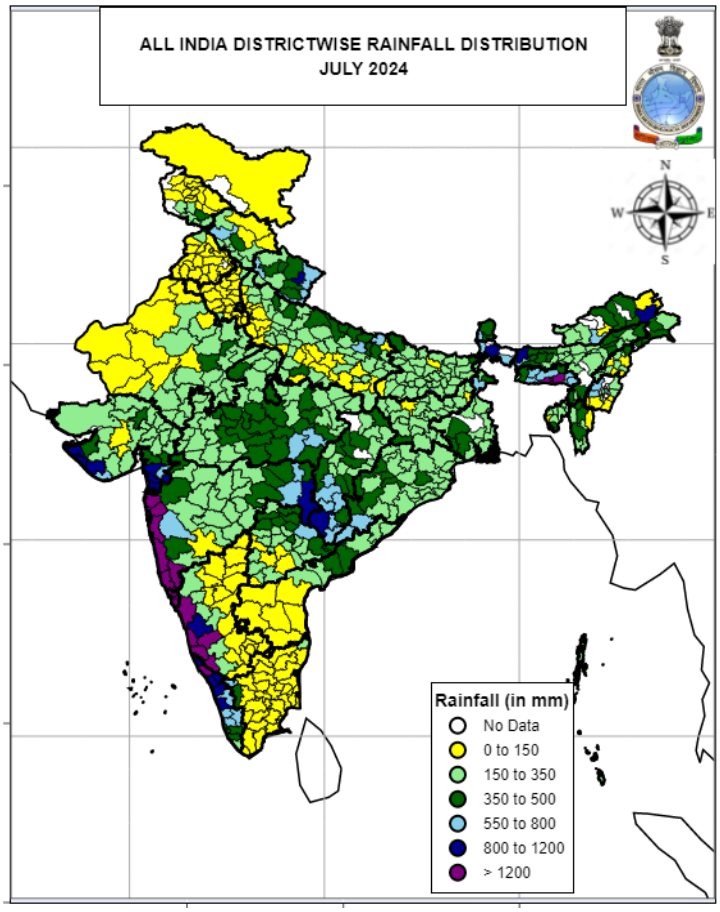

Figure 11: Actual Rainfall in July 2024

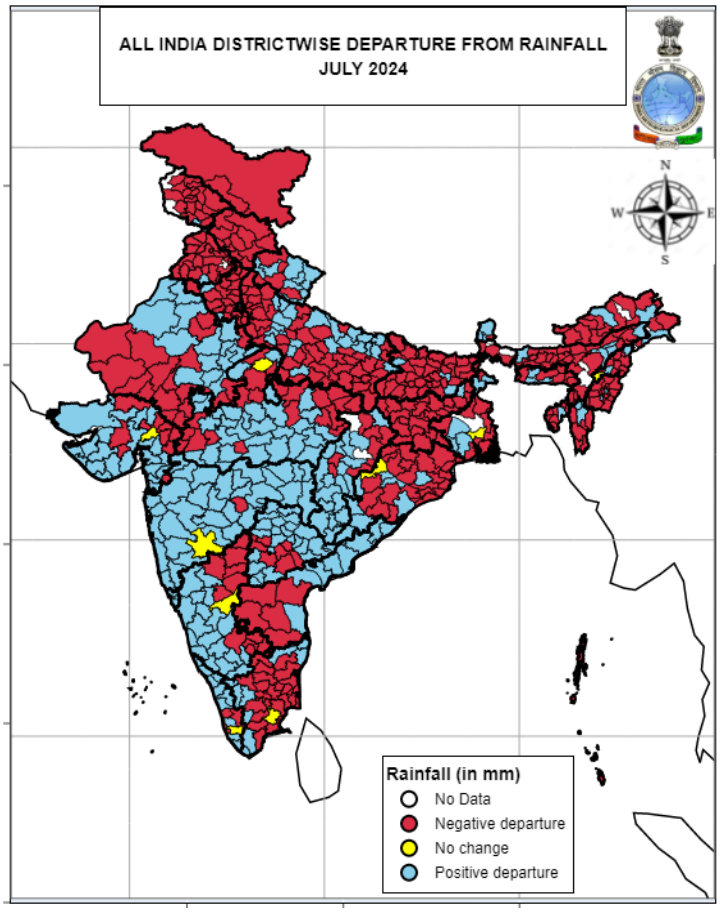

Figure 12: Departure from Normal in July 2024

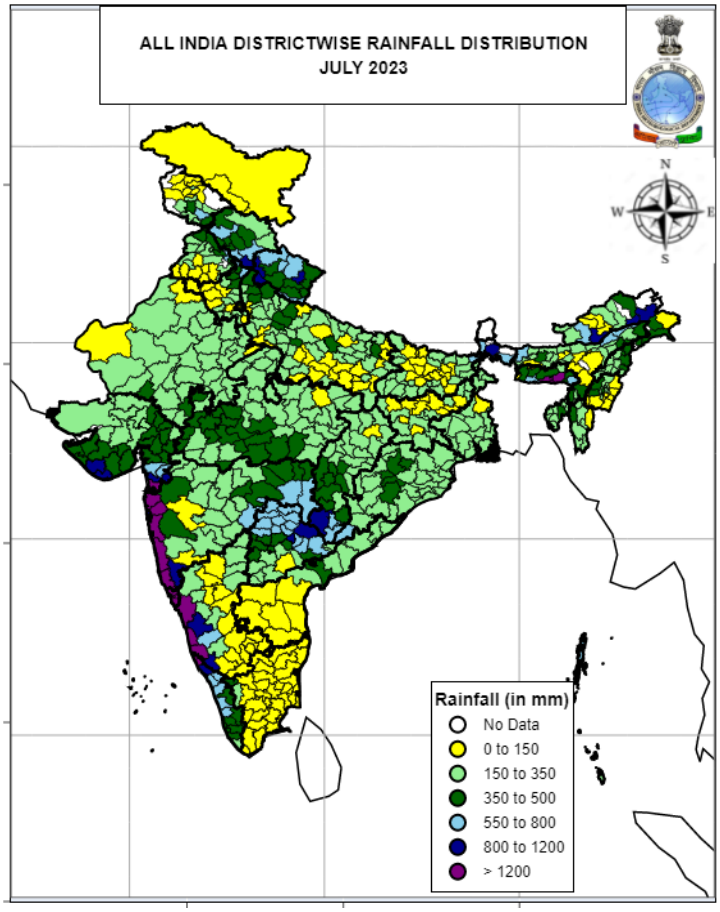

Figure 13: Actual Rainfall in July 2023

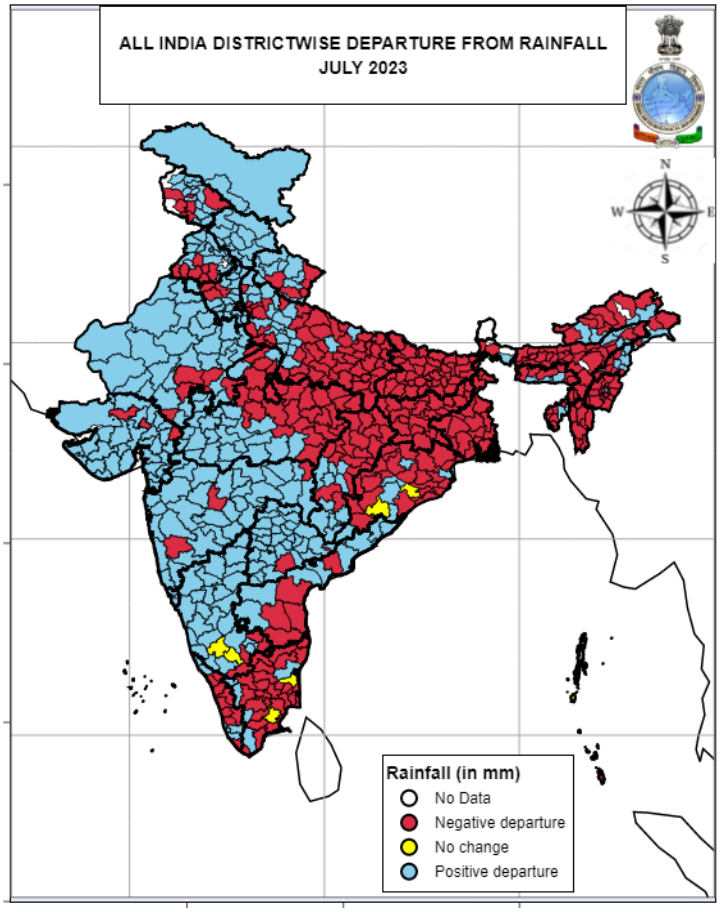

Figure 14: Departure from Normal in July 2023

3.2 SPI Outlook and Rainfall Normals for July and July 2024

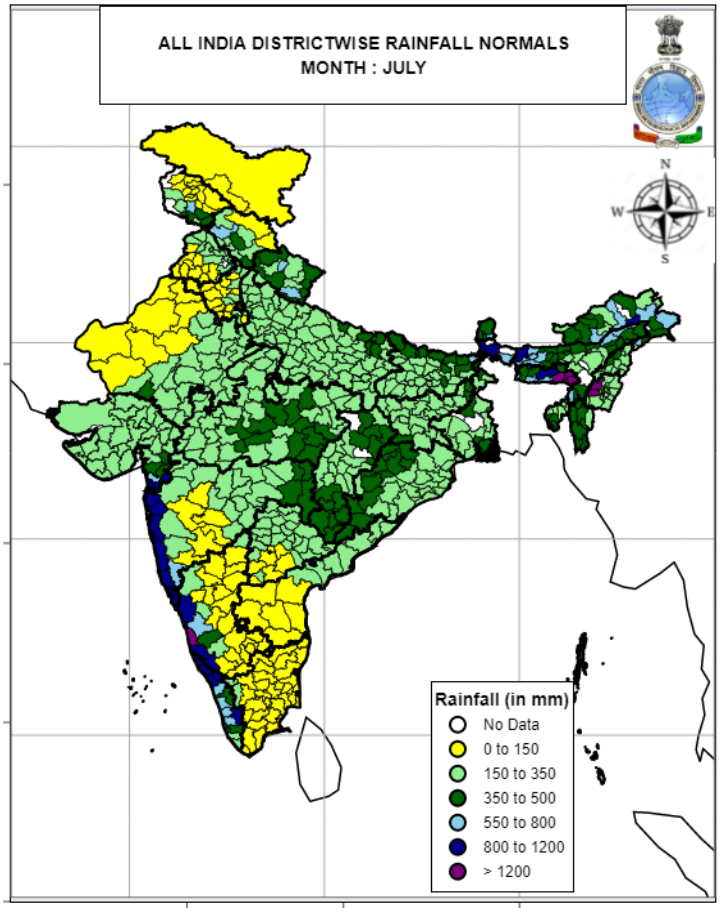

Figure 15: Normal Rainfall in July

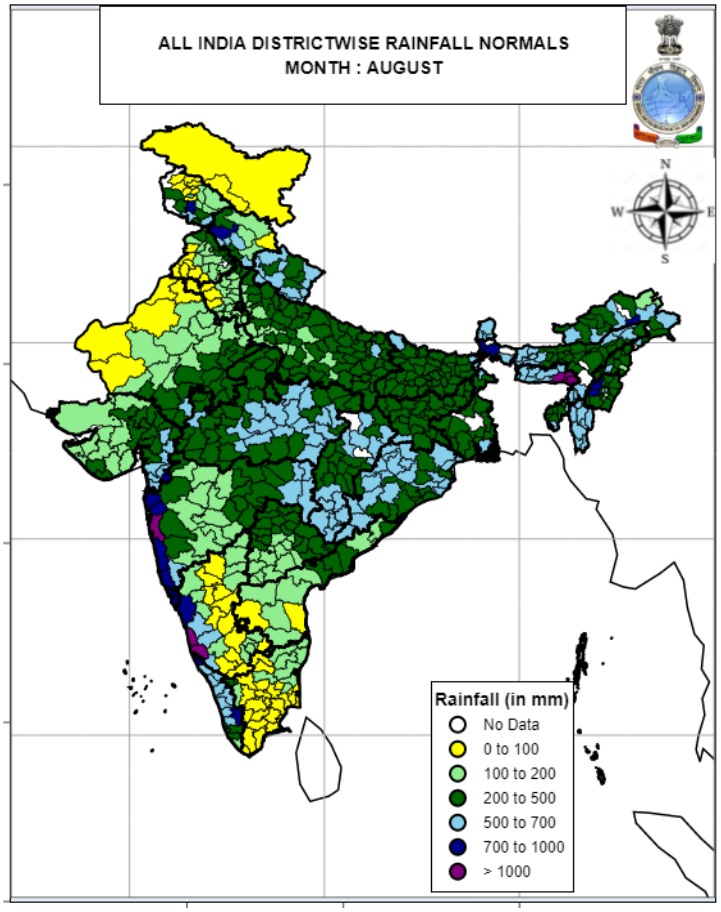

Figure 16: Normal Rainfall in August

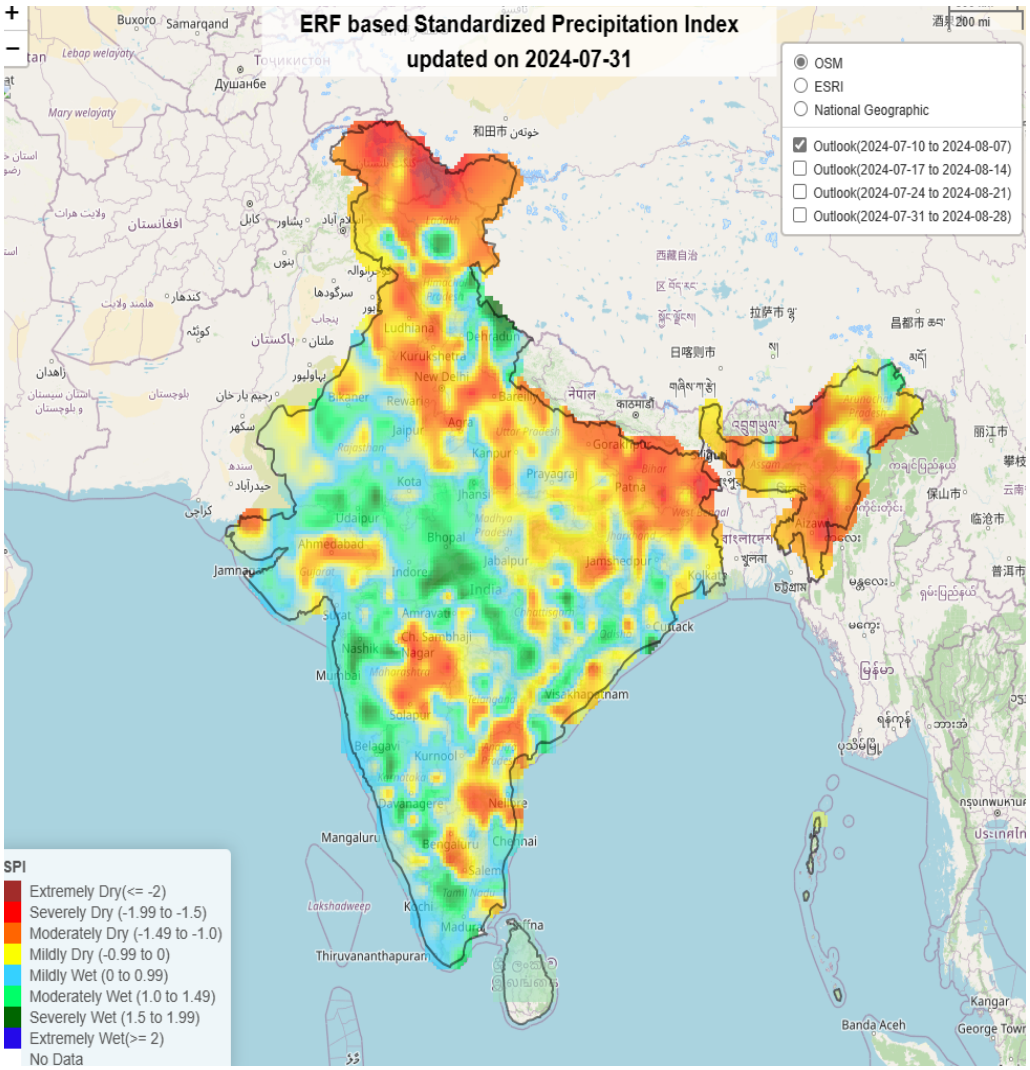

Figure 17: SPI Outlook for July 2024

3.3 Districtwise Highest and Lowest Statistics of Rainfall

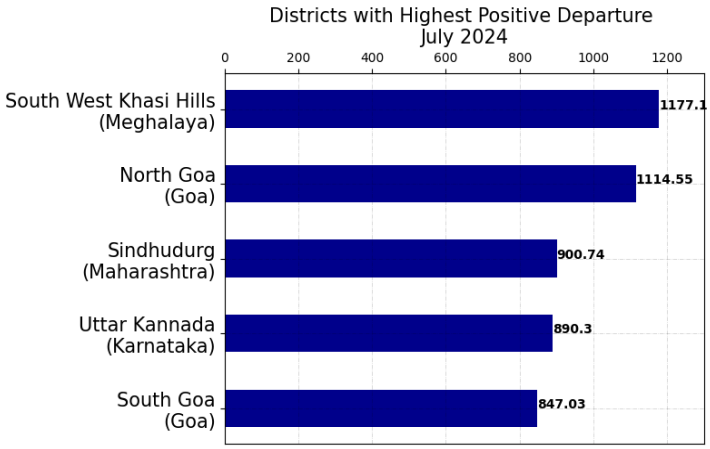

Figure 18: Districts with highest positive departure (July 2024)

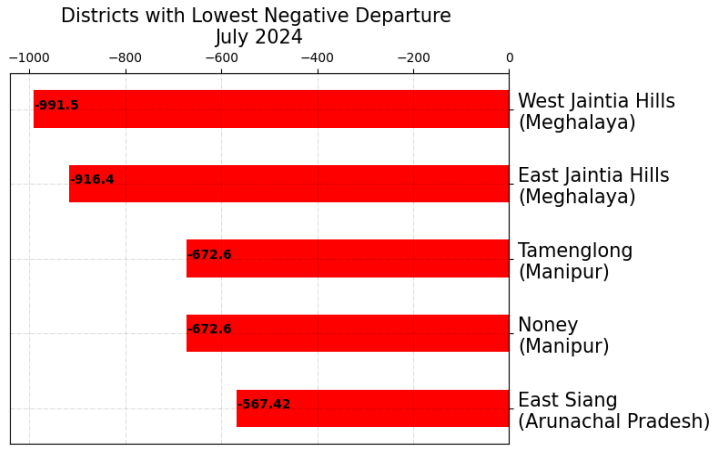

Figure 19: Districts with highest negative departure (July 2024)

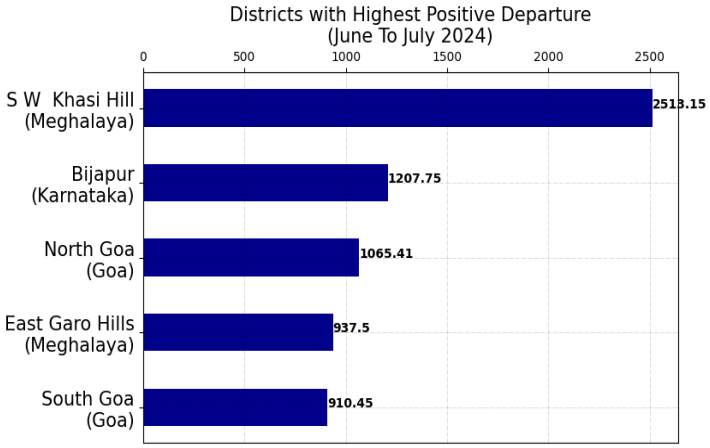

Figure 20: Districts with highest positive departure in Season (June To July 2024)

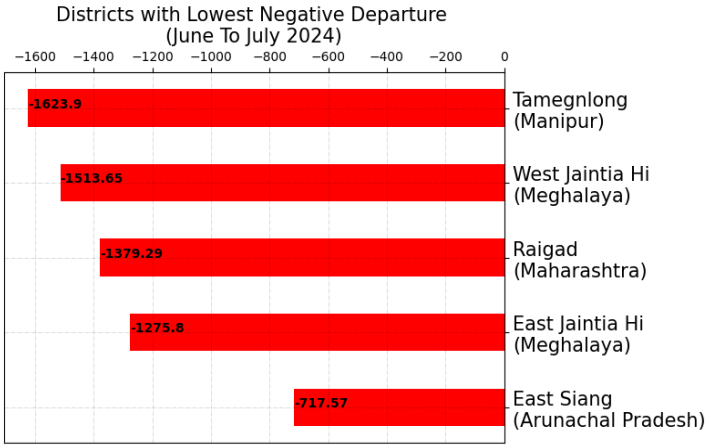

Figure 21: Districts with highest negative departure in Season (June To July 2024)

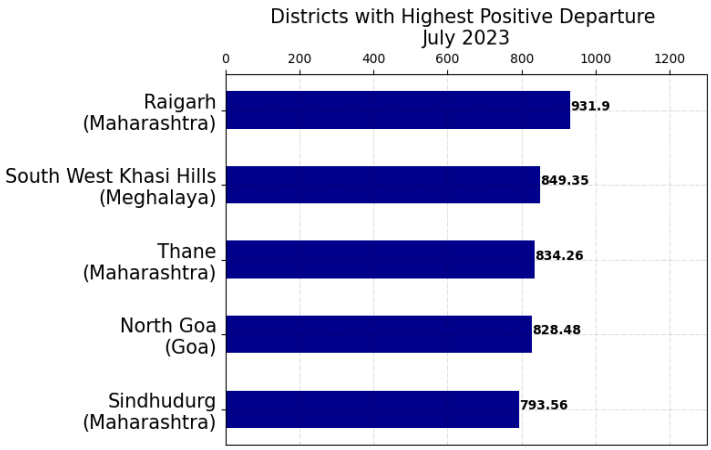

Figure 22: Districts with highest positive departure (July 2023)

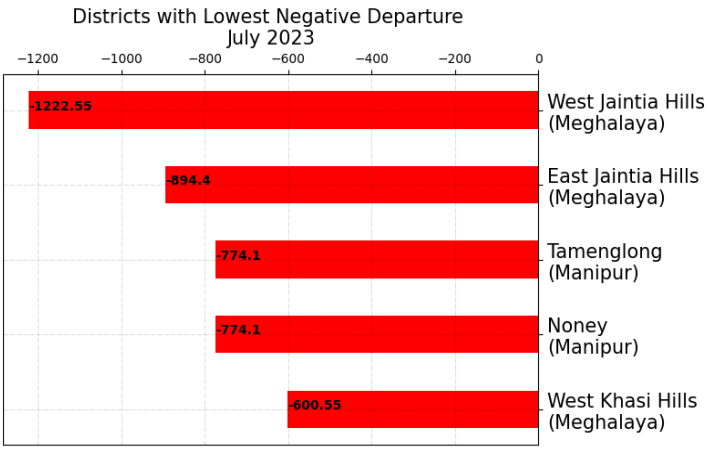

Figure 23: Districts with lowest negative departure (July 2023)