Hindustan Times- 10- October-2022

Delhi crosses annual rain mark despite disappointing monsoon

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NEW DELHI: Despite an underwhelming monsoon, Delhi has already recorded 790.1mm of rainfall till 5.30pm on Sunday, with a large volume of the annual rainfall coming in non-monsoon months, including January and October, India Meteorological Department (IMD) data shows.

With 74.3mm rain on Saturday, Delhi crossed its normal annual rainfall mark of 774.4mm.

Normally, Delhi receives 134mm or 17% of its annual rainfall in the non-monsoon months of January to May and October to December. But this year, the contribution of these dry months has been as high as 273.2mm (around 35% of the total rainfall and over two times the normal), with contribution from November and December yet to be added.

In fact, the monsoon, despite a late flurry in September, could only manage 516.9mm of rainfall between June and September – well below the average mark of 640.4mm for these four months. IMD data shows this monsoon rainfall was Delhi's lowest since 2019, when Delhi received only 404.3mm.

Delhi received only 24.5mm in June – a deficit of 67% over the normal monthly average of 74.1mm. July fared significantly better, receiving 286.3mm of rainfall – an excess of 37% over the monthly normal of 209.7mm, but August – traditionally Delhi's wettest month, recorded only 41.6mm of rainfall. It normally receives 233.1mm of rainfall, a deficit of 82%, data shows.

This monsoon could have ended even worse, had it not been for the incessant rain between September 1 to September 24, which saw Delhi receive 111.6mm of rainfall. This year, September recorded a total rainfall tally of 164.5mm -- more than 33% over the normal monthly mark of 123.5mm.

In comparison, the winter months of January, February also broke rain records this year and October appears to be following the same trajectory. January saw Delhi record 88.2mm of rainfall – four times over the normal mark of 21.7mm, also making it Delhi's wettest ever January in the last 121 years. February added another 29.7mm of rainfall, an excess of 65% over the normal monthly rainfall mark of 18mm, making it Delhi's wettest February since 2014.

Meanwhile, October has already recorded 107.3mm rainfall – around seven times over the normal monthly rainfall mark of 15.1mm, also making it the second wettest October so far between 2007 and 2022, IMD data shows.

Meanwhile, March and April were unusually dry. While the average rainfall in these two months is 15.9 and 12.2mm respectively, Delhi did not receive any rain in March and only recorded 0.3mm of rainfall in a single day in April.

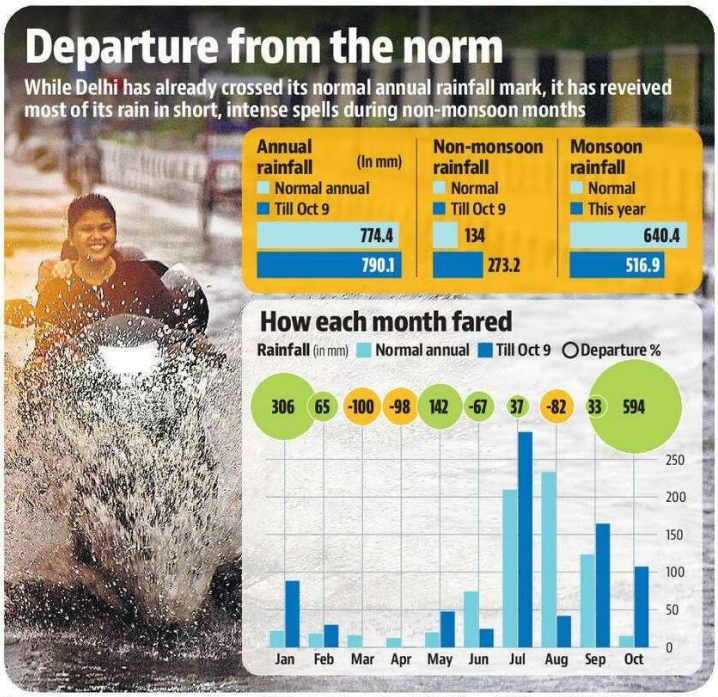
Experts say over the last one decade, rainfall patterns have become harder to predict, with extreme weather events becoming the norm.

"Extreme weather events are becoming a more common occurrence over the last decade or so due to the climate crisis. However, receiving a strong spell of rainfall in the non-monsoon months is not unusual. This particular spell occurred due to the interaction of a western disturbance with moisture-laden easterly winds and such WDs can occur two to three times in a year in the non-monsoon months too. We are just finding the pattern slightly erratic and tough to forecast," said RK Jenamani, scientist at IMD.

Last year too, Delhi saw unusual spells of rain in the month of May and October. While May saw 144.8mm of rainfall in the month – largely down to the impact of a Cyclone Tauktae, October witnessed late western disturbances bringing 122.5mm of rainfall in the month.

In fact, the IMD has this year revised its long-period average (LPA) for monthly rainfall for all states and Union Territories after considering the 50-year period of 1970-2020 as compared to 1960-2010, leading to October's monthly average of 28mm being changed to 15.1mm of rainfall. This indicates over the last one decade, October received less than normal rainfall.

Madhavan Rajeevan, former secretary at the union ministry of earth sciences, said while no clear trend is emerging that non-monsoon months are recording more rain, but extreme weather events are certainly becoming more common. "Throughout the year, we are beginning to witness heavy spells of rain in a day and then more than usual rainfall in some months when it normally does not rain a lot," he said.



Millennium Post- 10- October-2022

Delhi sees 2nd highest 24-hr rainfall in October since 2007; second 'good' air quality day of year

OUR CORRESPONDENT

NEW DELHI: Delhi received 74 mm of rainfall in 24 hours ending 8:30 am on Sunday, the second highest precipitation on a day in October since 2007, according to the India Meteorological Department data.

In 2021, the capital had logged 87.9 mm of rainfall on October 18.

The weather bureau said the ceaseless spell of rain brought down the difference between minimum temperature (20.8 degrees Celsius) on Friday and maximum temperature (23.4 degrees Celsius) on Saturday to 2.6 degrees Celsius — the lowest since 1969.

Earlier, the lowest such margin was recorded on October 19, 1998 at 3.1 degree Celsius, the IMD added.

The incessant rain in the capital also yielded the second "good" air quality day of the year, with the 24-hour average air quality index settling at 48.

Delhi had recorded a 24-hour average AQI of 47 on September 16.

The neighbouring cities of Ghaziabad (14), Gurugram (32) and Greater Noida (23) also recorded 'good' air quality.

The Safdarjung Observatory, Delhi's primary weather station, recorded another 7.4 mm of rainfall between 8:30 am and 5:30 pm on Sunday.

The city recorded a minimum temperature of 19.3 degrees Celsius, a degree below normal, while the maximum temperature dropped 10 notches to settle at 24.1 degrees Celsius.

The current rains in Delhi are not monsoon showers, which had receded from the city on September 29 after giving 516.9 mm of rainfall against a normal of 653.6 mm, the IMD said.

According to the Met department, the interaction of a western disturbance, which lies as a trough in mid and upper air, with a deep trough of easterly wind at a lower level led to the post-monsoon rain in the Delhi-NCR region.

Mahesh Palawat, vice president (meteorology and climate change), Skymet Weather, said easterly winds brought moisture from the Bay of Bengal with a trough running from Andhra Pradesh to northwest Uttar Pradesh.

People holding umbrellas visit the India Gate amid rains PTI

Easterly winds carried moisture from the Arabian Sea due to another trough extending from Delhi to east Rajasthan.

"In October to March, we get 3 to 5 such intense interactions," an IMD official said.

Palwat said these weather systems will weaken over the next two-three days.

Sporadic light to moderate rain is likely on Monday, but not much precipitation is expected the day after, he said.

The Palam observatory recorded 64.9 mm of rainfall in 24 hours ending 8:30 am. The Lodhi Road, Ridge, and Ayanagar weather stations received 87.2 mm, 60.1 mm, and 85.2 mm rainfall respectively, the IMD said.

Rainfall below 15 mm is considered "light", between 15 mm and 64.5 mm "moderate", between 64.5 mm and 115.5 mm "heavy", and between 115.6 mm and 204.4 mm "very heavy". Above 204.4 mm is considered "extremely heavy" rainfall.

Millennium Post- 10- October-2022

ABNORMAL MONSOON

UP farmers staring at heavy losses & uncertain future

67 districts recorded excess rainfall after Sept 30: IMD

OUR CORRESPONDENT

LUCKNOW: With less than normal rains during monsoon and excess rainfall after it, farmers in Uttar Pradesh are staring at heavy losses and an uncertain future.

According to India Meteorological Department (IMD) data, 67 of the 75 districts of Uttar Pradesh recorded excess rainfall last week (after September 30).

Even as Chief Minister Yogi Adityanath has directed officials to take measures to provide assistance to farmers hit by the adverse weather conditions, many believe the efforts might be too little, too late.

The excess rainfall led to waterlogging in cities and towns across the state but proved worse for farmers in rural pockets. The rains inundated the fields, causing damage to standing paddy, maize and newly cultivated potato crops. Millets like bajra and pulses like Urad have also been affected.

REPRESENTATIONAL IMAGE

Surendra Pathak, a potato farmer in Etawah, said, "We sow the early potato varieties by the end of September. But this year, around seven hectare of our potato farm has been affected by heavy rains. The fields are filled with water which causes rotting of the sown potato tubers."

Pathak said if excess rains continued, it would prove harder to sow the late variety of potatoes.

Etawah recorded 81 mm of average rainfall in the first week of October which is 876 per cent more than the long period average (LPE) of 8.3 mm.

Gonda district recorded 248.6 mm rainfall in the same period which is 883 per cent higher than the long period average of 25.3 mm. Prabhat Kumar, a marginal farmer, is worried about his paddy crop.

"My standing crop of paddy has fallen to the ground due to heavy rains. I fear that at least half of my crop has been destroyed, and all of it will be lost if the weather doesn't improve in the coming days," he said.

Officials at the district level are conducting surveys on the direction of the state government to assess the damage caused due to heavy rains across Uttar Pradesh.

The Tribune- 10- October-2022

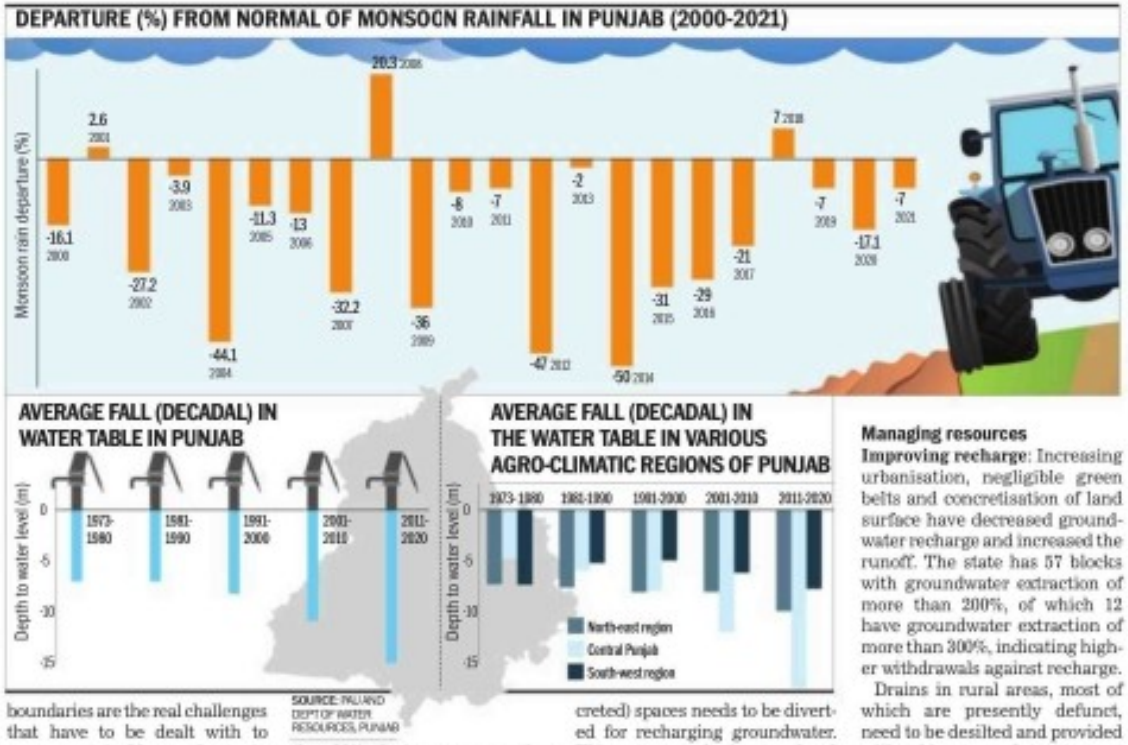
Sensitise, incentivise farmers to conserve water

Surinder S Kukal and Paul S Sidhu

Farmers in some canal command areas, especially in central Punjab, prefer using tubewell water for irrigation. They have installed automatic starters on tubewells, leading to large-scale wastage of water. Farmers should be sensitised about the use of canal water, especially in the head and middle reaches of irrigation channels. Farmers who save irrigation water with techniques like micro-irrigation or through crop diversification should be given benefits.

PUNJAB is a water-stressed agrarian state. The water demand of the agriculture sector (66 billion cubic metres, or BCM) has surpassed its availability (53 BCM); this has resulted in excessive mining of groundwater resources. Of the total water use in the state, the agriculture sector consumes 94.3%, followed by the domestic sector (3.7%), industry (1.7%) and livestock (0.3%). Climate change resulting in rising temperatures and high frequency of extreme weather events such as droughts and high-intensity rains, coupled with ever-increasing population, are expected to accentuate water demand of the industrial and domestic sectors at the cost of agriculture.

The average annual rainfall in Punjab decreased from 490 mm (1970-2020) to 444 mm (1998-2020); its temporal and spatial distribution became more erratic with prolonged dry spells. The average annual rainfall in the catchment area of the Bhakra reservoir has decreased from 1,124 mm (1983-2018) to 1,056 mm (2014-2018). Even with no reduction in rainfall, the actual evapotranspiration (water loss from soil, plant and other surfaces) is projected to increase by 5% and 8% by 2030 and 2050, respectively. Consequently, the water demand is expected to increase from the present 66 BCM to 70 and 72 BCM in 2030 and 2050, respectively. The popularity of the water-intensive rice-wheat system; inefficient use of water in agriculture, industrial and domestic sectors; non-recycling of wastewater; and 5.3 BCM rainwater going out of the state's boundaries are the real challenges that have to be dealt with to ensure sustainable use of water in agriculture. This calls for a three-pronged strategy: (i) increasing water availability (ii) managing water resources (iii) judicious use of water and promoting sustainable use of water in agriculture.



SOURCE: PAU AND DEPT OF WATER RESOURCES, PUNJAB

Increasing availability

Rainwater harvesting: Harvesting of rainwater for storage, reuse and groundwater recharge, coupled with wastewater treatment and reuse for irrigation and/or non-drinking purposes, can increase water availability. More than 90% of rainwater amounting to around 3 BCM in urban areas runs off the surface to join streams and rivers. This water needs to be harvested for groundwater recharge or storage.

A policy needs to be framed for mandatory harvesting of rainwater from rooftops in urban areas, either on an individual basis (larger buildings/houses) or on a community basis (smaller buildings/houses). The harvested rainwater can be used for non-drinking purposes. The rain-runoff water from open impervious (concreted) spaces needs to be diverted for recharging groundwater. This water can also be stored and diverted for various uses through separate supply pipelines.

Most of the rain-runoff water in villages accumulates in ponds. In pre-1960 Punjab, the pond-bed soil was excavated as it dried completely in May-June and acted as a groundwater recharge point. With the fast pace of economic development, these ponds are now no more excavated and the seepage from the pond surface is virtually nil. Through community action, the ponds should be renovated and maintained as quality water bodies.

Managing resources

Improving recharge: Increasing urbanisation, negligible green belts and concretisation of land surface have decreased groundwater recharge and increased the runoff. The state has 57 blocks with groundwater extraction of more than 200%, of which 12 have groundwater extraction of more than 300%, indicating higher withdrawals against recharge.

Drains in rural areas, most of which are presently defunct, need to be desilted and provided with gabion-type of structures at regular intervals so as to ensure natural recharge of excess runoff water, through these drains.

Farmers in some canal command areas, especially in central Punjab, prefer using tubewell water for irrigation due to ease of irrigation. They have installed automatic starters on tubewells, leading to large-scale wastage of water. Farmers should be sensitised about the benefits of using canal water, especially in the head and middle reaches of irrigation channels.

Judicious use

Crop diversification: A robust strategy needs to be developed and executed for the diversification of crops. A strategy at the micro-level (a block or cluster of blocks) needs to be developed for this purpose based on water availability, niche area crops (other than paddy) and market infrastructure in that unit. Based on this strategy, a block or block cluster-specific crop diversification plan should be developed. The economic benefit of alternative crops with or without value addition must be equivalent to that of paddy crop.

Rationing and credits: The consumption of ground- or surface-water should be rationed, based on good irrigation practices as recommended by Punjab Agricultural University. The quantity of water consumed above the recommended limit should be charged at higher rates as per this proposed scheme: Farms (above 12 hectares), 400% of the nominal rates; farms (4-12 hectares), 300%; and farms (up to 4 hectares), 200%.

Farmers who save irrigation water over and above the recommended allocation, either through innovative techniques like micro-irrigation or through crop diversification, may be credited for such savings at the rate of Rs 2/m³ with a specified ceiling.

Thus, an integrated approach based on a three-pronged strategy, followed and executed with a dedicated timeline, can ensure sustained use of water in agriculture.

Kukal is Member, Punjab Water Regulation & Development Authority; Sidhu is former Senior Agriculturist, World Bank (South Asia Region)

Haribhoomi- 10- October-2022

छग में सीजन की बारिश ने तोड़ा 10 साल का रिकॉर्ड, जल्दी जाने के मूड में नहीं मानसून

हरिभूमि न्यूज ▶▶| रायपुर

चार महीने के सीजन में दक्षिण पश्चिम मानसून की बारिश ने प्रदेश में पिछले दस साल के रिकार्ड को ध्वस्त कर चुका है। यह अभी प्रदेश से विदा होने के मूड में नजर नहीं आ रहा है। मानसून विदाई के लिए चार परिस्थितियां बननी चाहिए, जिसमें से एक लक्षण भी अभी दिखाई नहीं पड़ रहा है। वर्ष 2022 में हुई बारिश ने इस बार प्रदेश को तरबतर कर दिया है, इस बार प्रदेश में 1275 मिमी. बारिश हुई है, ▶▶| शेष पेज 04 पर

अलग खबर

प्रदेश में चार महीने में 1275 मिमी वर्षा, जो 12 प्रतिशत ज्यादा

तेज धूप से लोग परेशान

रविवार को तेज धूप ने लोगों को परेशान किया। बादल छाए रहे और धूप-छांव का खेल चलता रहा है। मौसम विशेषज्ञों के मुताबिक अभी वातावरण में प्रचुर मात्रा में नमी बनी हुई है। इसकी वजह से बारिश की संभावना भी लगातार बनी हुई है। पिछले चौबीस घंटे में प्रदेश के कुछ इलाकों में बारिश हुई। शहर का अधिकतम तापमान 33.1 डिग्री सेल्सियस रिकार्ड किया गया।

अब भी बारिश की गतिविधि

मानसून की विदाई के लायक प्रदेश में परिस्थितियां अनुकूल नहीं है। अभी पर्याप्त मात्रा में नमी और बनने वाले सिस्टम की वजह से बारिश की गतिविधि बनी हुई है।
- एपी चंदा, मौसम विशेषज्ञ

(सामान्य वर्षा 1142.1 मिमी.)

प्रदेश में दस साल की बारिश

वर्ष	कुल वर्षा	अंतर
2022	1275	+ 12
2021	1107.7	- 3
2020	1234.4	+8
2019	1255.7	+10
2018	1104.2	+3
2017	1041.4	-9
2016	1109.3	-7
2015	1025.9	-10
2014	1093.3	-3
2013	1153.8	+1
2012	1201.2	+5