

Central Water Commission  
Technical Documentation Directorate  
Bhagirath(English)& Publicity Section

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The News Clippings on Water Resources Development and allied subjects are enclosed for perusal of the Chairman, CWC, and Member (WP&P/D&R/RM), Central Water Commission. The soft copies of clippings have also been uploaded on the CWC website.

S. Maheshwari  
24/9/18  
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Director TD Dte

For information of Chairman & Member (WP&P/D&R/R.M.), CWC and all concerned,  
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News item/letter/article/editorial published on 21/9/18 in the

Hindustan Times

Statesman

The Times of India (N.D.)

Indian Express

Tribune

Hindustan (Hindi)

Nav Bharat Times (Hindi)

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The Hindu

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Deccan Chronicle

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Indian Nation

Nai Duniya (Hindi)

The Times of India (A)

Business standard

and documented at Bhagirath(English)& Publicity Section, CWC. **THE ECONOMIC TIMES**

# Monsoon Watch



**Monsoon remained weak as it approaches the end of season**

Rainfall across India was 50% below average on Thursday

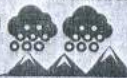


Rainfall deficit in Bengal, Bihar and the north-east remains a worrying 20%



Seasonal rainfall across India since June 1 is 10% below normal

The monsoon current is expected to intensify in central and northern India in next few days



## CURRENT WEATHER & FORECAST

**A cyclone is forecast to hit coasts of S Odisha and N Andhra in early hours of Friday**

The storm will cause heavy rains in Odisha, Andhra, Telangana, Bengal and parts of MP

Northern and NW India was completely dry on Thursday, but rainfall is expected in 2 days

Delhi, Punjab, Rajasthan and Himalayan regions can expect heavy rainfall on Saturday and Sunday

**Northern India will be cooler with max temperatures likely to fall 2-3 degrees from Friday**



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# Lenders to Decide on Stressed Power Projects by Oct 10

**No Sitting on the Fence** Banks with lesser exposure to stress have been asked to stop delaying, choose between resolution plan or bankruptcy

## Easing Energy Flow

### STRESSED PROJECTS UNDER DISCUSSION INCLUDE...

- 1 KSK Mahanadi Power (Akalnara)
- 2 Coastal Energen Pvt Ltd
- 3 Avantha Power (Jhabua)
- 4 SKS Power Generation (Chhattisgarh)
- 5 Prayagraj Power Gen Co (Jaypee Bara)
- 6 RKM Powergen
- 7 Indiabulls Power Amravati
- 8 Indiabulls Nashik
- 9 Essar Mahan
- 10 GMR Chhattisgarh
- 11 Jaypee Power Ventures Ltd consisting of three power plants - 1,320-mw Nigrie with an attached coal mine, 500-mw Bina, 400-mw Vishnuprayag hydro plant - and a transmission line



CAPACITY AT STAKE  
**13,000 MW**



Sarita.Singh@timesgroup.com

**New Delhi:** Top lenders to power projects including State Bank of India, Punjab National Bank, Power Finance Corp and others have agreed to decide the fate of a dozen stressed assets totalling about 18,000 MW by October 10.

At a meeting between lenders and top government officials late on Thursday, large lenders explained risks of moving power projects to insolvency court to disarming banks, most of which have smaller exposures, and sought to arrive upon a decision before the set deadline, sources said.

The meeting was attended by top executives of most banks with exposure to power sector, power secretary Ajay Bhalla and other senior officials of power

and finance ministries, they said.

Lenders were informed about rising electricity demand and measures being proposed by the high level empowered committee that is working to address issues related to fuel, discom payment delays and regulatory approvals.

"Banks with lesser exposure to stressed assets in power sector have been asked to come together and decide either to agree with the resolution plan or refer the projects to bankruptcy court rather than dilly-dallying," said a senior official who attended the meeting. "The disagreeing lenders were also informed about the risk of getting lower valuations in the insolvency court."

None of the resolution plans for the power projects under bidding have so far received 100% lenders nod. Projects like GMR Chhattis-

garh Energy, KSK Mahanadi, Prayagraj Power Generation Corp, Essar Mahan, RKM Powergen, RattanIndia Amravati and Nashik are awaiting 100% lenders' nod to complete resolutions. In most resolution proceedings, banks finalised bidders but not deals due to resistance from 15-20% lenders even as the offers are better than expected requiring lenders to take 60% haircut, the sources said.

**None of the resolution plans has so far got 100% lenders' nod**

Banks will not be able to transfer the power projects to new promoters even if they agree to finalise the deals because of the status quo verdict of the Supreme Court. "However, if the resolution plans are decided, it can cre-

ate a favourable ground before the court to salvage at least some of these good operational assets from insolvency proceedings," another official said.

Banks and power producers got an interim relief from the Reserve Bank circular's mandate referring the projects to insolvency court due to Supreme Court's status quo order. Power companies had moved courts after the RBI refused extension of deadline for completing resolutions of stressed power plants. The Allahabad High Court ruled in favour of RBI, the Supreme Court had on September 11 ordered status quo on the projects and transferred all cases on the circular to itself.

RBI's February 12 circular mandated the banks to resolve stressed assets by August 27 or move them to bankruptcy court.



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## MORE RICE, OILSEEDS PLANTED



# Kharif Acreage Up 0.61% YoY to 1,057.81 L Ha

**New Delhi:** Planting of kharif crops this season has increased over the previous year's figure. According to latest numbers from the agriculture ministry, kharif crop planting has covered 1,057.81 lakh hectare from June to September 20, a 0.61% increase from 1,051.36 lakh hectares a year earlier.

Rice, oilseeds and sugarcane saw the increase while pulses, coarse cereals and cotton saw the decline. The government has set a target of planting kharif crop on 1,058.10 lakh hectares this year.

Meanwhile, data from the weather department shows monsoon rainfall has been 10% below normal so far this year.

Rice planting saw a 2.36% increase over the previous year at 385.85 lakh hectare. Higher acreage was reported from Telangana, Karnataka, Madhya Pradesh and Punjab. Planting of oilseeds, chiefly soyabean, sesamum and castor increased while groundnut and niger fell, taking total planting from the previous year to 3.10% increase at 178.27 lakh hectare.

Sugarcane, was planted on 51.94 lakh hectares, up 4.17% from a year earlier. Area under cotton however was 0.89% lower at 120.64 lakh hectares. The area of pulse cultivation too dropped 1.11% to 137.93 lakh hectares. Major dip was seen in uradbean. In coarse cereals the planting fell by 3.92% to 176.16 lakh hectare. All major cereals from jowar, bajra, ragi, small millets and maize saw the dip.

The 91 major reservoirs held 23% more water as on Thursday compared with last year and 5% more than the ten year average at 120.087 billion cubic metres. OUR BUREAU

News item/letter/article/editorial published on

21/5/18

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THE ECONOMIC TIMES

## Central team to assess flood havoc

SPECIAL CORRESPONDENT  
THIRUVANANTHAPURAM

The inter-ministerial team deputed by the Central government to assess the extent of damage caused by the floods in Kerala last month is scheduled to start its ground-truthing exercise on Friday.

The 11-member team is headed by B.R.Sharma, Special Secretary, Ministry of Home Affairs.

It will split into four sub-groups and visit the flood-ravaged areas in all but Thiruvananthapuram and Kasargod districts which were spared the fury of the floods.

The team is scheduled to meet Chief Minister Pinarayi Vijayan and discuss their assessment of the situation with him before their return on Monday.

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THE ECONOMIC TIMES

# '₹37k-cr canal project will help 13 districts'

HT Correspondent

htraj@hindustantimes.com

**JAIPUR:** Rajasthan chief minister Vasundhara Raje on Thursday said that the ₹37,000-crore Eastern Rajasthan Canal Project in the state's Dausa district will meet the drinking water and irrigation needs of 13 districts.

Raje said she had requested Prime Minister Narendra Modi to approve the project when he visited Jaipur on July 7. "I thank the Prime Minister, who had assured us of this scheme, and the Central Water Commission approved this scheme," she said at a public meeting in Dausa as part of the Gaurav Yatra she is



■ Chief minister Vasundhara Raje during Rajasthan Gaurav Yatra, PTI FILE

undertaking across the state to galvanise support ahead of the assembly polls later this year.

Raje said the BJP government has introduced the law that pro-

vides for capital punishment for those held guilty of raping girls under 12. "Till now, three culprits have been sentenced to death."

She said many rape cases were

reported under the Congress rule but claimed the party did nothing. "Even Manmohan Singh, the then prime minister, and Congress president Sonia Gandhi did not speak on this," she said.

Raje said her government has waived loans up to ₹50,000 for farmers, which has been done for the first time in the history. She added that the farmers have been given ₹3,000 crore as insurance claims for crop failure.

She said, for the first time, the value added tax on petrol and diesel had been reduced by 4% and the fuel prices were down by Rs 2.50 per litre. "In the entire country, it was BJP's Rajasthan government which slashed the fuel

price and provided relief to all sections of the society," she said.

Raje said electricity tariffs for farmers were not increased and domestic power supply is being provided for 20 hours across the state. "The domestic electricity connections are being given for Rs 500 and there will be no house left in the state that will not have power by March 2019," she said.

She took a dig at the Congress saying it gets disappointed if they do some good work.

"Around 6,000 constables were promoted to head constables and for the first time in the history, the insurance of police personnel was increased, which has disturbed the Congress."



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THE ECONOMIC TIMES

# बारिश के अभाव में कई जगह फसलों की हालत खराब, सूखते पौधों व मुरझाती उपज को समेटने में जुटे काश्तकार फसल तो सूख गई, पर प्रशासन का पता नहीं

RP-21

प्रिका न्यूज नेटवर्क  
rajasthanpatrika.com

नागौर, बारिश के अभाव में फसलों की स्थिति बिगड़ चुकी है, लेकिन कृषि विभाग एवं प्रशासन की नजर में स्थिति संतोषप्रद है। जबकि वास्तव में मृग, ज्वार एवं बाजरा, मोठ एवं खार आदि के उपज स्थिति औसतन 20 से 25 प्रतिशत तक खराब हुई है, लेकिन कई जगहों पर यह आंकड़ा 50 फीसदी से भी ज्यादा जा पहुंचा है। इस संदर्भ में गांवों में पड़ताल हुई तो काश्तकारों का कहना है कि मृग व बाजरे की फसल उनकी पूरी तरह से चोपट हो चुकी है।

जिले में इस बार कई जगहों पर बादलों की मेहरबानी नहीं होने से खेतों में खड़ी फसलों की हालत



खराब हो चुकी है। विशेषकर मृग, ज्वार, बाजरा व मोठ व सब्जियों की स्थिति ज्यादा बिगड़ी है। कई जगहों पर पूरे खेत में खड़ी फसल ही बारिश के अभाव में सूख गई तो कुछ जगहों पर आधी-अधूरी बची फसलों की कटाई करने में

किसान लगाए गए हैं। खड़ी फसल के पौधों में अब पीलापन आने के साथ ही पौधों ने दम तोड़ दिया है। बची हुई फसलों में भरपूर बारिश से होने वाली उपज सरीखी गुणवत्ता नहीं मिलेगी। जिले के बाराणी, अमरपुरा, भगवानपुरा,

जोसियाद, बुड़ोद, गावड़ियों की ढाणी, बालिया, भगवानपुरा आदि ग्रामीण क्षेत्र के किसानों का मानना है कि इस बार बारिश नहीं होने की वजह से काफी नुकसान बटुचा है। खेतों में पौधों के सूखते कंट, मुरझाते पौधे अपनी स्थिति खुद-ब-खुद बयां करते नज़र आ रहे हैं। अब सूखने लगे हैं। अब खेतों में फसल हुई तो बरसात गायब हो गई है। समर्थन मूल्य की दरों में मृग में सर्वाधिक राशि बढ़ने के बाद उल्लसित किसानों ने जिले के तीन लाख 99 हजार 780 हेक्टेयर के एरिया में बुवाई कर डाली। अब बरसात नहीं होने से मृग, मोठ, मृगफली, ज्वार, चोला एवं हरी सब्जियों का उत्पादन अप्रत्याशित रूप में ज्यादा

## उत्पादन 25-30 प्रतिशत गिरा

कृषि विशेषज्ञों का कहना है कि बारिश नहीं होने के कारण निर्धारित उत्पादन में 25-30 फीसदी की गिरावट हो चुकी है।

अब जो फसल है भी तो बारिश के अभाव में वह पूर्ण रूप से विकसित नहीं हो पाई। हालांकि कई जगहों पर बाद में बरसात तो हुई,

प्रभावित हुआ है। मृग के बाद करीब तीन लाख 39 हजार 478 हेक्टेयर के एरिया में लहलहा रहे बाजरे की चमक भी कम हो गई है। फसलों की स्थिति यह है कि दाने तो आए हैं, लेकिन पानी नहीं मिलने के कारण उनके अंदर न तो अच्छी चमक है, और न ही गुणवत्ता अपेक्षा के अनुरूप है।

लेकिन यथासमय नहीं होने के कारण फसलों का उत्पादन औसतन अब गिर चुका है।

अश्चर्य है कि हालत इतनी खराब होने के बाद भी प्रशासन का कोई अधिकारी अब तक किसानों के पास उनकी सुध लेने के लिए नहीं पहुंचा है।

विभाग की ओर से सवे से नहीं कराया गया, लेकिन कई जगहों पर पर्याप्त बारिश हुई है। हालांकि कुछ क्षेत्र में कम बारिश के कारण स्थिति खराब हुई है, लेकिन बहुत ज्यादा बरसत नहीं है।

हरजीराम चौधरी, कृषि विस्तार उपनिदेशक

Hindustan Times  
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# Southwest Monsoon may Start Withdrawing this Month End

Our Bureau

**New Delhi:** The southwest monsoon is expected to start withdrawing towards the end of this month, nearly a month behind schedule, the weather office said on Friday. Monsoon normally begins to withdraw from September 1.

This year's delayed withdrawal is likely to help the country avoid a drought situation, even as countrywide rainfall is hovering on borderline drought conditions, measuring 10% below normal levels since the beginning of the monsoon season.

"Withdrawal of southwest monsoon is likely to commence from parts of northwest India towards the end of September," the India Meteorological Department (IMD) said in a weather forecast.

After making a strong start with an early arrival on May 29, the southwest monsoon season has been rife with anomalies this year.

A 12-day hiatus in the circulation of monsoon currents in June sent the rainfall figures dwindling, while agriculturally crucial months of July and August also recorded below normal rains.

ET reported on September 19 that the southwest monsoon this year could see an exception of recording below normal rains in all the months of June to September monsoon season, an event recorded after 14 years.

The ongoing spell of rainfall over northwest India could improve rainfall figures in the region, which has registered 7% below normal rains since June 1.

Meanwhile, above normal rains are also likely over Maharashtra, Gujarat, Andhra Pradesh, Telangana, Chhattisgarh, Odisha, Karnataka and Tamil Nadu till September 26.

The overall rainfall of the country has been dampened by below normal rains in the east



and northeast region, where rainfall deficiency measured up to 24%.

Withdrawal of monsoon in the last ten days of September is quite normal, but there could be a problem for crops ready for harvest if it moves beyond early October, which looks likely as per present weather conditions, said Madan Sabnavis, chief economist at Care Ratings.

"At the time of withdrawal of monsoon, we tend to see stormy weather," he said. "This coincides with the time the crop is ready to harvest which could be damaged because of strong winds. Already we have seen that the acreage for certain crops is low. So, that could exacerbate the situation further."

However, Sabnavis added that the borderline drought conditions do not look like a problem at present, since acreage for most crops barring cotton and pulses has been satisfactory.

The national weather office has forecast a normal monsoon season this year, but independent weather forecasting agency Skymet in August said India could see below normal rainfall season this year, with rainfall measuring up to 92% of average.



Hindustan Times  
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## Will it be a drought year? Cyclone Daye holds the key

Amit.Bhattacharya  
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**New Delhi:** Much rides on cyclone Daye, which hit the Odisha coast early Friday morning and lay over Chhattisgarh in the evening as it weakened into a deep depression that's expected to bring widespread rain to central and north India over the next three-four days.

This is probably the last storm system to hit India during the monsoon season ending on September 30 and the amount of rain it brings will decide whether this year's monsoon finally ends up in the below-normal range or in the drought category. Currently, the countrywide seasonal rainfall deficit is 10%. Anything below that is called a drought year, while a shortfall of 4 to 10% is a below-normal monsoon.

► Continued from P 1

Cyclonic storms are rather rare in September. We expect the system to make a make difference to the monsoon deficit," said Mrutyunjay Mohapatra, additional director-general at IMD.

The storm has energised the monsoon that's been poor in September so far, with rainfall deficit during the month at 29%. The depression is currently over Chhattisgarh and is expected to move north-westward, cutting through Madhya Pradesh before fizzling out close to the south Rajasthan-north Gujarat border.

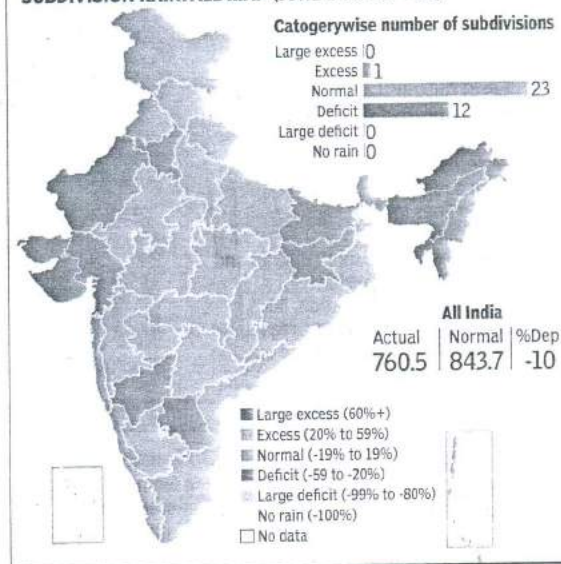
The Met department said the system is likely to cause heavy to very heavy rainfall over Chhattisgarh and east Madhya Pradesh till Saturday and over Vidarbha till Sunday. Heavy to very heavy rain is also likely on Saturday over north Konkan, north Madhya Maharashtra, west Madhya Pradesh, east Rajasthan and Gujarat.

From Saturday, system is

# Storm has energised monsoon

## 10% DEFICIT SO FAR

SUBDIVISION RAINFALL MAP (JUNE 1 TO SEPT 21)



expected to interact with a western disturbance, causing rain over northwest India, including Delhi, Haryana, Punjab, west UP and Himachal Pradesh.

The department has issued "red alert" warnings for very heavy rainfall over Himachal Pradesh on Sunday and Uttarakhand on Monday.

Full report on [www.toi.in](http://www.toi.in)

## Cyclone Daye batters Odisha, then fizzles out

**Bhubaneswar:** Cyclone Daye weakened into a deep depression and moved towards Chhattisgarh on Friday, leaving behind a trail of destruction in several districts of Odisha. Under its influence, heavy rain lashed northern and southern Odisha, causing flash floods in Malkangiri and Balasore districts.

CM Naveen Patnaik announced a cash relief for the flood-hit people of Malkangiri, which was the worst-affected district, for seven days. While everyone will get Rs60, children below 12 years will be given Rs 45 a day for the next one week. Special relief commissioner Bishnupada Sethi said, "Some parts of the district, like Korukonda, recorded a rainfall of 403mm followed by 256.4mm in Malkangiri and 135.4mm in Kakrigumma in the last 24 hours ending on Friday." **TNN**



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THE ECONOMIC TIMES

# Cyclonic storm 'Daye' hits Odisha coast, triggers heavy downpour

No casualties; road links snapped, low-lying areas submerged; more rain likely

STAFF REPORTER

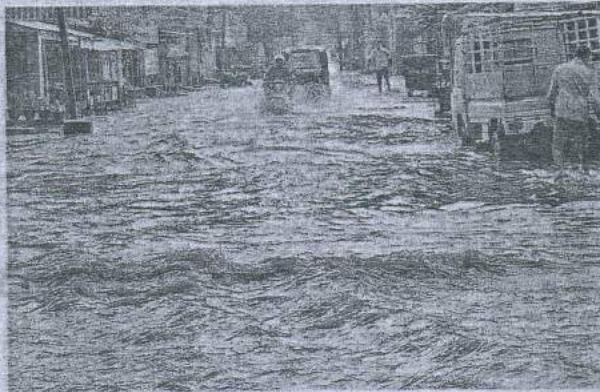
BHUBANESWAR

Heavy rain lashed Odisha as cyclonic storm 'Daye' crossed the State at Gopalpur in Ganjam district in the small hours of Friday.

Southern and coastal Odisha received heavy rain that caused inundation. About 150 people were shifted to safer places.

There was, however, no report of any casualty, said Bishnupada Sethi, Managing Director of the Odisha State Disaster Management Authority.

"The cyclonic storm moved west-north-westwards during the past six hours with a speed of about 23 kmph and crossed south Odisha and adjoining north Andhra Pradesh coast close to Gopalpur around 1.30 a.m. on Friday," said Mr. Sethi.



A flooded road in Bhubaneswar on Friday. • BISWARANJAN ROUT

The southern Odisha town of Jeypore recorded 290 mm of rainfall, Malkangiri 284 mm and Semiliguda 210 mm. Bhadrak, Balasore, Mayurbhanj and Puri districts also received heavy rain.

Road connectivity snapped at several places as rivers overflowed in Malkangiri district.

Roads in Kangu-rukonda and Potteru were submerged, leading to disruption in vehicular movement between Malkangiri and Motu.

Submergence in low-lying areas of Bhadrak and Balasore has also been reported. The water level in the Jalaka river was at the 6.30-metre

mark against the red level of 5.5 metres by 3 p.m. on Friday.

The water level was also rising in Budhabalanga and Baitarani rivers.

There was no threat of a major flood in the State, said government sources.

## Gratuitous relief

After reviewing the situation, Chief Minister Naveen Patnaik sanctioned gratuitous relief for seven days at ₹60 per day per person and ₹45 per day for children below 12 years in Malkangiri district.

The district administration was directed to reach out to the affected people and extend all assistance.

The Meteorological Department has forecast heavy to very heavy rain at isolated places as the system weakened into a depression.



Hindustan Times ✓  
Statesman  
The Times of India (N.D.)  
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The Hindu  
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M.P.Chronicle  
Asj (Hindi)  
Indian Nation  
Nai Duniya (Hindi)  
The Times of India (A)  
Business standard

and documented at Bhagirath(English)& Publicity Section, CWC. **THE ECONOMIC TIMES**



• Karnataka says it will not accept the fresh notification as 'it will have an adverse effect on state's economy'.  
AFP FILE

## K'taka rejects plan to declare western ghats eco-sensitive

Jayashree Nandi  
• [jnandi@hindustantimes.com](mailto:jnandi@hindustantimes.com)

**NEW DELHI:** The union environment ministry will be soon issuing a draft notification declaring the Western Ghats as eco-sensitive area (ESA) for a second time after a similar draft in 2014 expired due to a lack of consensus among states and the Centre. Karnataka, one of the six states to be affected, has already said it will not accept the fresh notification as "it will have an adverse effect on state's economy".

The affected states that also include Tamil Nadu, Goa, Maharashtra, Kerala and Gujarat will have 60 days time to respond to the draft.

The first draft notification declared 56,825 sq km of the ghats in these states as ESA.

AK Mehta, additional secretary, environment ministry said, "We are in the process of republishing the draft notification. We will have a discussion with Karnataka on the matter because they are not willing to accept the notification."

Karnataka forest minister, Shankar R, said the state will not accept any curbs under the ESA notification. "The Western Ghats ESA notification will have major impact on the state's economy. There are already various legislations including the Forest Conservation Act 1980, which ensure protection of forests. Why do we need more legislation? All red category industries will be restricted in the Ghats, which will affect livelihoods."

Red category industries are heavily polluting industries like pesticides, petrochemicals, pulp and paper and cement.

The ESA completely restricts mining, setting up of new thermal power plants, polluting industries and all new large township and area development projects. After the environment ministry issued the notification in 2014, Kerala, Karnataka, Maharashtra and Tamil Nadu raised objections, saying it will impact economic development in affected

villages and towns. It eventually led the notification to get lapsed.

A senior environment ministry official, who didn't wish to be named, said this time the other five states seem to be on board requesting minor amendments. "Karnataka, however, is not agreeing with even the concept of ESA," the official said.

The declaration of Western Ghats ESA has assumed significance because of the massive Kerala floods in July. Prominent ecologists like Madhav Gadgil have linked unprecedented rainfall, deforestation, mining, construction of dams and ecologically destructive activities to the exacerbation of floods.

The National Green Tribunal (NGT) had on September 1 barred any reduction in the ESA area in view of the Kerala floods. It has directed the environment ministry to not reduce the area covered and issue the notification in toto. The environment ministry, however, is issuing a draft notification to give states some more time to respond. "We will go back to NGT if states back out," the official cited above added.

The new ESA notification is based on an assessment by a high-level working group headed by space scientist K Kasturirangan. Before that, a working group headed by Gadgil set up in 2010 had recommended 75% of the Western Ghats area be declared ESA as opposed to 37% proposed by the Kasturirangan committee.

The Gadgil committee had recommended that local bodies and villagers should be consulted before any development project comes up in the ESA. "I don't think the state government has changed its view on ESA. It had opposed the Gadgil report and 2014 notification, but after the Kerala floods, they have been quiet. From an ecological point of view and after seeing the massive destruction in places like Wyanad and Idukki, we want the Madhav Gadgil committee report to be discussed again," said R Sridhar of Thanai, a Kerala-based environmental NGO.



Hindustan Times  
Statesman  
The Times of India (N.D.)  
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Business standard

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# Sterlite plant will not be reopened, says TN govt

PRESS TRUST OF INDIA

Chennai, 22 September

**T**he Tamil Nadu government has on Saturday asserted that the Sterlite Industries' plant in Tuticorin would not be re-opened as its policy decision to seal the Vedanta Ltd unit was in line with the people's sentiments.

This comes at a time when a three-member panel appointed by the National Green Tribunal (NGT) and led by former Meghalaya High Court Chief Justice Tarun Agrawal is slated to visit the copper smelter plant in the southern district.

"Our stand is that once it is closed, it is closed. A policy decision was taken by the government and based on that the plant was sealed. They (Vedanta) have moved the NGT against the sealing and a panel was formed. We have moved the Supreme Court saying not even that panel is required," Fisheries Minister D Jayakumar said here.

Jayakumar said the local people were against the plant, and therefore the government took a decision to seal it "in line with the sentiments of the people of Tuticorin". "There is no chance of re-opening it by the government," he asserted.

The Tamil Nadu government had ordered permanent closure of the copper smelter plant on environment grounds in the wake of protests by locals.

The locals protested demanding the closure of the Sterlite factory for 99 days and the stir turned violent on May 22, on its 100th day, as 13 agitators were killed in police firing.

The state government had last Tuesday urged the Central



The state government had also rejected the Centre's report on groundwater contamination in Tuticorin against the backdrop of the controversy, saying it was 'absolutely vague' and seemed to support the Vedanta unit

Pollution Control Board (CPCB) to postpone Saturday's visit of the expert committee to the closed Sterlite Industries, citing pendency of its appeal in the SC against the NGT order setting up the panel.

In its communication to the CPCB, the Tamil Nadu Pollution Control Board (TNPCB) referred to pending cases in the Supreme Court against the NGT order on setting up the panel.

Earlier, the state government had also rejected the Centre's report on groundwater contamination in Tuticorin against the backdrop of the Sterlite controversy, saying it was "absolutely vague" and seemed to support the Vedanta unit which was "totally unwarranted". It had said the state "strongly feels that the report is motivated and has been prepared only to prejudice the Tamil Nadu government and the TNPCB cases in various judicial fora".

To a query, Jayakumar rejected archival Dravida Munnetra Kazhagam's (DMK) contention

that the ruling All India Anna Dravida Munnetra Kazhagam's (AIADMK) September 25 protest against Congress and DMK on the Sri Lankan Tamils issue was a bid to divert attention from corruption charges faced by the ruling dispensation.

The AIADMK has announced state-wide public meetings on September 25 seeking "trial" of the DMK and the Congress for "war crimes" against Tamils in the 2009 Sri Lankan civil conflict. Jayakumar said the meetings were not an attempt at diverting attention from anything "as we have nothing to hide". Jayakumar added, "Certain truths have to be told to the people at the right time."

The old political issue has been revived by the AIADMK in the backdrop of the recent remarks of former Sri Lankan President Mahinda Rajapaksa that the Indian government helped his country during the final war against the Liberation Tigers of Tamil Eelam (LTTE). Rajapaksa was at the helm

when the nearly 30-year-old ethnic strife in Sri Lanka ended in 2009 with the defeat of the LTTE while the DMK was part of the Congress-led United Progressive Alliance that ruled India then.

The AIADMK had on September 19 adopted a resolution at a meeting here alleging that the DMK and the Congress were responsible for the killings of thousands of Tamils during the war.

"Now that Rajapaksa has openly admitted to all secrets, the DMK-Congress coalition government aiding the killings of 150,000 Tamils and rapes of thousands of Tamil women should be treated as war crimes, and those involved should be made war criminals and given punishment," it had said.

Jayakumar sought to know why the DMK had not warned the Congress of withdrawing support seeking ceasefire then, and said had this been done, "the 150,000 lives would have been saved".



Hindustan Times  
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The Times of India (A)  
Business standard

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# Every drop counts

As India reels from the effects of a severe water shortage, startups have begun offering innovative ways to help people access safe drinking water. But how feasible are these solutions?

SNEHA BHATTACHARJEE

This year saw a city run out of water completely. It was one of the world's greatest tourist destinations, Cape Town. Government reports suggest India's per capita availability of water has been reducing progressively due to an increase in population and the country is facing water stress. To add to this, a report titled, "The state of the world's water" by WaterAid says India has the lowest per capita access to clean drinking water - close to 163 million Indians are said to be suffering from this scarcity. At the same time, the report adds that it is also one of the world's most-improved nations for reaching the most people with clean water.

Further, it states the challenges faced by the country as: Falling groundwater levels, drought, demand from agriculture and industry, pollution and poor water resource management. Despite the government restructuring rural water programme with a goal to reach 90 per cent of rural households with piped water by 2022, the challenges will only intensify as "climate change contributes to more extreme weather shocks".

"What we need currently is accountability of the existing resources and ensure that whatever is available to us, is maintained well," says Dharmesh Shah, an independent researcher on environment from Chennai. On one of his research projects to an area in North Chennai, Shah came across people paying for using 20 litre jar bottles. "The ground-

water has been left to no use because there has been constant deposition of garbage right above the source of water. In such a situation, the common man has no choice but to pay and use water," he adds.

As the government data suggests India's average annual per capita water may reduce to 1,340 cubic meters in 2025 and 1,140 cubic meters in 2030, it is a welcome relief to see some organisations using natural resources, IOT (Internet of Things) to provide accessibility to safe and clean drinking water.

Take the case of Hyderabad-based Uravu Labs. Co-founder Swapnil Shrivastava told Business Standard their source water from "air" using solar energy. "A panel that can be installed on the rooftop that will attract water in the night, use sunlight through the day to heat it up, a condenser that will cool the water and then supply to the user through pipes," says Shrivastava. They are still four to six months away from their official launch but are hoping

to tie up with the government and the NGOs and reach places and people who do not have access to clean drinking water and where the infrastructure is missing.

Bengaluru based OCRO works on "pay per use" model. "The water purifier is IOT enabled and is installed at the user's location. They can recharge or buy water credits online through mobile and web application," says Vikram Gulecha, one of the co-founders.

This way, the user pays only for the purified water and there is no cost involved for machine and maintenance. "There is a zero capping on minimum consumption of water for the user.



The government restructured the rural water programme to reach 90 per cent of households with piped water by 2022

Though we have observed that 15-20 litres per day is consumed by a household, users can consume as many litres of water from the device without having to worry about its maintenance for a lifetime," adds Gulecha.

Gurugram based Swajal has water ATMs or shops across 15 states. Their idea has been to provide for accessibility in public places and small hamlets. Swajal started in 2011 for cluster of villages. The water ATMs come with solar pumps, and use locally available water. The machines are all self-run and have been programmed for self-cleaning too. "We have for every 30 machines, one technician available. Our machines are connected via IOT to our data centre in Delhi where we monitor their

maintenance," says Vibha Tripathi, one of the founding partners, Swajal. This year, they are launching this project in areas where water quality is bad, and also teach people about water conservation and rainwater harvesting.

"It may sound great but come to think of it, we have actually let go of our water resources to private players. A resource that is already diminishing," feels Shah. "At the end of the day, we are using environment to produce water. Isn't it putting pressure on the environment further?", he concludes adding instead the government should look at cleaning the already existing resources and ensure people have safe drinking water in their homes without paying for it.



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# Untimely rains leave farmers worried

TRIBUNE NEWS SERVICE

HISAR, SEPTEMBER 22

The post-monsoon rain lashing the region since Saturday morning has left farmers worried, as they were set to harvest the kharif crops, including cotton, paddy, bajra, and moong. Agriculture experts say that the Saturday rain is unlikely to have a major impact on the crops but they can suffer damage if the rain continues for the next couple of days, as forecast by the Meteorological Department.

Farmers have started plucking cotton balls in the region and harvesting is likely to pick up next week. However, the rain can lead to moisture in the blooming balls and their blackening. The rain accompanied with strong winds have also damaged standing paddy, moong, jawar, and bajra crops.

However, farmers hope that it will be beneficial for the advance sowing of chana and mustard for the coming rabi season.

Kuldeep Sheoran, a farmer of Badhra village, said that they also suffered losses due to sudden wilting of cotton. "Whatever cotton crop is remaining, the untimely rain is likely to damage it. Bajra has also been flattened by winds accompanying the



The flattened paddy crop in a field near Kaithal on Saturday.

rain," he said.

Baldev Singh of the Indian Meteorological Department in Hisar said that about 44 mm of rainfall was recorded in Hisar till Saturday evening. "The weather condition will continue for the next two or three days," he added.

Dr Surender Singh, Head of Meteorological Department in the HAU, said that the rain adversely impacted the kharif crops, which are on maturity. "More rain is forecast for the next couple of days. The cotton, paddy and moong crops are unlikely to withstand excessive rain and strong winds. However, it will be beneficial for farmers who are planning advance sowing of mustard and chana," he added.

## Paddy crop flattened

**Kurukshetra:** Standing paddy crop at a few places was reportedly flattened due to rain accompanied by winds in the early hours of Saturday. Deputy Director, Agriculture, Dr Karamchand, said that no major impact on the paddy crop had been reported. However, crops were lodged in a few pockets in low-lying areas, he added. A maximum of 14 mm to 31 mm of rainfall was received in the district.

## Crop at grain markets drenched

**Ambala:** Standing paddy crop at several places was flattened due to untimely rainfall in the district. The produce lying in grain markets got drenched, resulting

## CM's rally washed out

The Pragati rally of the BJP to be addressed by Chief Minister Manohar Lal Khattar at Kaimri village in the Nalwa segment of Hisar on Saturday was cancelled due to rain. The BJP had made elaborate arrangements for the rally and party workers had been working hard to mobilise people. The Chief Minister cancelled all programmes in Hisar.

## Warning along Yamuna

**Hisar:** The Central Government has issued a warning to the northern states, including Haryana, about heavy to very heavy rainfall in the region in the next three days. The state government has issued a warning urging people living along the Yamuna not to go close to the river, as the water level is likely to go up in view of the rains in Himachal Pradesh. Following the weather advisory, Chaudhary Charan Singh Haryana Agriculture University has postponed the Krishi Mela to be held on September 24-25 to October 4-5 October.

in a higher moisture level in the crop. Suresh Kumar, a farmer, said that the crop flattened and now it would be harvested manually. Meanwhile, Deputy Director Agriculture Girish Nagpal, said that, "No report of crop loss has been received from any part of the district.

## Alert sounded

**Sonepat:** The district administration has sounded an alert in villages located along the Yamuna and advised villagers not to enter the river and leave their cattle near it, as the water level is likely to increase considerably in the coming hours following heavy rain in Himachal areas since Friday. The district has received 12 mm to 25 mm of

rainfall at different places. Though there has been no report of crop loss, crop harvesting will be temporarily hampered for a few days.

## Now, harvesting to be costly

**Yamunanagar:** Farmers are afraid that the excessive rain can result in flooding of their fields, causing damage to their paddy crops. "Most of the paddy crop in the district is in the harvesting stage. At this stage, rain could flatten the standing crop or even lead to germination," said Joginder Singh, a farmer from Devdhar village.

Arun Kumar, a farmer from Jathlana, said that farmers had to pay more to labourers or harvesters for harvesting their flattened paddy crop.



Hindustan Times  
Statesman

The Times of India (N.D.)

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# Monsoon normal in state after 7 years

Heavy rain forecast today, tomorrow; cotton, paddy farmers fear crop damage <sup>23/9</sup>

## TRIBUNE REPORTERS

CHANDIGARH, SEPTEMBER 22

Thanks to the widespread rain on Saturday and a similar prediction for the next two days, Punjab is likely to finish this monsoon with normal rainfall. It will be the first time since 2011 that the state will have a normal monsoon.

With Saturday's rain, the state has so far recorded 393.9 mm rainfall this season and till the fourth week of September, 468.1 mm is expected. The state was 16 per cent deficient, but according to the Chandigarh Meteorological Centre, the entire gap is likely to be filled with the current spell.

The state had last witnessed a normal rainfall in 2011. At that time, it was 7 per cent above normal.

Twelve districts have so far witnessed normal rainfall. It was deficient in six districts — Bathinda, Moga, Muktsar, Jalandhar, Amritsar and Kapurthala — and scanty in Mansa, Fazilka and Ferozepur. Ropar district witnessed excess rainfall with around 1,000 mm so far.

The current spell of rain will start receding on Monday, while some isolated places will receive heavy



People wade through a waterlogged road after heavy rain in Patiala on Saturday. TRIBUNE PHOTO

## MOSTLY DEFICIENT

| YEAR | MONSOON (%) |
|------|-------------|
| 2005 | -11.3*      |
| 2006 | -13         |
| 2007 | -32.2       |
| 2008 | 20.3        |
| 2009 | -36         |
| 2010 | -7.4        |
| 2011 | 7           |
| 2012 | -46         |
| 2013 | -2          |
| 2014 | -50         |
| 2015 | -31         |
| 2016 | -25         |
| 2017 | -21         |

\*11.3% BELOW NORMAL

rainfall. A drop in both day and night temperatures was recorded. The maximum temperature fell to 32 degree Celsius and the minimum was 22°C.

Meanwhile, farmers have said that the current spell of rain will prove harmful for paddy. Jagmohan Singh, state general secretary of BKU (Dakaunda), said those who had sown short-term varieties of paddy would suffer the most as the harvest had already started reaching the market. He said the discolouration of high-quality basmati would affect crop prices. The ongoing showers will also delay harvest, he added.

"There have been no case of crop damage so far, but

“Those who have sown short-term varieties of paddy will suffer the most as the harvest has already started reaching the market. Discolouration of high-quality basmati would affect crop prices. The ongoing showers will also delay harvest.

Jagmohan Singh, BKU (DAKAUNDA) LEADER

if it continues to rain incessantly tomorrow and strong winds blow, then it can result in major crop damage,” said Baldev Singh Latala, state vice-president of the All India Kisan Sabha.

In Malwa, cotton farmers are a worried lot, apprehending crop loss due to incessant rain.

Though the area under cotton cultivation came down in Malwa this year, the farmers were expecting a bumper yield. However, with the forecast of heavy rain in the state for three days just around the harvesting time, they fear the worst now.

The cotton had started arriving in the market in areas such as Fazilka and the farmers were upbeat, as their produce was already fetching a price of above Rs 5,800 per quintal.

Agriculture experts have advised the farmers not to irrigate their fields in view

of the rainfall, as it increases the threat of flattening of crops, if strong winds accompany the rainfall. Earlier this year, the government had raised the MSP of cotton from Rs 4,020 to Rs 5,150 per quintal.

Kamal Deep Singh, a farmer from Jalandhar district, said most of the paddy sown on nearly 1,500 acres had got submerged. “We have been asking district officials to provide pump sets for draining out water. It seems unlikely that the standing crop will survive if it continues to rain till Sunday morning.”

In Patiala, the district administration is keeping a close watch on the water level in the Ghaggar.



Hindustan Times  
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THE ECONOMIC TIMES

# Despite copious rainfall, most rivers go dry in state

## Climate experts term it rare; greens point to loss of vegetation

**BENGALURU:** The state, which witnessed bounteous rainfall with almost all rivers flowing in spate until a few weeks ago, is suddenly staring at acute scarcity of potable water.

Paving way for yet another disaster, major rivers and rivulets along the Western Ghats and coastal areas have dried up unfolding a near summer-like situation in several districts.

The sudden drying up of rivers and water bodies in less than a month since the heavy rainfall has not only left the state's scientific community flummoxed but has also caused panic among people.

While the climate experts, geologists, hydrologists have termed it as a rare event, environmentalists have blamed it on the rampant destruction of vegetation over the years.

"The earth is like a living body. Forests, rivers and natural vegetation are suggestive of its health. But they have been destroyed over the years resulting in the sudden drying up of rivers and water bodies especially along the Ghats and coastal districts," opined Dr Rajendra Hegde, Principal Scientist and Head at the Bengaluru Regional Centre of

National Bureau of Soil Survey and Land Use Planning.

Elaborating further, Dr Hegde said, "The Western Ghats act as natural filter facilitating the percolation of rainwater into the ground. Further, the humus on top of the soil helps in retaining the water. But over the years, shockingly water retention capacity in Kodagu and Malnad districts has been reduced from 5% to just 1%. This has a cascading effect on flow of water as well. Hence, all the water bodies have dried up."

### Alarming phenomenon

Expressing concern, yet another ecological scientist at Indian Institute of Science (IISc) Dr TV Ramachandra said, "This is indeed a warning for all of us. The ground water level has dropped alarmingly and we had anticipated it when we were doing research on the Western Ghats rivers. Even though it is common for water levels in rivers to recede during summer, the phenomenon unnatural as early as September."

He also said that change in the land use pattern has resulted in the loss of unique bacteria and fungi in soil affecting water retention capacity.

**DH News Service**



**Plummeting groundwater level in DK**

**6.42 Mtrs (2013)**

**8.63 Mtrs (2018)**

### Dried-up rivers

Tunga, Bhadra, Cauvery, Kumaradhara, Nethravati, Lakshmanatheertha, Payaswini, Hemavathi, Yagachi and Vaate

### Dried-up rivulets

Kongana, Naadugundi, Kuttunadu and Hattihole

### Places where wells have dried up

Madikeri, Somawarpet

### Nethravati River fast drying up

In a normal rainfall-year, the water level in Nethravati River reaches 21 mtrs. But in 2018, despite the region witnessing excess rainfall, the water level in the river alarmingly came down to 13 mtrs in September.

### Tankers to supply water in Kodagu

Rivers and rivulets across Kodagu were in full spate a few months ago due to heavy downpour, triggering landslides. However, in less than a month, the district is staring at acute scarcity of water and potable water is supplied through tankers.



Hindustan Times  
Statesman  
The Times of India (N.D.)  
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# Canoeing through Chennai

The dunking of cities every monsoon points to a wilful neglect of urban ecosystems



**Soumya Sarkar**  
Managing Editor of  
IndiaClimateDialogue.net. Follow  
him on Twitter @scurve

Countless poets and lovers have declaimed over the ages that Venice is not just a city; it's a living dream. By that same measure, irreverent others would hold that during the monsoons in India, its cities are more than just cities; they are lived nightmares. Venice's waterways are celebrated the world over and hordes of tourists descend on the city every year. In contrast, the streets of India's cities become reluctant rivers at the mere hint of rain.

There's a colloquial saying in Kolkata that every time a frog wets its pants, the city goes under water. The same goes for Mumbai, India's shining commercial capital. A few hours of rain and the shine is smudged by knee-deep water. Chennai, which did not experience large-scale waterlogging even a couple of decades ago, has drastically changed since the debilitating floods of 2015.

Flooding in the country's cities is due to poor planning and a wilful neglect of urban ecosystems. Besides inconvenience caused to citizens, it has serious economic dimensions. Poor urban planning can cause a country to lose as much as 3% of its GDP every year, according to a report by the United Nations Environment Programme.

## Population explosion

India has been rapidly urbanising since Independence. In 1950, just about 17% of the population lived in cities. Today, more than a third lives in urban areas. There are now more than 300 cities in India, according to Census 2011 data, of which some 50



**All aboard** People being rescued in fishing boats during the floods in Chennai in December 2015. SHAJU JOHN

host more than a million people. Three of the world's 10 largest cities, Delhi, Mumbai and Kolkata, as well as three of the world's fastest growing cities, Ghaziabad, Surat and Faridabad, are in India.

Part of the problem is population explosion. Chandigarh, one of the most beautiful and well-planned cities in the country, was meant to house half a million people, but more than half a million and a half live there now. Last year in August, torrential rain caused widespread floods in the city. In July this year, Bhubaneswar, another leafy, well-planned city with broad avenues, went under water due to extreme rainfall. It's no wonder that the flooding in haphazardly growing cities like Ghaziabad and Surat is even worse.

But more than the increasing number of people, ecologists and planners say the problem of urban flooding is man-made, because not enough attention is paid to local eco-

systems and natural drainage. In this, the insatiable greed for real estate, often in connivance with city officials, is squarely to blame.

In Bengaluru, rapid, unplanned urban expansion has ensured that barely a handful of its interconnected lakes still survive, robbing the city of its capacity of natural storm water drainage.

The same can be said of Chennai. The degradation of Ennore creek has increased flood risk in the northern parts of the metropolis, and the constant draining of the Pallikarai marshes makes waterlogging inevitable in its southern stretches. Add the

fact that global warming has made rainfall more erratic and intense in South Asia, and the problem almost seems intractable.

## Short and intense

As the effects of climate change become evident, short bursts of intense rainfall are expected to become more common across India, not sparing its cities, research shows. Researchers say urban flooding results from two factors - permeable soil surfaces being replaced by impermeable concrete floors due to rapid urbanisation, and the strong link between increase in urban rainfall extremes and temperature.

In such a scenario, it's more important than ever that we pay immediate attention to more prudent urban planning that takes in to account the ecological dimensions of our expanding cities before it's too late. The Indian government is in the midst of framing a national urban policy. It must ensure that urban planning is ecology and people-centric rather than only providing engineering solutions.

City governance is woefully inadequate in our country. The annual survey of India's city systems by Janaagraha Centre for Citizenship and Governance has found that the poor state of service delivery across cities points to a failure of urban governance. This must change, and we should take heart from notable exceptions like Coimbatore, where citizen participation is leading to a rejuvenation of its water bodies.

India is at the crossroads of an urban transformation. We must manage it well, with an eye on sustainable ecological management to avoid flooding. Otherwise, we will have to face up to the unpleasant prospect of being ferried by canoes in Chennai or gondolas in Ghaziabad.

**In 1950, just about 17% of the population lived in cities. Today, more than a third lives in urban areas**



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THE ECONOMIC TIMES

## मध्यप्रदेश में फिर बारिश का दौर <sup>23PK</sup>

**भोपाल, (पंजाब केसरी):** बंगाल की खाड़ी में बने सिस्टम के चलते मध्यप्रदेश में मौसम एक बार फिर मेहरबान है। कल रात से प्रदेश खंडवा, इंदौर, बैतूल और पचमढी में झमाझम बारिश से शहर तरबतर हो गया। इस दौरान खंडवा में सबसे ज्यादा बारिश हुई,

जहां 13 इंच वर्षा रिकार्ड की गयी। भोपाल मौसम विज्ञान केन्द्र के मुताबिक बंगाल की खाड़ी में बना सिस्टम कल प्रदेश की दक्षिणी सीमा से प्रवेश कर गया, जिसके चलते खंडवा, बैतूल, पचमढी और इंदौर में झमाझम बारिश हुई। खंडवा में जहां 336 मिलीमीटर तो वहीं बैतूल में 100 मिलीमीटर, पचमढी में 93 तथा इंदौर में 83 मिलीमीटर वर्षा हुई। विभाग के अनुसार इंदौर से 80 किलोमीटर दूर कम दबाव का क्षेत्र बना हुआ है, जो उत्तर की ओर बढ़ रहा है। इससे ग्वालियर और चंबल संभाग सहित अनेक स्थानों पर भारी बारिश की संभावना जताई गयी है।

भारी बारिश के चलते खंडवा में



जहां निचली बस्तियों में जलभराव की स्थिति निर्मित हो गयी, वहीं जिले में बहने वाले अधिकांश नदी नाले उफान पर बह रहे हैं। इसके साथ ही इंदौर में भारी बारिश के चलते चलते खजराना, आजाद नगर, पंडरीनाथ, जूनी इंदौर, भागीरथपुरा, कुलकर्णी का भट्टा तथा चंदनगर सहित कई इलाकों में पानी भर गया। इसके अलावा उज्जैन, गुना, ग्वालियर, जबलपुर, रायसेन, भोपाल, सिवनी सहित अनेक स्थानों पर वर्षा का क्रम जारी है। राजधानी भोपाल में कल रात से रिमझिम बारिश का दौर जारी है। विभाग ने अगले चौबीस घंटों के दौरान प्रदेश में मौसम इसी तरह का बना रहने का अनुमान जताया है।



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THE ECONOMIC TIMES

# Govt Plans Waterway Freight Corridor Via Bangla to N-E States

Move will substantially reduce costs and time taken to transport goods to the eight states

**Rajat Arora & Yogima Sharma**

**New Delhi:** The government is working on a plan to set up a waterway freight corridor to connect the mainland with the northeastern states via Bangladesh at a cost of ₹5,000 crore.

The move would substantially reduce the time taken to transport goods to the eight northeastern states and costs.

The proposed 900-km waterway would be used to transport freight from the northern and eastern states to the northeast and would start near Haldia in West Bengal, go to the Sundarbans, merge into the Padma river in Bangladesh and then join up with the Brahmaputra in Assam.

"We are working on the details of the project. It would substantially improve connectivity between the mainland states and northeast. The cost of freight trans-

## Smooth Connectivity

COST OF THE PROJECT

₹5,000 CR

DISTANCE OF THE PROPOSED CORRIDOR

900 KM

### ROUTE OF THE WATERWAY

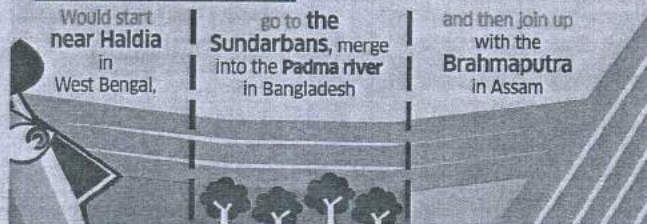


Illustration: ANIRBAN BORA

portation would come down substantially," shipping secretary Gopal Krishna told ET.

Currently, highway connectivity to the northeastern states is patchy and transportation of goods by road entails a high cost and takes time. According to the

ministry's estimate, the waterway could help reduce the cost of transportation by about 70%.

The government is already developing a waterway along the Ganga river between Haldia and Allahabad (1,620 km) at a cost of ₹4,500 crore. This link will also

be utilised for trade between India and Bangladesh.

India and Bangladesh share a 4,095-km border, of which 1,116 km is along rivers. Krishna said Bangladesh plans to use Indian ports as transshipment hubs.

"Instead of using Colombo or Singapore as a transshipment hub, Bangladesh is now looking at India. Our own container traffic moving to Colombo has come down as transshipment is now happening at our ports," he said.

The shipping ministry recently allowed foreign vessel operators to transport containerised cargo meant for import or export within ports located in Indian territory to ensure cargo doesn't land up in foreign hubs such as Singapore and Colombo.

He said that in the long term, India plans to develop two ports each on the west and east coasts as transshipment hubs.

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THE ECONOMIC TIMES

## Delhi gets more rain as monsoon withdraws

**NEW DELHI:** Intermittent rains continued in Delhi for the second consecutive day on Sunday cleaning up the city's air and bringing down the maximum temperature below normal. Scientists of the India Meteorological Department said rains are likely to continue on Monday.

"We are expecting light to moderate rainfall even on Monday. The sky is expected to clear up from Tuesday onwards," said BP Yadav, deputy director general of Indian Meteorological Department (IMD).

Officials said this will be the last spell of rain for this year's monsoon over northwest India, including Delhi. Once the rain ceases, IMD scientists would look for withdrawal symptoms of the monsoon. The symptoms include no rainfall activity over a period of at least five days, dry air and changing wind patterns.

Delhi started receiving light to moderate rains since Saturday. Between 8:30 am on Saturday and 8:30 am on Sunday, the IMD's Safdarjung observatory, which is taken to be a representative of Delhi's weather, received around 2.4 mm of rain. Another 0.5 mm of rain was recorded between 8:30 am and 5:30 pm on Sunday. **HTC**

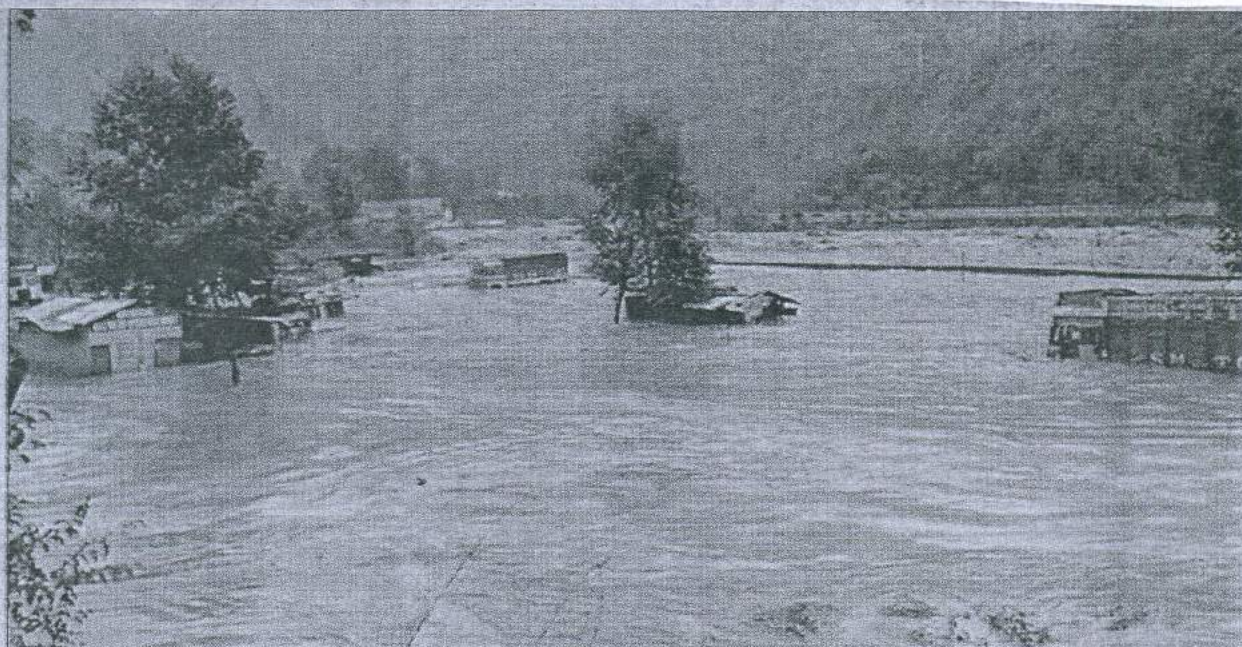


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**RAIN RAVAGES STATE:** Trucks and shops submerged in the swollen Beas in Mandi on Sunday. TRIBUNE PHOTO

# Chandigarh-Manali highway blocked as Beas runs amok

Portion of road submerges | Commuters stranded

TRIBUNE NEWS SERVICE

MANDI, SEPTEMBER 23

The Chandigarh-Manali highway remained blocked for hours after the water level rose in the Beas, submerging a portion of the road near Dwada in Mandi district on Sunday. Heavy rain in the upper parts of Kullu district spelt chaos in the area.

Moderate to heavy rain lashed several places in the past 24 hours. The authorities have issued an alert and have warned residents not to venture near the river and rivulets. Water was released from the Larji and Pandoh dams, which increased the water level of the Beas at Aut. The district administration has urged people not to go towards the Beas for the next two to three days, which is flowing above the danger mark.

Mandi Deputy Superintendent of Police Hitesh Lakhanpal said at Dwada, the

## WATER RELEASED FROM LARJI, PANDOH DAMS

- Water was released from the Larji and Pandoh dams, which increased the water level of the Beas at Aut.
- The district administration has urged people not to go towards the river for the next two to three days, which is flowing above the danger mark.
- In the evening, the water level rose again, forcing the authorities to stop the movement of vehicles for some time.

## PALAMPUR SANS POWER, WATER FOR 24 HRS

Incessant rain has thrown life out of gear in Palampur, Baijnath and Jaisinghpur. All rivers, rivulets and streams are in spate. Higher reaches of the Dhauladhar experienced snow on Saturday. Roads, water supply schemes, irrigation channels, residential houses and public property have suffered extensive damage. Besides, many parts of the region are without power supply following damage caused to the transmission lines.

riverwater flooded the Chandigarh-Manali highway. The traffic had to be halted for an hour. In the evening, the riverwater level rose again, forcing the authorities to stop the movement of vehicles for some time. Meanwhile, Manali in Kullu district

received the highest rainfall at 127.4 mm, followed by Dharamsala (125.2 mm), Una (124.2 mm), Gagret (118 mm), Jogindernagar (115 mm), Sujanpur (112 mm), Bhawan (110 mm), Nadaun (104 mm), Baijnath (97 mm) and Kangra (97.5 mm).

## Ravi above danger mark, schoolkids shifted

CHAMBA, SEPTEMBER 23

Chamba Deputy Commissioner Harikesh Meena on Sunday said the students of Navodaya Vidyalaya at Sarol on the banks of the Ravi had been shifted to safer places in the wake of heavy downpour for the past 24 hours.

He said the river was in spate and the Navodaya Vidyalaya building had been facing serious threat.

The Deputy Commissioner held an emergency meeting with district officials and directed functionaries of the District Disaster Management Authority to remain prepared to tackle any emergency situation in the wake of heavy downpour. He said a woman, identified as Guddi (47), a resident of Talara village in Bhattiyat subdivision died after falling off a cliff while working in her farm. Four houses were completely damaged at different villages. — OC



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THE ECONOMIC TIMES

# What caused the floods in Kerala?

Study by IIT professor identifies four major factors for the disaster

R. PRASAD  
CHENNAI

A combination of four factors led to extreme flooding across Kerala this year, a study says. Above normal seasonal (May-August) rainfall, extreme rainfall events occurring almost across the State during the season, over 90% reservoir storage even before the onset of extreme rainfall events, and finally, the unprecedented extreme rainfall in the catchment areas of major reservoirs in the State led to the disaster.

The summer monsoon rainfall in Kerala from May to August this year was 2,290 mm, which was 53% above normal. The average rainfall during the summer monsoon period (June-September) is about 1,619 mm. This makes 2018 Kerala's third wettest year in the last 118



A file photo of a rescue effort in Alappuzha, Kerala.

years (1901-2018); 1924 and 1961 were the wettest years with about 3,600 mm of annual rainfall.

Second, till August 21, the State witnessed few extreme rainfall events covering almost the entire State. These extreme rainfall events have very low probability of recurrence in any given year.

Third, Kerala received

1634.5 mm rainfall during the period May 1 to August 7, which is more than the average rainfall (1619.37 mm) during the summer monsoon period (June-September).

As a result, six of the seven major reservoirs in the State had over 90% storage before August 8, well before Kerala received the unprece-

ented extreme rainfall events.

Finally, the catchment areas of major reservoirs in the State received extreme rainfall never before witnessed in the State. The role of other factors such as changes in how infrastructure has grown at the expense of vegetation and drainage remains to be studied.

"The State-wide flooding shows that reservoirs can play a major role in improving or worsening the flood situation," says Prof. Vimal Mishra from the Civil Engineering Department at IIT Gandhinagar.

The results of the study were posted on September 14 in Hydrology and Earth System Sciences Discussions, and the manuscript is being peer-reviewed.



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THE ECONOMIC TIMES

## Report hints at our water and soil neglect

green  
piece



Bharati Chaturvedi

■ letters@hindustantimes.com

**NEW DELHI:** The United Nation Development Programme (UNDP) recently gave two pieces of data to sober us up. First, a majority of the world's poor are under 18 years of age. And the other, that a third of South Asia are multidimensionally poor.

By multidimension, the UNDP means not only less income, but lacking access to clean water, sanitation, nutrition, primary education and health. I believe it tells us about how deeply we have neglected our water and soil.

In South Asia, we have polluted our water bodies severely. Rivers have not been cleaned. Since centralised models to handle sewage have failed, clearly, decentralised models have to be rolled out urgently, even retrofitting building complexes if possible.

As far as industrial effluent goes, the story is different. South Asia has to rapidly move towards a circular economy, use materials, which are less toxic and make manufacturers and importers responsible for clean disposal of materials and items.

As far as nutrition is concerned, South Asia is already hit by climate change and as a result, agriculture is already in crisis. If business as usual continues, we won't have the food we need. A quick shift is needed. There should be an incentivised move to go back to ecologically appropriate crops. Also, there should be a campaign to eat foods not only more climate change resilient but also more nutritious and affordable. South Asia already has a treasury of millets, for example. At this moment, small farmers have been a greater focus point. Last week's grim news is our damning score card. We cannot allow this to continue unattacked with every weapon we have.

Bharati Chaturvedi

Founder and Director

Chintan Environmental Research and

Action Group

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**THE ECONOMIC TIMES**

# 500 homeless in Bengal as Ganga swallows land

The river has submerged large swaths of land of Murshidabad causing locals to flee to Malda

STAFF REPORTER

KOLKATA

Nearly 500 people have become homeless in the Hossainpur area of Murshidabad district due to severe river bank erosion by the Ganges. Since Wednesday the Ganga has swallowed large swaths of land in the area causing locals to flee to neighbouring Malda district.

Locals said the erosion started in Hossainpur in the district's Farakka block from Wednesday night. After a temporary lull on Thursday, the river started raging again from Friday.

"So far about 100 houses have been swallowed by the Ganga rendering nearly 500 people homeless and more than 40 houses are on the verge of collapsing into the



River bank erosion at Hossainpur in Murshidabad district.

• SPECIAL ARRANGEMENT

river," said Obaidur Rehman, an area resident.

While a section of the affected people have fled to Malda district, nearly half of

them are living in makeshift camps. The situation has generated severe discontent among the locals against the district administration and

the Farakka Barrage Project authorities.

Locals alleged that the project authorities "ignored" their warnings regarding the erosion.

Denying the allegation, an official of the Anti Erosion Division of the Farakka Barrage Project said that "adequate preventive measures" have been taken to check the erosion and the situation was now under control.

"Whenever such river bank erosion takes place it's a tendency among the locals to blame us. The section of the bank which collapsed got weakened due to abnormal rise in water level this year along with removal of soil by the villagers to construct houses," the official said.

He further claimed that a section of the villagers hurled abuses at the team of Farakka Barrage Project officials when they went to the spot on Saturday to strengthen the river bank.

However, district administration officials said the "preliminary measures" taken by the project authorities were not very effective.

Conforming that about 500 people have lost their homes due to river bank erosion a senior district administration official said that they have distributed 250 trampolines among the villagers and also set up a medical camp in the area.

"We are also helping the villagers in constructing makeshift shelters," the official said.



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# Saving Cauvery's cradle

Protecting the Kodagu watershed is essential to ensure the water security of three States



BOPAIAH BIDDANDA

We require water for everything: drinking, growing crops, producing electricity and industrial production. With the world population projected to grow to about 10 billion by 2050, according to the United Nations, and with climate change discernible, both the quantity and quality of freshwater will become critical, affecting health, food security, and economic well-being. A 2015 UN report, *Water for a Sustainable World*, pointed out that the gap between the availability of water and our need for water is only going to increase.

## Projects in the river basin

The growing demand on freshwater resources demonstrates the need for sustainable management of water. In this context, projects that are being contemplated, such as the laying of multiple railway tracks in the critical Cauvery river basin in Kodagu district, Karnataka, are not only economically unviable but also ecologically damaging. Mega projects pose a clear threat to the long-term water security of the three States that depend on the Cauvery (Karnataka, Kerala and Tamil Nadu), and exacerbate the threat posed by seasonal droughts and floods.

The Cauvery basin drains an area of about 81,000 sq. km. Originating in Talakaveri, Kodagu, the river irrigates agricultural fields, generates electricity, and provides drinking water to downstream communities across south India. The Cauvery and its tributaries contribute the bulk of water to the Krishna Raja Sagara dam near Mysuru, the primary water source for Bengaluru. However, increasing development pressure from the transportation and construction sectors poses a severe threat to the forests, riverbeds, wildlife and agricultural lands. This March, for the first time in decades, towns such as Virajpet in Kodagu faced a severe shortage of drinking water. The continuing loss of forest cover and illegal sand mining from river beds endanger water and food security for all the downstream communities in the



"A forest-depleted Kodagu basin will have reduced capacity to capture and store rainwater." It is a picture of destruction in Hattihole near Somwarpet Kodagu, after the floods. \*SAMPATH KUMAR G.P.

## Cauvery basin.

The three proposed railway plans have major implications. One, all the tracks will cut through large swaths of agricultural farms and fields as well as Protected and Reserve Forests that are spread across Kodagu and Mangaluru districts of Karnataka, and Wayanad and Kannur districts of Kerala. Along this sparsely populated area, transportation needs can be met by simply improving existing roads at a fraction of the monetary and ecological cost of the proposed railways. In fact, in its feasibility report of the Mysuru-Thalassery line, the Delhi Metro Rail Corporation stated that the project would not be beneficial to the State. In response to protests by the people of Kodagu in February, the plan to build the Mysuru-Thalassery line was scrapped in March. However, if history is any guide, plans to build the tracks will reemerge in time.

Two, they will affect the Western Ghats, one of the most biodiverse regions on earth. Kodagu has about 45% forest cover and about 30% agroforestry systems (coffee plantations and paddy fields). Between 2013 and 2015, a high-tension power line linking Mysuru and Kozhikode resulted in the loss of about 50,000 trees in Kodagu alone. If the proposed railway lines are constructed, they would conservatively result in tree loss that is 10 times more than this. Forests help capture rainfall, re-

duce run-off and soil erosion, recharge groundwater aquifers, mitigate flooding, support local communities, and provide refuge for native flora and fauna. Raised railway tracks will also impede wildlife and could result in the deaths of endangered animals such as elephants. Most importantly, a forest-depleted Kodagu basin will have reduced capacity to capture and store rainwater. Even without the railway tracks, a satellite-based report titled *India State of Forests 2017* noted that Kodagu lost 102 sq. km. of tree cover in just two years.

## Variable monsoon

The Kodagu basin receives heavy rainfall, mainly during the southwest monsoon (June-September), that feeds the Cauvery. However, studies by the Indian Institute of Tropical Meteorology and others, published in the journal *Nature*, have found evidence for increasingly variable monsoon rainfall. Thus, we can expect to experience more extreme floods as well as droughts in the future. These are scenarios that make preserving forest cover more vital in order to mitigate the collateral effects of these extreme events.

During this year's southwest monsoon season, Kodagu received twice as much annual rainfall as usual and with greater intensity. This resulted in landslides and floods. A recent study of nearly 5,000 landslides around

the world, published in *Earth and Space Science News (Eos)*, has revealed that activities like construction, illegal mining and hill cutting are increasingly responsible for the uptick in fatal landslides, particularly in Asia. It will be hard to claim that the uncontrolled development and forest clearance in the steep slopes of the Western Ghats in recent years has not been a factor in the tragedy that just unfolded in Kodagu, and in the coastal districts of Kerala. With 100-year storms likely to become more frequent as the climate becomes warmer, business as usual is sure to increasingly endanger lives and property.

Erratic monsoon rains can cause flooding, droughts, water and food security. Preserving existing forests in the watershed provides an effective 'insurance policy' for reducing the effect of floods and droughts while recharging groundwater across the Cauvery river basin. *Nature* has reported that diminished access to water resources increases the risk of social unrest, political instability, intensified refugee flows and armed conflicts, even within borders. The variable nature of monsoons makes India one of the most vulnerable regions to water-related disasters associated with climate change and extreme weather events. According to a BBC report, Bengaluru is likely to run out of drinking water in the next decade. Economists should estimate the monetary and human cost of cities like Bengaluru becoming dry, and implement policies focused on achieving and maintaining sustainable water resources.

We are at the start of the UN Decade for Water, which emphasises water security for all. Everyone lives in a watershed, yet water remains a remote concept for those who consume it the most—people, industries and farmers. There are no substitutes for water as the very basis for life. Protecting the Cauvery's source is essential for the sustained well-being of the entire basin and of the three States that the river nourishes. In fact, good water governance of the nation's watersheds will be key to its sustainable future. We can begin by saving Cauvery's cradle.

Bopiah Biddanda is Professor of Water Resources at the Robert B. Annis Water Resources Institute, U.S.



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THE ECONOMIC TIMES

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# Heavy rain lashes Himachal Pradesh, snowfall in Spiti

Woman, infant daughter killed as roof collapses in Haryana; officials asked to keep a watch on river water levels in their areas

PRESS TRUST OF INDIA  
SHIMLA/ CHANDIGARH

Rain and snowfall on Sunday in many areas of Himachal Pradesh brought down maximum temperatures, while Naina Devi in Bilaspur district was the wettest with 178.2 mm of rainfall.

Many areas in the State received moderate to heavy rain since Saturday with Saraghat recording 137 mm of rain, Mehre 132.6 mm, Manali 127.4, Dharamsala 125.2 and Kasauli 105 mm, the Meteorological department said. Shimla received 47.1 mm rain.

The upper hills in the State, including tribal Lahaul-Spiti district, witnessed snowfall. Rohtang Pass received over 1.5 feet of snow.

## Stranded people rescued

At least 20 stranded people have been rescued from the Rohtang Pass, a Border Roads Organisation (BRO) official said. They were stranded due to the closure of the Pass after heavy snowfall, Lieutenant-Colonel D.S. Bisht said.

After getting information, a General Reserve Engineer Force (GREF) truck was sent and they were brought to Manali safely with the help of Col. A.K. Awasthi and Kul-



Children splash water as they walk on a waterlogged street following heavy rain in Amritsar on Sunday. ♦♦♦

lu Deputy Commissioner Yunus, Lt.-Col. Bisht said.

Rohtang Pass witnessed about four feet of fresh snowfall on Sunday. The people should take utmost care while coming out of their homes in the area, the officer added.

Kalpa was the coldest place with minimum temperature of 9 degrees Celsius. In Dalhousie, the minimum temperature was 10.1 deg C followed by Kufri 10.6, Manali 10.8, Shimla 13 and

Mandi 14.2 degrees Celsius.

The maximum temperature in Nahan was 26.3 degrees Celsius, 25.2 in Mandi, 25 in Paonta Sahib, 24.8 in Una, 23.6 in Dharamshala and 21.9 deg C in Sundernagar.

The weather department forecast heavy rain and snowfall in the upper hills till Monday.

Normal life was badly hit in the State's Hamirpur district due to heavy rain for the past three days, officials

said. Sujampur, Nadaun, Bhoranj areas were worst hit.

The Beas river and its tributaries flowing through the district were in spate and the administration has directed the people not to go near the river.

Meanwhile, there was no drinking water supply for the people in various parts as power supply was unavailable. A spokesperson of the Irrigation-cum-Public Health department said that the

## Schools to remain closed in H.P.

PRESS TRUST OF INDIA  
SHIMLA

Heavy rain has driven the Himachal Pradesh government to order closure of all schools in Kullu and Kinnaur districts on Monday, the officials said.

All government and private schools will remain closed in tribal district of Kinnaur on Monday as per the directions issued by Deputy Com-

missioner Gopal Chand, an official said on Sunday.

Similarly, all private and government schools, colleges and ITIs will remain closed on Monday in Kullu district, Deputy Commissioner Yunus said. However, teaching and non-teaching staff would remain present in their respective institutions, he added.

supply would be restored once the situation improves. An official spokesperson said that there was heavy loss to the crops.

## Woman from Moga

A 28-year-old woman and her infant daughter were killed on Sunday morning after the roof of a house where they had taken shelter, collapsed due to heavy rain, the police said. The incident occurred in Nilanwali village in Dabwali town of Sirsa district, Deputy Superintendent of Police Kishori Lal said. The woman, Kiran, and

her one-year-old daughter, belonged to Punjab's Moga district, he said.

Earlier on Saturday, two persons were killed and four others of a family seriously injured when the roof of a house in Dilipgarh near Ambala cantonment collapsed due to heavy rain.

In the wake of heavy rain in Haryana since Saturday, the officials have been directed to keep a close watch on the water level of rivers and ponds in their respective areas. Widespread rain continued to lash Punjab for the second day on Sunday.



News item/letter/article/editorial published on 24/9/18 in the

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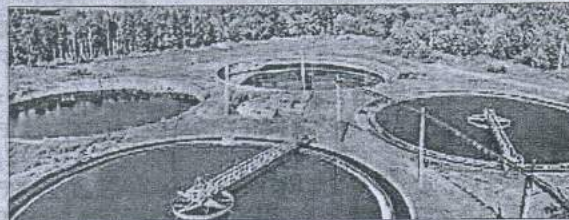
and documented at Bhagirath(English)& Publicity Section, CWC. **THE ECONOMIC TIMES**

# सीवर ट्रीटमेंट न होने से दिल्ली का भूजल स्तर हो चुका है प्रदूषित जापान की टेक्नॉलजी से साफ होगा सीवर का पानी

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■ नई दिल्ली : सीवर ट्रीटमेंट की समस्या को दूर करने के लिए अब जापान के एक्सपर्ट मदद करेंगे। जापान की टेक्नॉलजी का प्रयोग कर एक सीवर ट्रीटमेंट प्लांट लगाया जाएगा। यह प्लांट जापान के सेंट्रल कंट्रोल रूम से भी रिमोट के जरिए जुड़ा रहेगा। साथ ही, जापान के एक्सपर्ट और ट्रेड कर्मचारी प्लांट में हर समय मौजूद रहेंगे।

इस पूरे प्रोजेक्ट का कॉर्डिनेटर सीपीसीबी है। एक रिपोर्ट के अनुसार, दिल्ली में सीवरेज की 50 पैसेंट गंदगी कॉमन इम्प्यूलेट ट्रीटमेंट प्लांट (सीईटीपी) तक पहुंच ही नहीं रही है। 50 पैसेंट में भी एक बड़ा हिस्सा तकनीकी कारणों की वजह से ट्रीट नहीं हो पाता। इस समस्या की वजह से दिल्ली में जमा गंदगी भूजल को प्रदूषित



कर रही है। रिपोर्ट में दावा किया गया है कि 70 पैसेंट तक गंदगी भूजल को प्रदूषित करने का काम कर रही है। इसकी वजह है कि सीईटीपी भी खराब है या पूरी क्षमता से काम नहीं कर रहे हैं।

ऐसे में जापान की व्यवस्था को काफी सही माना गया। जापान की टेक्नॉलजी वाले सीईटीपी सीवरेज की गंदगी से पानी अलग कर देती है। जिसके बाद बाकी बची गंदगी का कई तरीके से निपटारा होता है। द जापान इंटरनैशनल

यह प्लांट जापान के सेंट्रल कंट्रोल रूम से भी रिमोट के जरिए हमेशा जुड़ा रहेगा

कॉरपोरेशन एजेसी (जायका) ने चेन्नई के अंबातुर औद्योगिक क्षेत्र में भी कुछ समय पहले ऐसा ही सीईटीपी लगाया था, जो पूरी तरह सफल रहा है।

सीपीसीबी से मिली जानकारी के अनुसार, पिछले हफ्ते जायका ने इसके लिए संपर्क किया था। मंत्रालय को यह टेक्नॉलजी काफी पसंद आई। जायका को इसके लिए केंद्रीय आवास व शहरी विकास मंत्रालय से भी जुड़ने

की सलाह दी गई है। साथ ही केंद्रीय प्रदूषण नियंत्रण बोर्ड (सीपीसीबी) को कॉर्डिनेटर बना दिया। लिहाजा, सीपीसीबी के दो अधिकारियों ने हाल ही में जायका प्रतिनिधिमंडल के साथ एक बैठक कर इस बाबत पूरी प्रोजेक्ट रिपोर्ट तैयार करने को कहा है। इस रिपोर्ट पर दोनों मंत्रालयों की मंजूरी लेकर काम शुरू कर दिया जाएगा।

सीपीसीबी और पर्यावरण मंत्रालय के प्रतिनिधि डॉ. उसके त्यागी ने बताया कि सीवरेज ट्रीटमेंट दिल्ली की सबसे बड़ी समस्या है। इसकी वजह से जमीन के अंदर पानी काफी अधिक प्रदूषित हो चुका है। जापान की तकनीक इसका हल है। यह सीईटीपी रिपोर्ट के जरिए जापान के बड़े तकनीकी विशेषज्ञों से भी जुड़ा रहेगा। पर्यावरण मंत्रालय के बाद जल्द ही जायका की शहरी विकास मंत्रालय के साथ भी बैठक होने के आसार हैं।



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# Karnataka's power politics

**COST OF SUPPLY** The state's historical context and its politics of development has consequences for the balancing act required in the power sector

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When Chief Minister HD Kumaraswamy announced crop loan waivers in his first budget after he came to power in May this year, there was widespread concern about how the state would finance these. Many who thought the loan waiver was a valid response to agrarian distress argued for managing costs by cutting the other biggest subsidy component in the budget—government subvention to the Electricity Supply Companies (ESCOMs).

This is estimated to be ₹11,048 crores for FY2018-19 according to the most recent tariff order issued by Karnataka Electricity Regulatory Commission (KERC) and is owed by the government to the ESCOMs in the state so that they can provide free electricity to irrigation pump sets below 10HP, a key plank in the government's welfare policy.

Electricity subsidies are often attributed to the incompetence of ESCOMs and are rarely interpreted as welfare policy. This has led to a near-complete silence about the continuous cycle of evasion of responsibility in the sector: the government subvention owed to the ESCOMs is only partially paid; the ESCOMs delay payment for power bought from state-owned generating stations hoping this would beset off against

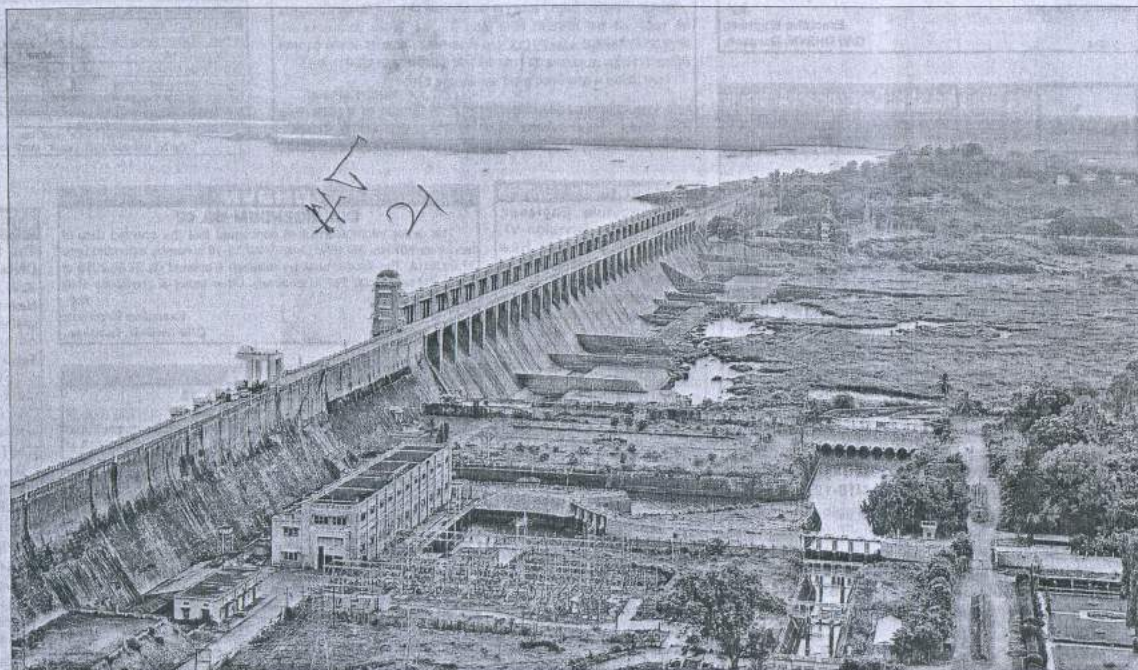
the subsidy owed to them; and in turn, municipal bodies do not pay the ESCOMs for the electricity they consume. In this way, the power sector has become the flexible and convenient current account for the government whenever it needs a bit more fiscal wiggle-room. What seems to make this cycle of evasion acceptable is the widespread belief that subsidy payments to utilities are somehow ill-justified.

This belief stands on a now-familiar storyline which turns the utilities into villains of fiscal problems of the state—inefficient public utilities that have no incentive to improve performance, compromise fiscal prudence and prevent much needed public expenditure on sectors such as health and education, all due to political pressures from rural constituencies. In this story, the solution is straight forward: there must be strong political will at the top of the hierarchy to implement tough measures to reform the sector.

Unfortunately, this kind of thinking that seeks to separate "petty" politics from what are considered technical matters of utility operations has contributed to the obfuscation of the very real political negotiations that have been happening in the sector. This thinking has also stifled what would be a useful debate in the sector on whether and how public-owned companies can be incentivised to become commercially viable and less prone to corruption.

This thinking has restricted the debates in the sector to ways and means to improve technical and commercial efficiency parameters in public utilities without acknowledging the central role that electricity departments and utilities played in agricultural development until the recent past and how to transition out of this regime and at what cost.

Political settlements therefore, have



• Tungbhadra Dam near Hampi in Karnataka. Completed in 1953, it is a multipurpose dam for irrigation, electricity generation and flood control.

GETTY IMAGES/STOCK PHOTO

occurred under the guise of techno-economic adjustments. For example higher agricultural tariffs in the northern region are justified on the basis of deeper ground water levels in that region.

The real effect of this adjustment, however, is not on ground water consumption as that is completely free for users. Instead, ESCOMs in the regions with low paying consumers receive a higher allocation of the budgeted power sector subsidy in the State relative to their share of sales to consumers that do not pay for electricity (IP sets account for 97% of this sales revenue).

Historical factors such as structural differences across regions in Karnataka also affect seemingly technical issues such as tariff determination subsidy.

For example, Karnataka's strategy of relying on a services-led growth around Bengaluru also left most paying consumers concentrated in one region.

The creation of regional ESCOMs as part of the reform in 2002 was meant to create autonomous companies that could operate on commercial principles

according to cost of supply in each region.

In practice, however, tariff setting norms and subsidies in the state have evolved an equilibrium that can accommodate the vastly different consumer profiles in various regions of the state so that most of the budgeted power subsidy is allocated to the ESCOMs in the northern region.

The state's historical context and its politics of development, including the debate on the inequalities between the northern and southern regions, has consequences for the balancing act that is required in the sector—often brokered by the energy department and the regulator. It is useful to be mindful of this political dynamic in the sector rather than relying on measurement and monitoring based on technical parameters alone.

(Meera Sudhakar is a graduate student at the International Institute of Advanced Studies. This research is based on work presented in full in the book *Mapping Power*, edited by Dushyant Kale and Bhavvirkar.)

## When region decides benefits

ESCOMs or electricity supply companies in areas with low paying consumers receive a higher allocation of power subsidy

■ % Share in electricity supplied to non-paying category  
■ % Share in government subvention

### Bangalore ESCOM

33%

25%

### Hubli and Gulbarga ESCOMs (northern region)

44%

52%

### Others

23%

22%

(Source: KERC tariff order FY18)

**TARIFF SETTING NORMS AND SUBSIDIES IN THE STATE HAVE EVOLVED AN EQUILIBRIUM THAT CAN ACCOMMODATE VASTLY DIFFERENT CONSUMER PROFILES IN VARIOUS REGIONS OF THE STATE**



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# Monsoon Watch



24. E.T.

**Countrywide rainfall since June 1 remained 9% below normal**

Withdrawal of SW monsoon likely to begin towards the end of this week



NW India recorded over 500% excess rainfall on Sunday morning

Deficient rainfall recorded over 29% area of the country since June 1



Overall rainfall recorded on Sunday remained 78% above normal



## CURRENT WEATHER & FORECAST

**Ongoing heavy rainfall activity over NW India to decrease gradually by tomorrow**

Highest max temperature recorded at 42.5°Celsius in Saurashtra & Kutch on Saturday



**Heavy rainfall warning for HP & Uttarakhand today**



Max temperatures over NW & Central India to rise by 2-4°Celsius after Tuesday



**Central India to receive scanty rains through the week**





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# Every drop counts...

**WORTHWHILE** Jagadish Angadi explores a community water conservation effort in Tumakuru district, where local people have constructed various rainwater harvesting structures across an entire hill

This is a story of how a few like-minded people came together from different walks of life to harvest rainwater on a hill. A community project, called the Jala Dasoha, was launched on June 5 this year, on World Environment Day. Spearheaded by a group of people belonging to a wide range of professions with a common goal of conserving natural resources, it mobilised people living in the area to construct trenches on a hill to harvest rainwater.

## How did it begin

"This idea was conceived in last December and we quickly got into action," says Mallikarjuniah Battarwadi, a key group member. The group conducted a survey of the average rainfall in the area and its pattern in the last two decades to understand the water requirements and the issues that required immediate attention. Groundwater stress in and around the district is critically high because its aquifers are overexploited, hence the need for the project. This area used to be green with lush fields, but now it is a barren landscape and the hills are scarred due to mining and the topsoil here has eroded," he adds. The cause of the problem is unprecedented mining and commissioning

of a large number of brick factories in and around the region. In Huliya hobli alone, there are over 150 brick factories, points out H H Manjunath.

The group feels that the coconut and areca nut plantations, which are primary sources of income for the farmers have been badly affected. "At the same time, the land has lost its fertile soil due to unscientific desilting. Water gets accu-

sons for people to migrate to cities in the last two decades. "So, we chipped in and vowed to do something to solve the water problem," C Yathiraju asserts. The team's survey has indicated that 650 mm rainfall was sufficient for the region for farming and drinking.

After some deliberation, the group decided to build watersheds and soil conservation structures such as earthen dams, loose boulder structures and deep continuous contour trenches and compartment bunding on a hill to check the flow of water.

They chose Mallikarjuna Swamy Hill for the project because of its strategic location. "There are no canals in the vicinity of the hill, hence no water projects will come up here. It is an isolated hill and is spread over 80 acres of land," says Mallikarjuniah. This initiative is slowly catching up with people from all walks of life, from farmers

to government employees, everyone does their bit. The construction work mostly happens when the people have the time, on weekdays and weekends. The tools that are used in the construction work are kept in the temple on the hill and sometimes the residents bring their own tools.

This project is situated in the cultural concept of *shramdaan* (voluntary labour). "Social mobilisation is the linchpin of



**COLLECTIVE EFFORT** (Clockwise) Citizens of Tumakuru constructing a rainwater harvesting structure on Mallikarjuna Swamy Hill; a sapling planted near the unit; construction of a trench.

## Jala Dasoha

The region's average rainfall is 650 mm. If it rains 650 mm, about 20,000 crore litres of water gets collected in the hill.

Now, with more than 2,000 people involved in the project that aims to build over 3,000 rainwater harvesting structures in the area, the results may be seen in the next three years.

About 11 villages have been identified as immediate beneficiaries of this project. At least 60% of the task will be completed manually, while the remaining work will be done mechanically.

There are specifications for the depth, width and length of the trenches. Materials for the construction are provided and sometimes the residents bring their own.

Armed with spades and enthusiasm, the villagers are engaged in the task of conservation, breaking the cycle of dependence.

success. It unites people and builds social capital of a community to address water issues. Hence, we are depending on voluntary labour," says Mallikarjuniah.

Apart from C Yathiraju and Mallikarjuniah Battarwadi, H H Manjunath, an agricultural scientist; Nagendra, a natural farmer; Indiramma, a principal; Ramakrishna, a headmaster are the other members of the Jala Dasoha team.

## Social effort

To mobilise more people for the initiative, the group has been holding meetings in about 20 villages in the surrounding areas. "In these meetings, we discuss community development and we also put forth

the idea that we want to make this region a better place to live. All of this is explained in simple terms and the participants disseminate the information across villages. Thus, we are able to encourage community-level discussions," he adds.

"Many of them have realised that only people's collective effort can solve man-made condition of drought. Our work has a transformative impact on them. We are hopeful of seeing unity in action too," Manjunath points out. The team was able to restore confidence and hope among the local residents and is confident that it has created enough awareness to act on time and help conserve natural resources. "Once the work is complete,



rainwater won't drain, but it will get collected in the bunds, trenches and artificial lakes. This will revive water table and sustain farming. If such efforts are replicated, it can save the region from chronic drought which has wrecked lives here," Yathiraju adds.

That said, given the enormity of district's water issues, encouraging single village to revive and protect its own watersheds can seem a feeble response to a crisis. However, this initiative is set out to prove that a careful grass roots effort to manage water locally is a sensible and sustainable move.



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# Spoils system overlooks farm ailments



RANJIT POWAR  
PSYCHOLOGIST

THE Punjab government will soon swing into action for procurement and subsequent storage of the paddy crop in the state. The Centre has received some appreciation for a record increase of Rs 200 per quintal in the minimum support price (MSP) for paddy.

The government's price advisory body, Commission for Agricultural Costs and Prices (CACP), had calculated its production cost at Rs 1,166 per quintal and the MSP for common grade paddy has been increased by Rs 200 to Rs 1,750 per quintal for the kharif season 2018-19. The election year is close and this will serve as one added brownie point in the report card of the ruling party. But Punjab's overall health, in the context of its ecological, financial and social indices, has declined alarmingly over the last five decades, raising questions as to whether increasing the MSP for crops holds much significance at all for a state reaching its nadir.

Let us trace the recent history of the state. New high-yielding varieties of crops were introduced in the early 60s, when the country was grappling with a massive food shortage. The Punjab farmer was quick to adopt new agricultural technologies consisting of hybrid seeds, chemical fertilisers, pes-

ticides and agro-machinery, setting agricultural output on a new growth trajectory and filling the national granaries. But the green revolution which accorded Punjab the distinction of being called the granary of India came at a crippling cost which would be extracted from the state in the years to follow.

The MSP offered by the government and high-yield varieties increased the cropped area for paddy from 6.8 per cent in 1970 to 33 per cent in 2000. This was at the cost of other traditionally grown crops. The production of wheat between 1960 and 2000 went up by more than nine times and the production of rice between 1970 and 2000 has gone up by more than 13 times. Soon, the wheat and paddy cycle came to be the most favoured which brought along new problems — a sharp deterioration in soil productivity, leading to greater use of chemical fertilisers. By 1985, Punjab was using nearly three times more fertiliser per lakh hectare than the national average. The introduction of new crops and varieties also means combating new diseases and pests, and by 1985, Punjab was using the highest quantity of pesticides in the country, nearly four times the national average.

By 1990, the euphoria of the green revolution was over. The dark decade of religious militancy had taken its toll. Post 1984, Punjab government had extended a large number of medium and long-term loans and credit subsidy, many of which would turn into bad loans and nooses around many an unfortunate neck.

Punjab's climatic conditions were not suitable for growing a water guzzling crop like paddy. In 1985, Pun-



SATURATION POINT: A sharp deterioration in soil productivity in Punjab has led to greater use of chemical fertilisers.

Though 75 per cent of Punjab's development blocks have been declared "dark", the political-bureaucratic nexus ignores the deepening agrarian and socio-economic crises because most are beneficiaries from rice mills, grain procurement commission agencies, transport agencies & private storage godowns.

jab had dug up 10,756 tube wells per lakh hectare against a national average of 3,753 tube wells per lakh hectare and has approximately 14 lakh now. Soon after, tube wells need to be replaced by submersible pumps to delve deeper into a depleting water table, placing an additional financial burden on the farmer.

The post 60s mechanisation of the farming process had already made it increasingly difficult for the small farmer, who own under two hectares of land and form 45 per cent of the farming community, to sustain the viability of small farms. He did not have the resources for a submersible pump and was deprived of his right to underground water which was sucked out by those of the neighbouring big farmer. The

government did little beyond extending subsidised electricity. As the other states of the country became increasingly self-reliant in foodgrain needs, wheat stocks started rotting in government godowns, waiting to be accepted by a reluctant Food Corporation of India (FCI). Rice shipments were rejected. This has led, over the years, to an accumulative and spiralling financial loss for the Punjab government.

The present situation is grim. Seventy-five per cent of the total development blocks in Punjab have been declared "dark" due to over exploitation of water. Parts of south-west Punjab are on the way to becoming arid. Indiscriminate and persistent toxification of the eco-system by agro-chemicals has taken its toll. The soil,

water and the food chain in the state has been contaminated with heavy metals, arsenic, iron, phosphates, nitrates, fluoride and salinity, much beyond the permitted limits. Muktsar, Mansa and Bathinda districts from the Malwa region have shown an alarming number of cancer incidences. Serious mental health problems have driven a large number of farmers to suicide and substance abuse. Physical and mental health challenges result in reduced productivity and financial resources and adversely affect all indices of development and well-being.

The nexus of the political and bureaucratic establishment has chosen to ignore these deepening agrarian and socio-economic crises because most of them are indirect or direct beneficiaries from the rice mills, grain procurement commission agencies, transport agencies and private storage godowns in the state. They have neglected to address the core issues of an honest agricultural policy with long-term interests of the state and the small farmer in view, development of agro-industry, alternate avenues of employment of the educated youth and safeguards for the state's depleting natural resources.

The Centre doesn't need Punjab's grain anymore and could not care less. Political cronyism, absolute short-sightedness in favour of immediate greed and a morally corrupt leadership has brought Punjab to the brink of disaster. The state that fed the country and was home to many a gallant soldier and decorated sports person, stands bereft of all glory—contaminated, ill, addicted, poor and facing a continuous exodus of its youth to foreign lands.



Hindustan Times  
Statesman  
The Times of India (N.D.)  
Indian Express  
Tribune  
Hindustan (Hindi)

Nav Bharat Times (Hindi)  
Punjab Keshari (Hindi)  
The Hindu  
Rajasthan Patrika (Hindi)  
Deccan Chronicle  
Deccan Herald

M.P.Chronicle  
Aaj (Hindi)  
Indian Nation  
Nai Duniya (Hindi)  
The Times of India (A)  
Business standard

and documented at Bhagirath(English)& Publicity Section, CWC THE ECONOMIC TIMES

## 8 Companies: Pursuit of Profit

# Shadows Loom Over Smaller Solar Players

ETPrime.com

A combination of low tariff, wafer-thin margins, heavy debt, high capital cost and a hazy policy framework is sucking the life from smaller companies

Prashant Mukherjee  
@timesinternet.in

I started off as a darling of private equity investment, generating much curiosity along the way, but ended up against a wall. The story of solar power in India reads like a litany of woes, chief among them being low tariff, wafer-thin margins and high debt. The initial days of solar power were bright and sunny. It was pitched as the next big thing in boardrooms and at investment summits. Between 2010 and 2014, everyone—from homegrown small businesses to global companies to investors—was happy with returns. The euphoria proved short-lived though, as tariff dipped to historic lows and intense competition led to unsustainably low margins. The result was a wave of consolidation, both forced and strategic, in the highly capital-intensive business.

RAJESH KR MEDIRATTA  
Director, India Energy Exchange

Already several states are delaying payments. If payments are not on time, we are staring at another NPA crisis

Smaller players have been the hardest hit. They don't have access to low-cost finance that's critical for quoting low tariffs and winning solar auctions. They also operate undiversified portfolios that cannot absorb the liquidity pressure that comes from uncertainties such as delay in payments, or the rollout of goods and services tax (GST) and safeguards duty.

Some 10 companies, such as Shapoorji Pallonji Solar Holdings, Orange Renewable, Fotowatio Renewable Ventures (FRV), Essel Energy, Skeiron Renewable Ener-

gy, Emmvee Solar and Alex Solar, have been put on the block after the 18 long struggle with skeletal tariffs and debt pile-up.

Shapoorji Pallonji declined comment. However, senior officials from the company told ET Prime that a deal is almost through. Investment banker Credit Suisse has been tasked with finding a suitable buyer. Trilegal is the law firm involved in the deal.

Set up in 2010, Shapoorji Pallonji Solar Holdings has seven operational projects with an aggregate capacity of 272MW and an additional 130MW of capacity under development. A company official indicates that group assets are attractive for prospective buyers since it has older power-purchase agreements (PPA) signed with high tariffs.

Other companies on the block did not respond to queries till the time of publishing.

### CLOUD COVER

So what took the sunshine away from smaller players?

First, came the crash in prices. From the highs of ₹12.16/kWh, when the National Solar Mission (NSM Batch 1) kicked off in December 2010, prices have tumbled to ₹2.4/kWh in August 2018. "The lowest solar tariff was in May 2017. Tariffs have stabilised at a ₹3 level since then," says Manu Aggarwal, programme associate, Council on Energy, Environment and Water (CEEW), a Delhi-based not-for-profit policy-research institution.

There are other, systemic, reasons too. Mahesh Kolli, founder of Greenko Group, one of the largest renewable players in the country, says, "More reforms are needed in the distribution system. One of the important (needs) for business viability in the space, including for revenue management, is accurate and verifiable information. Lack of accurate distribution information leads to retail tariff distortions, dilution of regulatory effectiveness, and strain on finances."

Ashok Khurana, director gene-

ral, Association of Power Producers, says, "The game (in) solar has shifted from entrepreneurs to financing. Large companies have better negotiating capacity to procure supplies and arrange finance at 800-400 basis points lower than small and medium players can. (Also) the transmission cost has seen a rise of 65% in the last six years."

According to Rahul Goswami, managing director of Greenstone Energy Advisors and a counsellor to a number of small and medium solar firms, the environment is becoming more challenging as discoms are not honouring payments as per PPAs with higher tariffs.

MAHESH KOLLI  
Founder, Greenko Group

More reforms are needed in distribution. One of the important (needs) for business viability is accurate, verifiable info

### SMALL IS NOT BRIGHT

#### DECLINING SOLAR TARIFF IN INDIA

(₹/KWH)



### FINANCIAL STANDINGS

| Company                  | Profit/(Loss) |          |          | Debt as on March 31 |      |
|--------------------------|---------------|----------|----------|---------------------|------|
|                          | FY16          | FY17     | FY18     | 2018                | 2017 |
| Skeiron                  |               | (20.95)  | (225.69) | 2,720.95            |      |
| Essel Infra              | (283.31)      | (907.49) |          | 2,328.71            |      |
| Orange Renewable         | 6.77          | (51.59)  | NA       | 1,141.35            |      |
| Ostro Energy             | (17)          | (2.63)   | NA       | 770.9               |      |
| Shapoorji Pallonji Solar | -0.86         | (4.12)   | NA       | 26.22               |      |

(₹ Crore) Source: Tracxn

The cost of modules makes up a substantial portion of total cost of a utility-scale solar project. It is more than 60% of total project cost in India, but is expected to come down as prices fall further. These costs are determined in the international market, given that India does not have a significant domestic module-manufacturing capacity.

### ROAD AHEAD

Greenstone's Goswami says, "The solar industry landscape is changing rapidly. It will be a field for the big boys." On the other hand, senior MNRE officials tell ET Prime it is a "healthy sign" that the market is maturing, and only the toughest will survive. On the question of tariffs and whether the proposed cap will hamper investment in the space, one official says "low tariffs are good for the country." According to him, investors will also benefit in the long run.

CEEW's Aggarwal says an analysis of solar tenders from the last three years shows the top 10 firms won over 60% of the solar capacity

ASHOK KHURANA  
DG, Association of Power Producers

The game (in) solar has shifted from entrepreneurs to financing. Large companies have better negotiating capacity

awarded during the period. "Big developers with low-cost finance will continue dominating the Indian utility-scale solar market. We see this trend further amplifying, as the capacity limits that an individual developer could win in Solar Energy Corporation of India (SECI) tenders have been removed altogether. Other big strategic and financial investors are also expected to join the already-hot Indian solar market in coming months."

Small companies are facing difficulties in raising funds, which is keeping them away from government power-project auctions, restricting their growth and crippling their ability to refinance loans. The larger players are, however, sustaining their business with diversified portfolios. They are also looking to raise capital through listing in public markets. Most of the big renewable-energy developers in India are funded by private equity (PE) money. PE investors typically look for an exit after five to seven years, mostly moving out when the stock market is at a high.

Many small players tried tapping the markets for funds, but investors showed no interest. Companies like Acme Solar and Mytrah Energy postponed their initial public offering announcement citing lack of investor interest.

### FEASIBLE TARGET?

The big question is whether the 100GW by 2022 target achievable?

There are two solar targets: 60GW of utility-scale and 40GW of rooftop solar. The utility-scale target looks achievable but would require active policy making.

Recently, the government has shifted its focus from renewable-energy development to manufacturing. While this is a welcome move, project development still warrants some focus as a lot has changed in the last nine months, both on the policy and market fronts. Tender activity has slowed down due to policy uncertainties around pass-through of duties, inadequate evacuation infrastructure, and the proposed cap on solar tariffs.

On the markets front, a depreciating rupee and increasing global interest rates might raise solar tariffs beyond ₹3/kWh. But discoms might not sign PPAs with developers at that price point.

Rooftop solar, on the other hand, is lagging. Innovative business models, coupled with a conducive regulatory structure, will be critical to meeting targets.



भारत सरकार  
Government of India  
केन्द्रीय जल आयोग  
Central Water Commission  
बाढ़ पूर्वानुमान प्रबोधन निदेशालय  
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विषय : दिनांक 24.09.2018 की समाचार की कतरन ( News Clippings ) प्रस्तुत करने के सम्बन्ध में ।

मानसून/ बाढ़ सम्बन्धी समाचारों की कतरन ( News Clippings ) अवलोकन हेतु प्रस्तुत हैं :

संबन्ध : उपरोक्तानुसार

निदेशक  
( सहायक निदेशक ) 24/9/18

24/09/18

उपनिदेशक

निदेशक (वा.प.प्र.)

2102-4  
24/09/2018

कृपया केन्द्रीय जल आयोग की वेब साईट पर अपलोड करने की व्यवस्था करें ।

51 निदेशक (तकनीकी प्रलेखन )

निदेशक  
24/9



✓ Hindustan Times ( Delhi )  
नवभारत टाइम्स ( दिल्ली )  
The Tribune ( Chandigarh )  
The Hindu ( Chennai )

The Assam Tribune ( Guwahati )  
The Times of India ( Mumbai )  
The Telegraph ( Kolkata )  
हिन्दुस्तान ( पटना )

The Deccan Herald ( Bengluru )  
The Deccan Chronical ( Hyderabad )  
Central Chronical ( Bhopal )

## Delhi gets more rain as monsoon withdraws

**NEWDELHI:** Intermittent rains continued in Delhi for the second consecutive day on Sunday cleaning up the city's air and bringing down the maximum temperature below normal. Scientists of the India Meteorological Department said rains are likely to continue on Monday.

"We are expecting light to moderate rainfall even on Monday. The sky is expected to clear up from Tuesday onwards," said BP Yadav, deputy director general of Indian Meteorological Department (IMD).

Officials said this will be the last spell of rain for this year's monsoon over northwest India, including Delhi. Once the rain ceases, IMD scientists would look for withdrawal symptoms of the monsoon. The symptoms include no rainfall activity over a period of at least five days, dry air and changing wind patterns.

Delhi started receiving light to moderate rains since Saturday. Between 8:30 am on Saturday and 8:30 am on Sunday, the IMD's Safdarjung observatory, which is taken to be a representative of Delhi's weather, received around 2.4 mm of rain. Another 0.5 mm of rain was recorded between 8:30 am and 5:30 pm on Sunday. **HTC**

## 2 hours of showers drown Gurugram, traffic crawls

**HT Correspondent**

■ htreporters@htlive.com

**GURUGRAM:** Major city junctions and underpasses were waterlogged on Sunday evening following two hours of rain, causing traffic jams in the city.

Passengers exiting the Huda City Centre Metro station faced problems as the compound was inundated. Waterlogging was also reported from outside other metro stations in the city.

The Medanta underpass was shut due to heavy flooding and hydra cranes were parked at the entrance to block entry of vehicles. There was heavy waterlogging at the Hero Honda Chowk and Cyber City underpasses, though they remained open. Police were deployed at the Hero Honda Chowk underpass, which remained under water for two days last month following heavy rains, to monitor the situation.

Commuters outside Metro stations had a hard time accessing intermediate public transport due to waterlogging. Autos charged exorbitant amounts for travelling short distances, said residents. Jyoti Panjwani, who was travelling to Sector 31 from Huda City Center, said, "Autos



■ There was heavy waterlogging at the Hero Honda Chowk after a spell of rainfall in Gurugram on Sunday.

PARVEEN KUMAR/HT

are charging Rs120 for a trip that usually costs me Rs50."

The rain started around 5.20pm and lasted till 7.30pm. Waterlogging and snarls were reported from Hero Honda Chowk, Huda City Centre, Subash Chowk, IFFCO Chowk, Sheetla Mata Road, Signature Towers, parts of Palam Vihar and Udyog Vihar, and Sectors 30, 31, 22, 23 and 14.

The sudden waterlogging raised concerns of Gurugram-like situation of 2016, when commuters had to leave vehicles on the road and walk to their homes due to a massive traffic jam. More recently, almost all major junctions and underpasses of the city

went under water after record heavy rains on August 28.

Earlier on Sunday, the India Meteorological Department had predicted heavy to very heavy rain at isolated places over Punjab, Haryana, Chandigarh & Delhi. High wind speeds of 23kmph prevailed during the day.

Power supply was also affected, with areas like Rajendra Park and Ardee City suffering outages for more than four hours. Shortly after the rain began, the Dakshin Haryana Bijli Vitran Nigam cut power to the city on a precautionary basis, according to a discom official. The power supply was restored after the rain stopped, the official said.



Hindustan Times ( Delhi )  
नवभारत टाइम्स ( दिल्ली )  
The Tribune ( Chandigarh )  
The Hindu ( Chennai )

The Assam Tribune ( Guwahati )  
The Times of India ( Mumbai )  
The Telegraph ( Kolkata )  
हिन्दुस्तान ( पटना )

The Deccan Herald ( Bengluru )  
The Deccan Chronical ( Hyderabad )  
Central Chronical ( Bhopal )

# Krishna water on its way to the city from Kandaleru

About 300 cusecs released; outflow to be increased to 1,000 cusecs by today

SPECIAL CORRESPONDENT  
CHENNAI

At a time when reservoirs supplying drinking water to the city are running dry, water from the Krishna, considered a lifeline, is on its way.

According to the Water Resources Department (WRD) officials here, about 300 cubic feet per second (cusecs) of water was released into the 152-km long Kandaleru-Poondi canal at 1 p.m. on Saturday.

The outflow will be stepped up to 1,000 cusecs by Sunday and further increased next week, the officials said.

The Kandaleru reservoir now has 9.16 thousand million cubic feet of water (tmc). The water could not be released till now as the storage had to reach a minimum of 8.4 tmc for discharge.

The water released into the K-P canal would also cater to Kalahasti and Tirupati en route, before reaching the State's border at Uthukottai,



**Good flow:** Chennai had already received 2 tmc from the Kandaleru reservoir between January and March this year, helping it tide over the crisis during summer.

Tiruvallur district. As the canal bed is dry, it would take six to seven days for the water to reach the inter-State border, officials said.

A team of Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) officials are on a visit to the Kandaleru reservoir.

The Andhra Pradesh go-

vernment has promised to provide 2 tmc of water during October.

This would be sufficient to manage the city's water requirement till the onset of the northeast monsoon, sources said.

It may be recalled that Chennai received 2 tmc between January and March this

year, that helped the city tide over the crisis during summer.

The regulator gates in the K-P Canal at Kandaleru dam were opened on Saturday in the presence of Kurugondla Ramakrishna, Telugu Desam MLA of Venkatagiri Constituency and Prabhu Shankar, executive director, CMWSSB.



Hindustan Times ( Delhi )

नवभारत टाइम्स ( दिल्ली )

The Tribune ( Chandigarh )

✓ The Hindu ( Chennai )

The Assam Tribune ( Guwahati )

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Central Chronical ( Bhopal )

# Krishna water for Chennai likely to be released today

Storage in city's major reservoirs dips to less than 10%, may last for a month

**SPECIAL CORRESPONDENT  
CHENNAI**

After water from the Veeram tank, Chennai will get another source to augment its drinking water supply in a few days. Krishna water is likely to be released from the Kandaleru reservoir in Andhra Pradesh on Saturday.

This comes at a time when storage in the city's major reservoirs has dipped to less than 10% and may last only for a month.

A team of officials from Chennai Metrowater plan to travel to the Kandaleru reservoir on Saturday. The water body, in Andhra Pradesh, has been receiving a steady inflow from the Somasila reservoir located upstream. The storage has gone up to 8.4 thousand million cubic feet (TMC) in the Kandaleru reservoir, which is consi-



The Water Resources Department has completed 90% of repair work in the Kandaleru-Poondi canal.

dered adequate to discharge water.

Sources in the Metrowater said their counterparts in Andhra Pradesh have promised to release 2 TMC of Krishna water to Chennai in October.

More volume of water may be released, depending

on the storage in Kandaleru.

## Delayed release

According to the agreement between Tamil Nadu and Andhra Pradesh, Chennai would have to be provided with 8 TMC of Krishna water between July and October. However, there was a delay



The water body, in Andhra Pradesh, has been receiving a steady inflow from the Somasila reservoir

this year due to lack of inflow in the waterbodies of Andhra Pradesh.

Meanwhile, the Water Resources Department (WRD) has completed 90% of repair work in the Kandaleru-Poondi canal for a stretch of 10 km, to facilitate free flow of water. The WRD had taken up work in the 25-km-long canal from the entry point at Uthukottai to the Poondi reservoir, to clear vegetation and clean the canal bed, that was silted up at a cost of ₹24 lakh. Work is in progress in the remaining portion of the canal.



Hindustan Times ( Delhi )  
नवभारत टाइम्स ( दिल्ली )  
The Tribune ( Chandigarh )  
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✓ The Assam Tribune ( Guwahati )  
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The Deccan Herald ( Bengluru )  
The Deccan Chronical ( Hyderabad )  
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# Afternoon shower throws life out of gear in city

## CITY CORRESPONDENT

GUWAHATI, Sept 20: An hour-long heavy shower this afternoon caused waterlogging in various parts of Guwahati, which was followed by traffic congestion on most of the main roads of the city. The rain was followed by power

cuts that continued till late in the evening.

According to a report of the Assam State Disaster Management Authority (ASDMA), after the rain partial waterlogging took place in Anil Nagar, Nabin Nagar, Lachit Nagar, B Barooah Road, GNB Road and Chandmari areas in the cen-

tral part of the city under the Guwahati revenue circle.

A similar situation prevailed in the eastern part of the city in areas like Juripar, Panjabari, Veterinary Field road, Sixmile and Rukminigaon under the Dispur circle. Under the same circle, waterlogging also took place in Hatigaon and Odal-

bakra areas.

District administration sources informed that waterlogging took place mainly due to incomplete drainage and desiltation work.

In many areas of the city, contractors appointed by the Guwahati Municipal Corporation (GMC) have been carrying out construction of drains, which create barriers in the flow of water and cause waterlogging, the sources said.

On the other hand, Dispur is yet to formulate a solution to mitigate the disaster caused by the water flowing down from the hills of Meghalaya, which is the main reason for waterlogging in Rukminigaon, Juripar, Panjabari and Khanapara areas of the city. Even in the Jorabat area, the district administration had carried out an eviction drive a few days ago to mitigate the problem, but today's waterlogging proved the attempt futile.



Rainwater being pumped out into the Bharalu river after the shower. - UB Photos



Hindustan Times ( Delhi )  
नवभारत टाइम्स ( दिल्ली )  
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Central Chronical ( Bhopal )

# Delhi's last rain spell turns air quality good; traffic disrupted

**BREATHE EASY** Capital witnesses 'good' air quality for second time this year, CPCB data shows

HT Correspondent

■ htreports@hindustantimes.com

**NEW DELHI:** A continuous spell of light rain that started early Saturday morning was enough to throw traffic movement out of gear in various parts of Delhi-NCR. However, the showers also brought with it some good news; the city's air quality turned 'good' for a few hours for the second time this year, officials of the Central Pollution Control Board (CPCB) said.

According to data released by the CPCB, the national Capital's air quality index (AQI) was recorded at 48 micrograms per cubic metre, which is categorised as 'good'. However, the average AQI for the day remained 'satisfactory' — at 54 micrograms per cubic metre.

The spell of rain brought the mercury down by 6.4 degrees to 27.6 degrees Celsius, five notches below the season's average. The cooler weather is going to remain till Monday and the temperature may again rise to 36 degrees Celsius by Thursday.

Long snarls were witnessed on several key stretches due to waterlogging and potholes on the roads. Vehicles moved bumper to bumper on arterial roads, including the Badarpur underpass at Mehrauli-Badarpur Road, ITO-Bhairon Marg, Modi Mill flyover (Okhla), Rao Tula Ram (RTR) T-Point, Rajghat, Lajpat Nagar on Ring Road, Mundka to Surajmal Stadium (both carriageways), Dwarka, Shankar Road, Anand Parbat and Rajdhani Park.

Commuters in east Delhi, meanwhile, had a harrowing time owing to the ongoing strike of sanitation workers. With the rain, the piles of garbage that were dumped on roads got scattered and emanated a stench.

"The constant drizzle has brought respite to almost everyone in the city except us. The



■ The rain brought the mercury down by 6.4 degrees Celsius, five notches below the season's average.

SONU MEHTA/HT PHOTO

heaps of garbage on streets are all over the place and could even cause accidents of motorists. Why isn't the government taking any action regarding this mess," asked Prabhat Jain, a resident of Laxmi Nagar.

Officials of the India Meteorological Department (IMD) said the day temperature on Saturday was 27.6 degrees Celsius down from Friday's 34 degrees. The minimum temperature, too, saw a drop of nearly four degrees from Friday at 22.2 degrees Celsius. The city will continue to receive rain till Monday and it is the last spell of monsoon.

The Safdarjung observatory, considered to be a representative of the city's weather, received

26.8 mm rainfall between Friday and Saturday. Light rain and thunderstorm are expected on Sunday as well, said the official.

"Light to moderate rain is expected on Sunday while isolated parts of Delhi-NCR could receive heavy spells. Monday again could see some traces of rain. However, this would be the last spell of rain for this year's monsoon over northwest India," said a senior IMD official.

On Saturday, chief minister Arvind Kejriwal too tweeted about the improved air quality. "Am glad people's efforts are bearing fruit and Delhi air quality is improving," he wrote quoting a news report on the subject. Earlier this year, the AQI fell in

the 'good' category on July 28, when pollutants in the air were washed away with the onset of monsoon.

"The air quality turned good this time due to both widespread rain and strong winds. The incessant rain in Delhi and surrounding areas did not allow pollutants generated locally to be carried in the air," said a senior CPCB officer, who did not wish to be named. As per inputs received from the IMD, the officer said, air quality is expected to remain in the 'satisfactory' category over the next two days.

**FARIDABAD UNDERPASS SUBMERGED AGAIN**  
Heavy rains lashed Faridabad,

leading to waterlogging and traffic disruption at several places including the Greenfield colony on the Faridabad-Delhi border. Most affected areas included Neelam Chowk-Ajrondha, parts of Ballabgarh, Sector 17, NIT and Greenfield.

The rain led to the Greenfield underpass to get submerged — which triggered massive protests by residents of the area who demanded an immediate solution to the problem. Just a few weeks ago, 52-year-old Krishna Devi, lost her leg which got crushed under a train while she was crossing the railway tracks. According to sources, she had to take the railway road as the underpass was submerged.



Hindustan Times ( Delhi )  
नवभारत टाइम्स ( दिल्ली )  
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Central Chronical ( Bhopal )



**THOUGH TIMES:** People wade through flood water at a village in Balasore, Odisha, on Friday. PTI

## Cyclone 'Daye' hits Odisha coast

**BHUBANESWAR:** Cyclonic storm 'Daye' hit the Odisha coast near Gopalpur early on Friday causing heavy rain and Malkangiri district, which bore the brunt, was virtually cut off from the rest of the state.

Special Relief Commissioner (SRC) B P Sethi said no loss of life has been reported till 12 noon.

The SRC said, Malkangiri district was severely affected by the cyclonic storm and some people were left marooned in submerged areas, including

Poteru. Around 150 people have so far been rescued from some places in the district, the SRC said.

Immediate steps have been taken for distribution of relief materials in the affected areas and damage caused by the natural calamity was being ascertained, he added.

Rain water was flowing over major roads, submerging low-lying areas in the district that experienced a total rainfall of 1163.8 mm since Thursday, Malkangiri Collector

Manish Agarwal said.

After reviewing the situation, Chief Minister Naveen Patnaik has directed the Malkangiri district administration to reach out to the affected people and extend all assistance to them, an official in the Chief Minister's Office (CMO) said.

Patnaik also sanctioned gratuitous relief for seven days at Rs 60 per day per person and Rs 45 each for children below 12 years in the district, he said.

The cyclonic storm "Daye"

over northwest Bay of Bengal crossed south Odisha and adjoining Andhra Pradesh coast close to Gopalpur in the early hours of Friday, Director, Meteorological Centre, Bhubaneswar, H R Biswas said.

The cyclonic system then moved west-northwestward with a speed of 26 kmph and weakened into a deep depression and lay centred over south interior Odisha and its neighbourhood, about 65 km east-southeast of Titlagarh.

**PTI**



Hindustan Times ( Delhi )  
नवभारत टाइम्स ( दिल्ली )  
The Tribune ( Chandigarh )  
The Hindu ( Chennai )

The Assam Tribune ( Guwahati )  
The Times of India ( Mumbai )  
The Telegraph ( Kolkata )  
हिन्दुस्तान ( पटना )

The Deccan Herald ( Bengaluru )  
The Deccan Chronicle ( Hyderabad )  
Central Chronicle ( Bhopal )

# Northeast monsoon to be normal in state: weatherman

## State got unlucky during kharif season this year

**BENGALURU:** Owing to the weakening of the southwest monsoon since June, Karnataka got unlucky during the Kharif season this year too.

However, all's not lost, as the weatherman is predicting a good Rabi season for the state this year. Rainfall activity is said to pick pace next month with the setting in of the northeast monsoon (October to December-end), giving the farmers, especially those in north Karnataka, a reason to rejoice.

Except for the year 2017, Karnataka has been experiencing successive drought years ever since 2011, with the failure in both southwest and northeast monsoon activities.

This year, the state has already identified 86 taluks as drought-affected. More number of taluks might be added to the list if the state continues to receive deficient rainfall.

CN Prabhu, scientific officer at the Karnataka State Natural Disaster Monitoring Centre (KSNDMC) told *DH* that the state was expected to receive normal rainfall during the Rabi season.

"As of now, the northeast monsoon will be normal - we are not expecting any abnormality, unlike 2015 and 2016. Those years, Karnataka was the only state to have submitted a memorandum to the Centre seeking grants under National Disaster Relief Fund. The withdrawal of the southwest monsoon has started, and the northeast monsoon is expected to set in by the first week of October," he added.

Interestingly, the cumulative progress of rainfall for the period from June 1 to September 9 for the state as a whole shows a drastic improvement.

As the percentage departure from normal rainfall is (+)1, the state has been classi-



**TORRENTIAL DOWNPOUR:** People take shelter at a shop as it rains heavily at Hubballi on Thursday.

### Parts of North, Central Karnataka receive heavy showers

Several parts of North and Central Karnataka received heavy rains on Thursday. Rains that lashed for over two hours brought respite as weather was hot and humid in the last one week. Heavy rains accompanied by gusty winds lashed Hubballi and Dharwad for nearly an hour towards evening. It started raining around 4.30 pm at Davanagere city and lasted for two hours. Several parts of the district, including Harihar, Malebennur and Honnali too received rains.

Koppal town continued to receive rains. It rained heavily at the town, while Yelaburga and surrounding areas too received rains. The district has been receiving rains for the last four days. It drizzled for a while at Belagavi city, while Kittur and Bailhongal taluks received mild showers. Chitradurga town and parts of the district including Holalkere and Chikkajajur witnessed heavy rains.

fied under 'normal' category for this period. While the percentage departure in 2017 was (-)14, it was (-)17 in 2016.

In 2015 the percentage departure was (-) 23. The rainfall, when compared to the

corresponding period in the last three years, is much better. This, however, does not mean that rainfall has been distributed equally across the state.

"In Malnad and coastal re-

gions rainfall has been above normal, while it has been below normal in south interior and north interior Karnataka. There has been a successive dry spell in these regions, and hence they come under the drought category. Though the amount of rainfall has improved, distribution has been erratic," added Prabhu.

While Karnataka has sought a grant of Rs 1,199 crore under NDRF for flood-affected districts this year, it is yet to draw up an assessment for the drought-affected districts.

In 2016, the state had sought Rs 1,600 crore for the failure of crops in Kharif season, and Rs 700 crore for crop failure during the rabi season. In 2015, the state had sought a financial assistance of Rs 1,547 crore under NDRF.

**DH News Service**