



CLIMATE INFORMATION BASED ON STANDARDIZED PRECIPITATION INDEX (SPI)

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This bulletin contains SPI (Standardized Precipitation Index) information for past 4 weeks and forecast up to next week from the date of issue of bulletin.

Weekly Monitoring and Prediction of Drought Using SPI

The SPI stands as the predominant global tool for identifying and characterizing meteorological droughts. Developed by McKee et al. in 1993 and extensively detailed by Edwards and McKee in 1997, the SPI assesses precipitation anomalies at a specific location. This assessment is based on comparing observed total precipitation over a defined accumulation period (e.g., 1, 3, 12, or 48 months) with the historical rainfall data for that same period. The historical data is then adjusted to fit a probability distribution known as the “gamma” distribution, which is subsequently transformed into a normal distribution. This normalization process ensures that the mean SPI value for that location and period is zero. In a given region, as the SPI value dips below -1.0 , it indicates increasingly severe rainfall deficits, signifying meteorological droughts. Conversely, as the SPI value climbs above 1.0 , it signifies increasingly severe excess rainfall.

How to Use This Index

CONDITION	SPI VALUE	
Extremely Dry	≤ -2.0	Negative SPI
Severely Dry	Between -1.99 and -1.5	
Moderately Dry	Between -1.49 and -1.0	
Mildly Dry	Between -0.99 and 0	Near- Zero SPI
Mildly Wet	Between 0 and 0.99	
Moderately Wet	Between 1.0 and 1.49	Positive SPI
Severely Wet	Between 1.50 and 1.99	
Extremely Wet	≥ 2.0	

Products

The products released by us with their description are as below :

S.NO	PRODUCTS	DESCRIPTION
1.	Recent 4 week SPI (District)	SPI is calculated through districtwise rainfall data for last 28 days(4 weeks).
2.	Monthly SPI (District)	SPI is calculated through districtwise rainfall data for the month. For example,for January, February , ..., December.
3.	Seasonal SPI (Current)	SPI is calculated for the current season. The months considered in a particular season are as follows: <ol style="list-style-type: none"> 1. <i>Winter Season</i> : January – February 2. <i>Pre-Monsoon Season</i> : March – May 3. <i>SouthWest Monsoon Season</i> : June – September 4. <i>Post Monsoon Season</i> : October – December
4.	Current SPI 4 month (Gridded)	SPI is calculated through gridded rainfall data for recent 4 months.
5.	SPI Weekly District Forecast (GFS)	SPI is calculated for upto 4 weeks (previous 3 weeks and forecast for the next week) through districtwise rainfall data.
6.	SPI Weekly Outlook (Extended Range)	SPI outlook for upto 4 weeks (previous 3 weeks and forecast for the next week) is calculated through gridded data.
7.	SPI Maps for Monsoon 2023	SPI for every 4 weeks is calculated for Monsoon Season, i.e, from June to September.