

Hindustan Times- 18- September-2023

Monsoon has ground to cover in its last 2 weeks

By Abhishek Jha

Rain over large parts of India since September's second week is a relief after the country experienced its driest August in recorded history. While kharif crop-sowing was nearly complete in early August, last week's rain could help preserve its output. It should also help bring down temperatures after the warmest August in recorded history. However, the amount of rain India needs in the next two weeks of the monsoon — it ends officially on September 30 — is still quite high if the year is to not record a deficit. This suggests that unless IMD forecasts for this month are very wrong, large parts of India and most of its reservoirs will remain dry after its main rainy season. Here are four charts that explain this.

1 Before last week, daily rain had a deficit almost continuously for over a month

The amount of precipitation recorded overall has been more than the 1961-2010 average, a benchmark for rain, on almost all days starting September 7, according to India Meteorological Department's (IMD) gridded dataset. While such a daily surplus is not needed every day in the usual course of things, it is significant because of the prolonged gap after which this happened. There was a deficit continuously on every day for the two-week period from August 24 to September 6. In

the 34-day period from August 4 to September 6, there were only two days of surplus rain: August 19 and August 23. To be sure, as the accompanying chart shows, recording a surplus in September takes much less rain than in August, which is India's second-wettest month. For example, India received 6.61 mm rain on September 10, an 8% surplus for the day. A similar amount of rain (6.85 mm) on August 24 was a 10% deficit for that day.

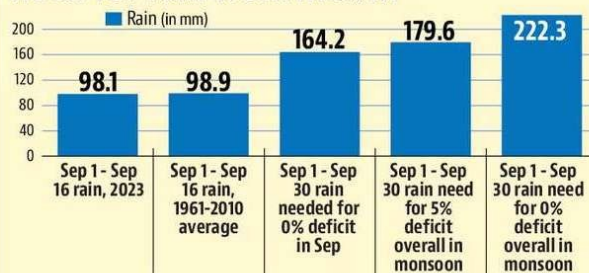
Daily rain over India (mm)



2 Therefore, September rain will have to defy IMD forecasts for a monsoon without deficit

The example given above suggests that September will have to record a large surplus to fix the deficit accumulated through August. How much of a surplus does September need? The 1961-2010 average for the June-September monsoon season is 853.7 mm. India has received 729.5 mm rain from 1 June to September 16, which leaves a requirement of 124.2 mm in the remaining two weeks of the month. This translates to an overall surplus of 35% for September compared to the 1961-2010 average or a total of 222.3 mm rain in the month. 222.3 mm rain would make this September the tenth wettest since 1901, when it is only the 67th wettest so far. Even for an overall 5% deficit this monsoon, September will have to record a 9% surplus. In comparison, the IMD has forecast a maximum of 183 mm rain in the month. This means that IMD forecast for September will have to be way off mark for no deficit in 2023 monsoon.

Rain so far in September and overall need for rain from month

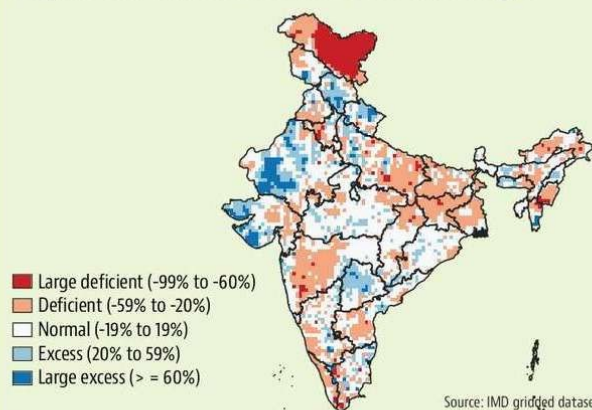


Hindustan Times- 18- September-2023

3 September surplus is not expected over all the 37% of India that is dry

To be sure, if 222.3 mm rain does fall in September, it will not be the first time this monsoon that IMD had forecast for a month has been off the mark. IMD had forecast a maximum of 297 mm rain in July. July rain was 16 mm more than that. The degree by which September forecast needs to go wrong is much bigger: 39 mm. Moreover, a more recent forecast for the next two weeks shows surplus rains giving parts of Bihar, Uttar Pradesh, north-western states, and peninsular India without surplus rain. Since forecasts tend to be more accurate when made closer to the date, one can expect that the deficits of these regions will remain largely as they are. This is a problem because large parts of north-western, western, and peninsular India are also under big deficits. While 36% of India's total area has a deficit of 20% or more (called "deficient" rain officially), this area is 76% in Kerala, 47% in Maharashtra, and 46% in Haryana, and 39% in Punjab and Andhra Pradesh. Around a third of Karnataka and Tamil Nadu is also under similar deficits. The surplus rain forecast in central and eastern India will also have a lot of ground to cover: 51%-77% of the area of West Bengal, Jharkhand, Bihar, and Uttar Pradesh is also "deficient".

June 1-September 16: 2023 rains's departure from 1961-2010 average

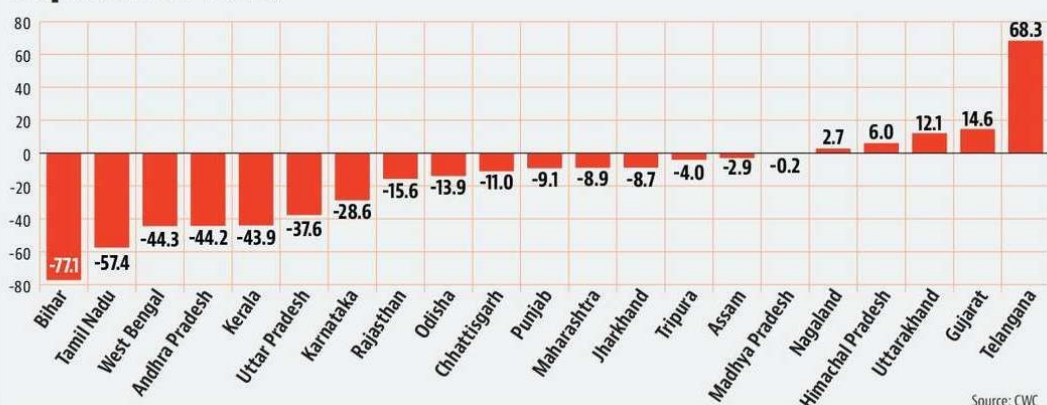


4 This has left reservoirs dry for the winter crop cycle

As the discussion above suggests, some parts of India – including important crop-producing states – are likely to end up with a dry monsoon. While the impact of the dry monsoon so far on the kharif crops will likely only be known when its output is measured (there was correction in sowing after July rains), it has created at least one

pressure point for the winter crop cycle. Among the 21 states for which the Central Water Commission (CWC) publishes reservoir data, all but five (Uttarakhand, Himachal Pradesh, Gujarat, Telangana, and Nagaland) have a deficit.

Reservoir level departure from last 10 years' average: As on September 14 (%)



The Times of India- 18- September-2023

MPs to meet Union Jal Sakti minister today

Chennai: The delegation of MPs led by state water resources minister Duraimurugan is set to meet Union Jal Sakthi minister Gajendra Singh Shekawath in Delhi on Monday.

DMK MP T R Baalu, Congress MP S Jothimani, AIADMK MPs M Thambidurai and N Chandrasekaran, CPI MP K Subburayan, CPM MP P R Natarajan, MDMK MP Vaiko, VCK MP Thol Thirumavalavan, PMK MP Anbumani Ramadoss, TMC MP G K Vasan, IUML Navas Kani, Kongu Makkal Desiya Katchi A K P Chinnaraj are part of the delegation to meet the minister and to demand him to direct the Cauvery Water Management Authority to instruct the Karnataka government to release the water from Cauvery river. TNN

The Hindu- 18- September-2023

Shinde seeks Centre's aid for water project in Marathwada region

Shoumojit Banerjee

PUNE

Maharashtra Chief Minister Eknath Shinde said on Sunday that he hopes the Union government would financially assist the water-grid project in the arid Marathwada region. Mr. Shinde was speaking in Sambhajinagar (formerly Aurangabad) on Marathwada Liberation Day.

"The State government has earmarked ₹15,000 crore for the Marathwada water-grid project. We have also asked Prime Minister Narendra Modi for assistance and are confident of securing support from the Union government," said Mr. Shinde.

He said Maharashtra would implement the NaMo 11-point programme – an array of welfare measures, to commemorate Mr. Modi's 73rd birthday.

73 lakh beneficiaries

"The first programme will be called the 'NaMo Women Empowerment Campaign' under which various government schemes will cover 73 lakh women. As many as 40 lakh women will be connected with self-help groups, while 20 lakh more will be connected with 'Shakti groups'," Mr.



Maharashtra CM Eknath Shinde and his deputies Devendra Fadnavis and Ajit Pawar during a press conference. PTI

Shinde said.

The CM earlier hoisted the flag to mark the 75th Marathwada Liberation Day, observed annually to mark liberation of the region from the yoke of the Nizam of Hyderabad by Indian forces on September 17, 1948.

The region comprises Chhatrapati Sambhajinagar, Nanded, Latur, Jalna, Beed, Parbhani, Dhareashiv (formerly Osmanabad), and Hingoli districts.

On Saturday, Mr. Shinde had announced a package of over ₹45,000 crore for the region. The Chief Minister further said that to draw inspiration from the Marathwada liberation struggle and keep alive the sacrifices of the martyrs of 1948, ₹2 crore has been allotted to erect memorial pillars in every district of the region.

The Morning Standard- 18- September-2023

Not enough storage in Cauvery, can't release water to TN: Siddaramaiah

EXPRESS NEWS SERVICE

@ Kalaburagi

CHIEF Minister Siddaramaiah on Sunday said the reservoirs in the Cauvery river basin do not have enough storage to release water to Tamil Nadu.

"We are filing an appeal before the Supreme Court, briefing it as to why Karnataka could not implement the orders of the Cauvery Water Management Authority (CWMA). Karnataka needs more than 106 tmcft of water in Cauvery river if we have to release water to Tamil Nadu. Karnataka needs 30 tmcft for drinking water purposes, 70 tmcft to save standing crops and 3 tmcft for industries. But as on date, we only have 53 tmcft," he said.



He termed former chief minister BS Yediyurappa's statement that Karnataka has released water to Tamil Nadu as politically motivated. All the previous governments, including Yediyurappa's, released water to the neighbouring state when they were in power, he added.

"In a normal year, Karnataka

Water requirements of Karnataka

Karnataka needs more than 106 tmcft of water in Cauvery river if we have to release water to TN. It needs 30 tmcft for drinking water purposes, 70 tmcft to save standing crops. Karnataka CM Siddaramaiah

used to release 177.25 tmcft of water. So far, we have released 37.7 tmcft. Let the former chief minister tell us where we have released 99 tmcft to Tamil Nadu. The CWMA has suggested that we release 500 cusses of water to Tamil Nadu. But we have not released it as we do not have sufficient storage," he added.

The Tribune- 18- September-2023

Devise plan to save crops from a watery grave

SURINDER S KUKAL

MONSOON fury ravaged Himachal Pradesh in July and August this year. Punjab and Haryana suffered, too, as the huge runoff water from the catchment areas located in the hill state, coupled with water released from the reservoirs into the rivers, led to the inundation of vast tracts of agricultural land. Many crops, including water-guzzling paddy, got damaged on lakhs of acres in Punjab and Haryana. It is feared that paddy yield in these states may decline by around 30 per cent. The situation could not be handled by the two states due to certain challenges.

More than 75 per cent of the annual rainfall in the region occurs during a period of two-and-a-half months. The three-day spell of rainfall (about 300 mm) in July accounted for more than half of the average annual rainfall in Punjab and Haryana. The excess rainfall (436 per cent of the long-term average) during July in Himachal Pradesh led to a huge runoff from the Himalayan state into the rivers of Sutlej, Beas, Ghaggar and Yamuna, causing numerous breaches and flooding of agricultural fields.

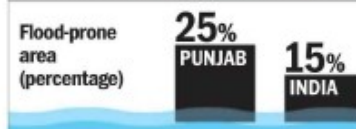
Degraded catchments

The major reservoirs in the region have their catchment areas in the Himalayan states of Himachal and Uttarakhand. These catchment areas have been denuded of their natural vegetation by large-scale, unplanned deforestation over the past couple of decades. This has led to huge siltation of the reservoirs. For example, the sed-

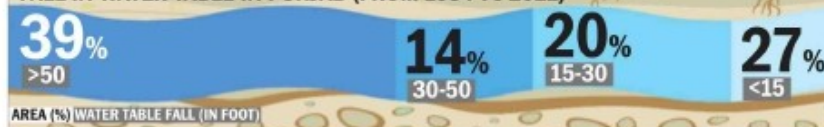
DAMAGE DUE TO FLOODS IN PUNJAB

Year	Agricultural area affected (km ²)
1988	9,221
1993	121.7
2013	9,757
2023	2,400*

SOURCE: STATISTICAL ABSTRACTS OF PUNJAB *AS PER ESTIMATES



FALL IN WATER TABLE IN PUNJAB (FROM 1984 TO 2021)



AREA (%) WATER TABLE FALL (IN FOOT)

iments entering the Gobind Sagar lake from a catchment area of 36,000 square km in the Himalayas have reduced its water storage capacity from 9.27 billion cubic metres (BCM) to 7.14 BCM. Also, the heavy runoff and unabated soil erosion in the catchment areas trigger floods in the plains of Punjab and Haryana. Due to anthropogenic activities in the hill states, the floods in the plains threaten agricultural productivity of the food bowl of the country.

So-called development activities, such as the construction of roads, bridges, tunnels, etc. in the catchment areas without proper planning and execution, have rendered the landscape unstable. Unregulated inhabita-

tion in the catchment areas has aggravated the situation by blocking the natural path of running water and concentrating its flow velocity. The concentrated flow damages structures such as roads, buildings and embankments of rivers and streams, leading to damage to crops in Punjab and Haryana.

Managing floods

The natural landscapes in hills and plains, which have been altered over time, need to be restored. The provision of systematic waterways in recently degraded landscapes and their isolation from any type of man-made obstruction needs to be ensured. The basic principle of reducing runoff and sediment load from the

catchment areas should be adhered to through a dedicated afforestation programme.

In the plains, too, the embankments of rivers and streams need to be strengthened, besides curbing stream-bank erosion. The floodplains of the rivers and streams must be restored by removing structures or habitations. The excess water in rivers should be diverted for irrigation purposes through the existing canal system or an alternative carrying system. This becomes more important during situations like the one witnessed recently — there was abundant floodwater in some blocks of Punjab, whereas farmers in other blocks had to irrigate their fields

through groundwater extraction. Let this disaster be turned into an opportunity for groundwater conservation.

Desilting of water bodies

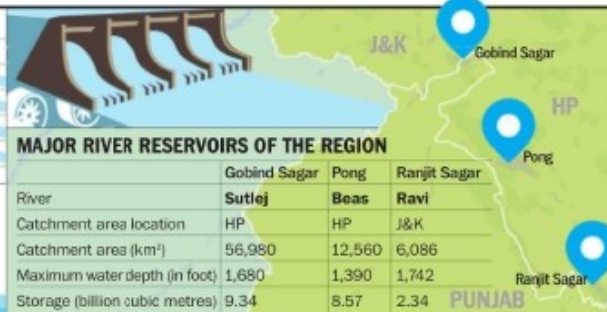
The reservoirs of various dams in the region need to be desilted periodically to ensure a minimum of 50 per cent of dead storage available for water, apart from live storage. Similarly, the rivers and streams in the plains must be cleared of deposited sand (or silt near the barrages) through scientific mining to sustain their carrying capacity. The village ponds, which get runoff water from the whole village/catchment areas, also need to be desilted periodically with the twin

objectives of groundwater recharge and water use for animals and other purposes.

Rainwater management

Rainwater in the hills or plains needs to be managed in such a way that the runoff accounts for not more than 25 per cent in the hill states and 10 per cent in the plains. Unfortunately, during the monsoon season, more than 70 per cent of the rainwater in hill states goes as runoff water into rivers and streams and, ultimately, oceans. This water must be conserved in the hills as well as the plains. Most of the catchment areas of hydroelectric reservoirs are in Himachal and Uttarakhand, while rivers and streams carrying runoff water flow into the plains via these reservoirs. Thus, there is an urgent need to tackle the rain runoff issue on a regional basis rather than by individual states; any activity in a hill state may have consequences for the plains. In this direction, a Regional Water Commission for the states concerned should be established, aided by a regional group of land and water experts. The commission, on the advice of the expert group, should draft state-specific water and flood management plans on short-, medium- and long-term bases. These plans should be executed effectively by the states. Such a collaborative approach is a must to minimise flood-induced damage to agriculture and also to utilise the rain/runoff water to recharge groundwater.

The author is a member of the Punjab Water Regulation & Development Authority



MAJOR RIVER RESERVOIRS OF THE REGION

	Gobind Sagar	Pong	Ranjit Sagar
River	Sutlej	Beas	Ravi
Catchment area location	HP	HP	J&K
Catchment area (km ²)	56,980	12,560	6,086
Maximum water depth (in foot)	1,680	1,390	1,742
Storage (billion cubic metres)	9.34	8.57	2.34

Amar Ujala- 18- September-2023

नर्मदा बांध से पानी छोड़ने से अहमदाबाद में बाढ़, 9,600 को सुरक्षित स्थान पर भेजा गया

अहमदाबाद। गुजरात में सरदार सरोवर बांध का जलाशय रविवार सुबह इस मानसून में पहली बार अपने पूर्ण स्तर (एफआरएल) 138.68 मीटर तक पहुंच गया।

इसके बाद अधिकारियों ने अतिरिक्त पानी छोड़ने के लिए बांध के 30 गेटों में से 23 खोल दिए। भरूच जिले में नर्मदा नदी खतरे के निशान (24 फीट) को पार करते हुए 31 फीट पर बह रही है। बाढ़ से प्रभावित कुल 9,613 लोगों को सुरक्षित स्थानों पर पहुंचाया गया है। नर्मदा, भरूच, वडोदरा, दाहोद और पंचमहल जिलों में 207 अन्य लोगों को बचाया गया। एजेंसी

मौसम विभाग ने दी भारी बारिश की चेतावनी

गुजरात के कई हिस्सों में रविवार को भारी हुई बारिश से निचले इलाकों में बाढ़ आ गई और कई गांवों का संपर्क टूट गया। नर्मदा और अन्य नदियां पूरे उफान पर हैं। शहर में 76 मिमी बारिश के बाद अहमदाबाद के कई इलाकों में पानी भर गया, जिससे सामान्य जनजीवन अस्त-व्यस्त हो गया। अधिकारियों ने एहतियात के तौर पर यातायात के लिए अंडरपास को बंद कर दिया है।

Rajasthan Patrika- 18- September-2023

महाराष्ट्र और मध्यप्रदेश में भारी बारिश के कारण बांध में बड़ी मात्रा में पानी की आवक

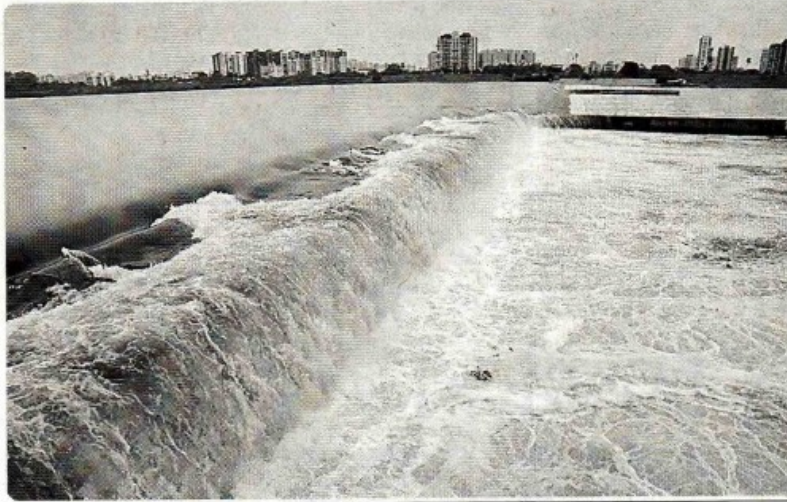
उकाई बांध हाईअलर्ट पर, जलस्तर रूल लेवल 340 फीट के पार पहुंचा

पत्रिका न्यूज नेटवर्क
patrika.com

सुरत. महाराष्ट्र और मध्यप्रदेश में लगातार जारी भारी बारिश का असर तापी नदी पर बने उकाई बांध पर देखने को मिल रहा है। बड़ी मात्रा में पानी की आवक के कारण बांध का जलस्तर तेजी से बढ़ते हुए रूल लेवल 340 फीट को पार कर गया है। बांध में 4.90 लाख क्यूसेक पानी की आवक हो रही है। वहीं, 2.50 लाख क्यूसेक आउट फ्लो को ध्यान में रखते हुए प्रशासन अलर्ट हो गया है और तापी किनारे के गांवों को सतर्क कर दिया गया है।

अगस्त महीने में बादलों के विराम के बाद सितम्बर में फिर एक बार बारिश का माहौल जमा हुआ है। तीन दिनों से दक्षिण गुजरात के साथ ही महाराष्ट्र और मध्यप्रदेश में भारी बारिश का दौर जारी है। भारी बारिश के कारण उकाई बांध का जलस्तर तेजी से बढ़ रहा है। एक दिन में ही बांध के जलस्तर में तीन फीट की बढ़ोतरी हुई है और जलस्तर रूल लेवल को पार कर 342.30 फीट पर पहुंच गया है। जबकि बांध का खतरे का निशान 345 फीट है।

बांध प्रशासन के मुताबिक महाराष्ट्र और मध्यप्रदेश में हो रही भारी बारिश के कारण महाराष्ट्र के हयनूर बांध और प्रकाश बैराज के सभी दरवाजे खोल दिए गए हैं और उकाई बांध में 4.90 लाख क्यूसेक पानी की आवक हो रही है। बड़ी मात्रा में पानी की आवक के कारण पूर्व के अनुभवों को ध्यान में रखते हुए बांध प्रशासन अलर्ट हो गया है और जलस्तर पर निगरानी रखी जा रही है। बांध के जलस्तर को बनाए रखने के लिए 2.50 लाख क्यूसेक पानी छोड़ा जा रहा है।



342.30

फीट दर्ज किया गया
रविवार रात आठ बजे
बांध का जलस्तर

4.90

लाख क्यूसेक पानी की
आवक हो रही बांध में

2.50

लाख क्यूसेक पानी
छोड़ा जा रहा बांध से

तापी नदी का जलस्तर बढ़ा



उकाई बांध से ढाई लाख क्यूसेक पानी छोड़े जाने से सुरत में तापी नदी का जलस्तर भी तेजी से बढ़ रहा है। तापी नदी पर बना कियर कम कौजवे ओवरफ्लो होने के साथ ही 7.34 मीटर के जलस्तर

पर बह रहा है। वहीं, कौजवे से 72 हजार क्यूसेक पानी की निकासी के कारण तापी नदी के जलस्तर में भी बढ़ोतरी हो रही है। तापी नदी किनारों को छूने की कगार पर है।

शहर में आधा इंच बारिश



जोनवार बारिश(एमएम में)

सेंट्रल - 17	कतारगाम-14	वराछा-बी -14	अठवा - 09
रावेर - 13	वराछा-ए -15	उधना -08	लिंबायत -11

सुरत समेत दक्षिण गुजरात में भारी बारिश की चेतावनी के बीच रविवार को दिनभर शहर में बारिश का माहौल रहा और आधा इंच बारिश दर्ज की गई। सुबह से

ही आसमान में बादलों का डेरा रहा और हल्की बारिश का दौर जारी रहा। मनपा के फ्लड कंट्रोल रूम के मुताबिक शहर में 12 घंटे में आधा इंच बारिश हुई।