

ICAR-Central Research Institute for Dryland Agriculture

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Date: 11.11.2016

Answer to the Rajya Sabha Q Dy. No. S824

c) Whether the sudden change of climate has also resulted in heavy rains, hail storms, cyclones, deficient rains, drought etc., if so, the regions prone to this abnormal weather pattern affecting agriculture and farmers

Inter-governmental Panel on Climate Change (IPCC) in their fourth assessment report stated that some extreme weather events have changed in frequency and/or intensity over the last 50 years

- It is likely that the frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) has increased over most areas.
- It is very likely that cold days, cold nights and frosts have become less frequent over most land areas, while hot days and hot nights have become more frequent.
- It is likely that heat waves have become more frequent over most land areas
- It is likely that the incidence of extreme high sea level has increased at a broad range of sites worldwide since 1975.

The recent increase in frequency of extreme precipitation, hail storms, heat waves etc are attributed to climate change. Recognizing that the climate change will have a major impact on agricultural and allied sector, the Council has initiated a mega network project, National Innovations in Climate Resilient Agriculture (NICRA) during 2010-11. Under the project, districts which are most exposed by weather aberrations such as flood, drought, cyclones, heat wave, frost etc were identified and the details of the same are attached hereunder.

List of districts and frequently observed weather aberrations

State	District	Frequently observed weather aberration
Haryana	Yamunanagar	Frost in winter
	Sirsa	Drought / heat wave
HP	Hamirpur	Drought
	Chamba	Cold wave /Drought /frost
	Kullu	Drought / cold wave
	Kinnaur	Cold wave / drought
J&K	Kathua	Drought
	Phulwama	Frost/cold wave
Punjab	Ropar	Frost/cold wave
	Fatehgarh Shaib	Frost/cold wave
	Faridkot	High temperature
	Bathinda	Drought/heat wave
A&N Islands	Port Blair	Cyclone
Bihar	Saran	Flood/Drought
	Supaul	Drought/Flood
	Buxar	Drought/Flood
	Nawadah	Drought
	Aurangabad	Drought

	Jehanabad	Drought
Jharkhand	Koderma	Drought
	Palamau	Drought/Heat wave
	East Singhbhum	Drought/Heat wave
	Gumla	Drought/ Heat wave
	Chatra	Drought/ Heat wave
West Bengal	Coochbehar	Heavy rainfall
	Malda	Flood
	South 24 Pargaras	Cyclonic storm
Arunachal Pradesh	Tirap	Water stress
	West Kameng	Cold stress
	West Siang	Water stress
Assam	Sonitpur	Floods
	Dibrugarh	Floods
	Dhubri,	Drought
	Cachar	Floods
Manipur	Senapati	Drought
	Imphal East	Drought
Meghalaya	Umiam	Drought
	West Garo Hills-Tura	Drought
Mizoram	Lunglei	Water Stress
Nagaland	Phek	Drought
	Dimapur	Drought
	Mokokchung	Drought
Sikkim	East Sikkim	Soil erosion/Water Stress
Tripura	West Tripura	Cyclones
UP	Bahraich	Flood
	Gorakhpur	Flood
	Maharajganj	Flood
	Gonda	Flood
	Jhansi	Drought & Heat wave
	Kushinagar	Flood
	Sonbhadra	Drought heat wave
	Baghpat	Ground water depletion
	Muzaffarnagar	Ground water depletion
	Chitrakoot	Drought & Heat Wave
	Hamirpur	Drought & Heat Wave
Uttarakhand	Uttarkashi	Cold wave, flood, hail storm
	Tehri Garhwal	Cold wave, hail storm
AP	West Godavari	Cyclone
	Srikakulam	Floods
	Anantapur	Drought
	Kurnool	Drought
Telangana	Nalgonda	Drought sodicity
	Khammam	Drought heat stress
Maharashtra	Nandurbar	Heat stress, Drought
	Pune	Drought
	Aurangabad	Drought
	Amravati	Central Plateau

	(Durgapur)	
	Ratnagiri	Floods
	Ahmednagar	Drought
	Gondia	Drought
Gujarat	Valsad	Heavy and intensive rainfall
	Rajkot	Erratic monsoon
	Kutch	Scanty rainfall
Rajasthan	Jhunjhunu	Drought, low and erratic rainfall,
	Bharatpur	Rucurring flood and water logging.
	Jodhpur	Drought, low rainfall, heat wave & wind erosion
	Kota	Flood prone area
Chhattisgarh	Bhatapara	Drought
	Bilaspur	Drought
	Dantewada	Heavy rainfall
Madhya Pradesh	Satna	Drought
	Guna	Drought
	Morena	Drought
	Datia	Drought
	Tikamgarh	Drought
	Chhatarpur	Drought
	Balaghat	Drought
Odisha	Kendrapara	Flood and Cyclone
	Jharsugda	Drought, Flood
	Sonepur	Drought, Flood
	Ganjam	Drought
Tamil Nadu	Villupuram	Drought
	Namakkal	Drought
	Nagapattinam	Drought, Floods, cyclones
	Ramanathapuram	Drought, Salinity
Karnataka	Tumkur	Drought
	Kolar	Drought
	Davanagere	Drought
	Belgaum	Drought, Heat wave
Kerala	Alleppey	Sea water inundation - salinity, water logging