

Drought Indices for Drought Monitoring

Drought is a recurrent phenomenon in the Indian subcontinent. During the colonial period, many droughts in India turned into severe famines causing massive human losses. As far as loss of crop due to drought is concerned, it is the agricultural drought affecting the crop growth as well as production. Agricultural drought can be thought of as the result of a shortage of precipitation over a particular timescale that leads to a soil moisture deficit that limits water availability for crops to such an extent that yields are reduced. Agricultural drought can have severe economic and social consequences, especially in regions with limited water resources or with imbalances between water demand and natural supply capacity. As a result, a range of indicators is used to detect and monitor agricultural drought, which are typically based on the use of meteorological observations and estimates from remote sensing and/or modelling. To reduce the serious consequences of drought, besides improving the understanding of the hazard and the factors that influence vulnerability, there are calls for more attention to prediction/early warning activities (i.e., risk assessment) that could improve drought preparedness and response, as well as to reduce future impacts

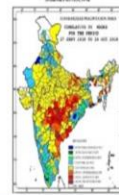
Drought Monitoring

Drought Monitoring are made based on rainfall departure, aridity anomaly index & SPI, SPEI

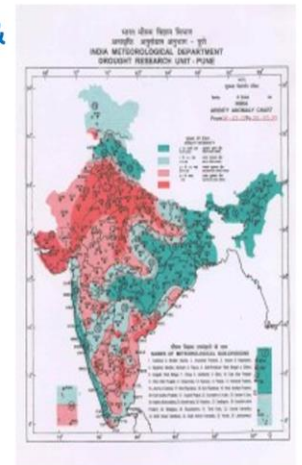
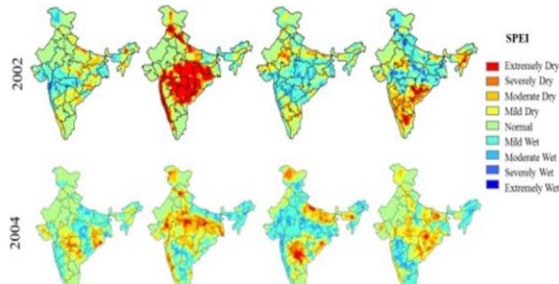
Week by Week Rainfall Distribution from 10.10.18 to 24.10.18

Sub-Divisions	10.10.18		17.10.18		24.10.18	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	0.2	-99	**	**	**	**
Changlang	3.4	-96	32.2	-41	3.6	-93
Dibang Valley	0	-100	0	-100	0	-100
East Kameng	8.4	-79	11.5	-70	0	-100
East Siang	14.1	-80	68.5	195	0	-100
Korung Kumey	19.4	-7	1.6	-92	30.4	8
Lohit	20.8	-71	73.2	159	0	-100
Lower Dibang Valley	16.2	-70	24.7	-53	0	-100
Lower Subansiri	**	**	**	**	**	**
Papumpare	0	-100	39.7	-30	0	-100
Tawang	0	-100	10	-82	3	-92
Trip	27.4	-63	24	-32	0	-100
Upper Siang	44.4	-36	13.4	-85	0	-100
Upper Subansiri	0	-100	20.2	6	0.8	-97
West Kameng	38.8	-54	62	15	0	-100
West Siang	4.9	-85	50.3	41	1.4	-95
Assam & Meghalaya						
Assam						
Baksa	3.7	-94	10.3	-42	0	-100
Barpeta	1.8	-97	18.2	-33	0.7	-98
Bongaigaon	0	-100	21.8	-38	0	-73
Cachar	16.7	-77	66.8	79	0	-100
Chirang	0	-100	32.2	-8	4	-86
Darrang	0.5	-98	3	-85	0.5	-97
Dhemaji	1	-98	2	-93	2	-92

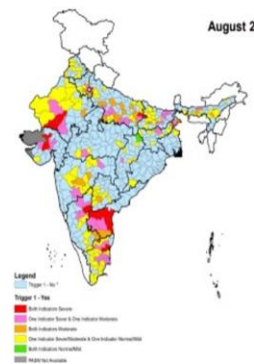
Standardised Precipitation Index
Cumulative 4 weeks for the period 27th September to 24th October 2018



- Extremely/severely wet conditions experienced in Udalguri district of Assam; Kandhamal, district of Odisha; Monghyr district of Bihar; Sri Ganganagar district of Rajasthan; Pathanamthitta district of Kerala.
- Extremely/severely dry conditions experienced in few districts of Maharashtra and Chhattisgarh; West Garo Hills district of Meghalaya; Cooch Behar district of West Bengal; Nawapara district of Odisha; Gumla and Simdega districts of Jharkhand; East Champaran, Sitamarhi and Siwan, districts of Bihar; Chhindwara district of Madhya Pradesh; East Godavari, Guntur and Vishakhapatnam districts of Andhra Pradesh; Adilabad and Nalgonda districts of Telangana.
- Moderately dry conditions experienced in few districts of Assam, Maharashtra, Chhattisgarh, Andhra Pradesh and Telangana, West Tripura district of Tripura; South Dinajpur, Hooghly and Howrah, districts of West Bengal; Bargarh, Jharsuguda, Nawarangpur and Sambalpur districts of Odisha; Lohardaga, Ranchi, Latehar, and Khunti districts of Jharkhand; Bhojpur, Buxar, West Champaran, Darbhanga, Nawada, Patna, and Saran districts of Bihar; Arzangarh, Deoria, Gorakhpur, Jaunpur and Mirzapur district of Uttar Pradesh; Chamoli district of Uttarakhand; Hoshangabad, Jabalpur, Seoni, Shahdol and Amrupur districts of Madhya Pradesh; districts of TamilNadu & Puducherry.
- Rest of the country remained moderate to wet in the described time conditions.



(Based on rainfall, Remote sensing based vegetation indices and Soil Moisture)



August 2018