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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. H. Chauran
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SPA (Publicity)

Encl: As stated above.

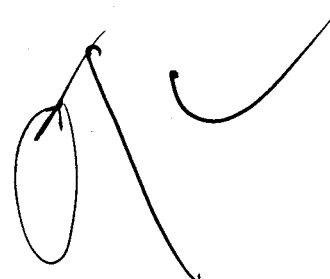
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For information of Chairman & Member (WP&P/D&R/R.M.), CWC and all concerned,
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Trans. 20/9/17

Key's item/letter/article

Hindustan Times
Statesman
The Times of India (I)
Indian Express
Tribune
Hindustan (Hindi)

and documented at E

'Finalise body for Cauvery water sharing'

ndia (A)

T.N. insists that the Supreme Court appoint an authority

KRISHNADAS RAJAGOPAL
NEW DELHI

The Tamil Nadu government insisted on Tuesday that the Supreme Court itself should finally appoint an authority and frame a scheme for sharing and management of Cauvery river waters among Tamil Nadu, Karnataka, Kerala and Puducherry, and not leave the responsibility to the Centre.

Arguing before a Special Bench of Chief Justice of India Dipak Misra, Justices Amitava Roy and A.M. Khanwilkar, Tamil Nadu, represented by senior advocate Shekhar Naphade, said it has for the past 25 years had a frictional relationship with Karnataka over Cauvery, and had often to make the journey to the Supreme Court for release of water.

The day-long hearing saw the court chide the Centre for not implementing the final award of the Cauvery Tribunal in 2007.

Centre questioned

The court questioned the reluctance shown by the Centre to set up of the Cauvery Management Board and frame a scheme for implementation of the tribunal award despite it having been notified in 2013.

"It was your responsibility to frame a scheme," the court asked the Centre, appearing through Solicitor General Ranjit Kumar.

Mr. Kumar said the Centre did set up the Cauvery River Water Authority and Supervisory Committee following the Supreme Court's direction. It had, in fact, been waiting for some clarifications on the tribunal award. Mr. Kumar said the Centre had decided to wait till the Supreme Court took a final call on the tribunal award.



Bone of contention: The Cauvery flows in Tiruchi.

Water let out from Kabini

SPECIAL CORRESPONDENT
MYSURU

The Kabini reservoir has reached its brim for the first time in three years with the revival of monsoon.

The Irrigation Department authorities, who have already sounded a flood warning to people residing in villages downstream, began releasing 16,000 cusecs of water early on Tuesday by opening four crest gates of the reservoir.

But Chief Justice Misra responded that the Centre should not have let a vacuum prevail after the tribunal's award.

Senior advocate Fali Nariman, for Karnataka, submitted that the Board or Authority should be headed by a former Supreme Court judge. While Mr. Kumar said the tribunal award was not clear about water release during times of distress, Mr. Nariman differed to say there was no clarity in the award in times of surplus.

Mr. Naphade objected to any fiddling with the monthly release of water as this would impact the State's seasonal crops. Karnataka interjected to submit that there should not be any restriction on how it uses its share.

दिनांक 19.09.2017 को निम्नलिखित समाचार पत्र में प्रकाशित मानसून/ बाढ़ सम्बन्धी समाचार

Hindu 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)

(9-104) Srisaillam water in big demand

■ AP, TS can draw water,
move Krishna river board

CH. V.M. KRISHNA RAO

IDC

HYDERABAD, SEPT. 18

The water level at the Srisaillam dam rose past the Minimum Draw Down Level (MDDL) of 854 ft on the back of an average of 1.7 lakh cusecs flowing in from the Jurala project on Monday.

The full reservoir level at Srisaillam is 885 feet; the water stood at 855 ft on Monday evening against 848.30 ft on Sunday. The reservoir now has 90 tmc ft against the full capacity of 225 tmc ft.

Jurala received 2 lakh cusecs in the morning from the Bheema and Krishna rivers, which reduced to 1.7 lakh cusecs by the evening. "We hope the pattern will continue for three days," Srisaillam chief engineer C. Narayana Reddy said.

The improved water levels led to the TS and AP governments going to the Krishna River Management Board seeking release of water for drinking.

According to Mr Narayana Reddy, the AP government sought 15

tmc ft of water for the Handri-Neeva and Telugu Ganga projects, Srisaillam Right Branch Canal and Chennai. "We hope for favourable orders," he said.

Nagarjunasagar dam chief engineer S. Suneel told this newspaper that the TS government had sought more than 50 tmc ft to meet its drinking water requirements till 2018.

He said the water level at Nagarjunasagar was at 500.9 ft. "First of all we need to maintain Minimum Draw Down Level which is at 510 feet at Nagarjunasagar. For this we require 15 tmc ft of water. To meet Hyderabad's drinking water requirements till June 2018 we require 16 tmc ft. Four tmc ft is needed for Nalgonda city and to fill up tanks in Nalgonda and Khammam districts."

He said the TS government had sought another 16 tmc ft to provide water from the dam for Mission Bhagiratha.

He said the TS government would not seek water for irrigation purposes till the Srisaillam dam attains full level.

CETPs Near Mumbai Clean Up Act After Court Orders, River Kal Gets A Breather

'Dirty' industry cluster takes green turn, meets waste treatment norms

Nergish Sunavala
@timesgroup.com

Adanand Patwardhan's village is sandwiched between phase 1 and 2 of Mahad MIDC, one of several industrial clusters in Maharashtra's western region. His ancestral home is on the banks of the once-pristine Kal River, a tributary of the Savitri, which flows through Raigad district. By 1960, chemical and textile companies were spewing untreated effluents into them. And by 2007, Mahad was among top 10 of the Blacksmith Institute's Dirty Thirty—a list of the world's most polluted places. In its report, Blacksmith Institute noted that "approximately 1.8 lakh tonnes of hazardous sludge had accumulated" at the Mahad Common Effluent Treatment Plant (CETP).

Today, the picture is rosier. In 2010, the CETP began pulling

GW AWAITS GURU

Artists, state leaders and corporate bigwigs joined forces with spiritual leader Sadhguru's Rally for Rivers at a public event in Mumbai on Monday to highlight the depletion of rivers. On Wednesday, Sadhguru will address an event in Ahmedabad

up its socks following a series of Bombay high court orders. They upgraded infrastructure, installed an online monitoring system to check the quality of effluent and forced industries to pre-treat waste so the CETP wouldn't be burdened. They even got ISO certification.

By January 2013, the HC reported that Chemical Oxygen Demand (COD) levels—a valuable test for assessing organic pollution—had plummeted to a monthly average of 356mg/L. This was higher than the prescribed standard of 250mg/L but a far cry from its all-time high of 7,320mg/L in 2006. As of September 4, 2017, the Maharashtra Pollution Control Board

EFFLUENT PLANTS HELP RAISE OXYGEN LEVELS

What's a CETP

A unit to treat effluents, especially from a cluster of industries, set up through collective effort.

• Every industry has to treat its effluents before disposal according to the Water (Prevention and Control of Pollution) Act, 1974

• Small industries cannot afford to have own effluent treatment facilities as they need investment in land and manpower. So their effluent is brought to a centralized place

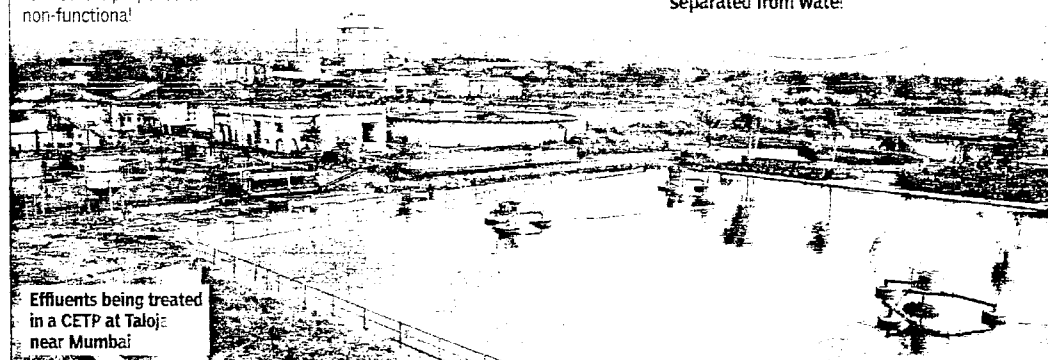
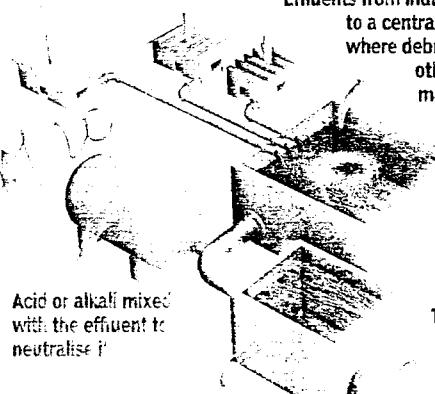
• 25 CETPs in Maharashtra. Four others proposed or non-functional

Measuring water quality

COD: Chemical Oxygen Demand measures everything that can be chemically oxidized. High COD levels mean the amount of dissolved oxygen available for aquatic organisms is low.

BOD: Biochemical Oxygen Demand is used as a gauge of the effectiveness of wastewater treatment plants. BOD is similar to COD. It measures the levels of biodegradable organic matter

Effluents from industries flow to a centralised place, where debris, dirt and other floating materials are removed



Effluents being treated in a CETP at Talaja near Mumbai

(MPCB) recorded Mahad's COD at 144mg/L.

Mahad's story is not unique. Many other CETPs have followed its lead. The turnaround can be traced to a 2011 PIL filed by activist Nicholas H Almeida, a trustee of Watchdog Foundation. The PIL resulted in many court orders for monitoring malfunctioning CETPs, action against industrial units flouting pre-treatment norms and setting up of new CETPs where the pollution load exceeded a plant's capacity. In Tarapur, the CETP had a capacity of 25 million litres per day (MLD) but was handling 40 MLD. Perhaps the most far-sighted directive was forcing the MPCB to test

RALLY FOR RIVERS

SAVE A MISSED CALL 8000980009

Presented by

WATCHDOG FOUNDATION

In partnership with

future group

CETPs' effluents every week, says Godfrey Pimenta, also a trustee of Watchdog Foundation. Anbalagan, member secre-

tary of MPCB, says that when he joined in 2006, just 10 of the 26 CETPs met the standards. Today, he says that number has jumped to 19/26, thanks to stringent monitoring, night samplings and surprise checks.

What's more, 60%-plus industrial units flouting environmental laws have been shut down across Maharashtra. As for CETPs, still exceeding permissible standards, Anbalagan claims they've shown improvement and are now just marginally above prescribed levels.

Experts say this must be weighed against the volume of effluent discharged, as impact in some cases would be greater. And suspended solids (SS) and

total dissolved solids (TDS) levels for many CETPs remain in the red zone. MPCB says "this shouldn't be an issue for coastal discharge where there is sufficient water volume for dilution" but environmentalists do not agree. Shyam Asolekar, a professor at IIT Bombay's Centre for Environmental Science and Engineering, says the result of flushing large quantities of SS and TDS into the ocean will only be apparent decades from now, once it's too late to rectify. He also fears current standards for COD and BOD are too lax.

While the situation is better now, activists insist it is far from perfect. The fight continues.

NATURE'S FURY Nearly 40% districts face the prospect of drought, while close to 25% have had heavy rainfall of more than 100mm in just a matter of hours, bringing the country to its knees

Chetan Chauhan

chetan@hindustantimes.com

NEW DELHI: It has been a year of unprecedented and extreme weather events in India, and across the world, highlighted by freak phenomena which experts attribute to an alarming rate of climate change.

For the record, 2016 was the warmest year since climate data came to be officially compiled, claiming 547 lives in India as its southern states faced the worst drought in 40 years.

The year also saw five Indian states grappling with floods, with Assam facing the worst deluge in over a decade.

A year later, the situation looks worse.

Nearly 40% of the districts in India face the prospect of drought, while close to 25% districts have had heavy rainfall of more than 100mm in just a matter of hours. Sudden heavy rainfall this year has brought cities like Mumbai, Chandigarh and Bengaluru to their knees, and unseasonal hail has destroyed farm produce.

This may sound alarming now but climate scientists have spotted the trend early and warned the government of its devastating impact on the Indian economy.

"If we fail to do adequate climate proofing of our agriculture and cities, the impact on Gross Domestic Product (GDP) could be more than one percentage point," said Kirit Parikh, former member of the erstwhile Planning Commission.

Latest studies by the Pune-based Indian Institute of Tropical Meteorology (IITM) show that average rainfall during

the monsoon period is falling as the Indian Ocean gets warmer, busting the earlier claim of average rainfall between July-September months not having changed despite increase in extreme downpour.

The IITM's latest analysis show that the summer rainfall during 1901-2012 over the central-east and northern regions of India, along the Ganges-Brahmaputra-Meghna basins and the Himalayan foothills is falling.

The warming of the western Indian Ocean in recent decades has also led to a pole-ward shift of the core of low-level monsoon winds, increasing the precipitation to the north of the Western Ghats, while weakening it over southern regions of India, said Roxy Mathew Koll, a scientist at the institute's climate centre, who is also member of the Intergovernmental Panel on Climate Change (IPCC).

Koll said the enhanced Indian Ocean warming in recent decades has potentially weakened the land-sea thermal contrast, dampening the summer monsoon wind circulation, and reducing the rainfall over parts of south Asia.

The change was not "well reproduced" in the models used in the IPCC's fifth climate change assessment report that suggested "uncertainties looking over status and fate" of monsoons. "The fall in rainfall is a trend of recent decades," Koll said.

INCREASING DROUGHT

The India Meteorological Department's data shows that since 1950s, incidence of droughts has increased as rainfall in the excess of 10% of the normal has fallen. The IMD defines monsoon as normal when average summer rainfall is within 10% of the average rainfall over a long period.

Almost half of India, including food bowl states of Punjab, Haryana, Maharashtra and Madhya Pradesh, is facing drought like conditions this year, third in a row for many parts of India where around 60% of the population is directly and indirectly dependant on agriculture for livelihood.

India has seen six major droughts



• A man wades through a waterlogged road in Mumbai. In August, the city received about 30% of its annual rain in less than 24 hours. **SHUTTERS FILE**

since 2000 and about 100 districts have witnessed drought-like situation in 10 of the last 17 years due to poor south-west monsoon rainfall, devastating India's farm economy.

The IMD data also shows that frequency of drought — defined as water shortage for human, cattle and agriculture consumption — is increasing in Bihar, Uttar Pradesh, Karnataka, Telangana, Kerala and Maharashtra.

"Yes, the frequency of drought has increased but now we are better prepared to deal with it," said Abhijit Sen, agriculture economist and former member, Planning Commission.

"The drought is more of an economic

disruptor than that of human lives. People don't starve to death anymore".

DEVASTATING FLOODS

Chandigarh, Mumbai, Bengaluru and Araria in Bihar were submerged after sudden rainfall brought the regions to a halt.

Chandigarh, a city of parks, received 115mm of rain — 15% of its annual monsoon rain — in just 12 hours on August 21. It drowned.

Bengaluru got close to 30% of its annual rainfall in a day in July.

In August, Mumbai received about 30% of its annual rain in less than 24 hours and Araria almost a year's rain

in three days.

"This should not surprise us," said environmental activist Sunita Narain, in a recent article in Hindustan Times.

"Models have predicted that the first impact of a changing climate would be on increased frequency and intensity of weird and extreme weather events. It is happening. What should worry us is that models have predicted that this would only get worse as temperatures rise."

In recent past, the intensity of extreme rainfall events with cloud bursts becoming yearly affair in the hills of Uttarakhand and Himachal Pradesh. The 100-year monsoon rain in the

X If we fail to do adequate climate proofing of our agriculture and cities the impact on Gross Domestic Product (GDP) could be more than one percentage point.

KIRIT PARIKH, former member of the erstwhile Planning Commission

The worst natural disasters to hit India

DEATHS DUE TO RAIN

July 26, 2005: Mumbai came to an abrupt halt as unprecedented heavy rains stopped rail and bus traffic. Over 500 people were killed.

August 2008: In a span of a couple of days, sudden rains caused a six-time increase in Kosi river, leaving 500 people dead and 3,500 missing. Over 3.3 million people were affected.

August 6, 2010: In the midst of peak tourist season in Ladakh, a cloud burst caused incessant rains, triggering floods and landslides, causing losses to life and property.

June 2013: The June 2013 Uttarakhand disaster is regarded the worst calamity of its kind in recent times. While official estimates put the toll at 5,700, it is believed that over 10,000 people died.

September 2014: The recent J&K floods are the worst recorded in the state in the past 60 years.

August 2016: The massive floods killed 28 people, with around 2.6 million people displaced as Brahmaputra and its tributaries swept more than 2,800 villages.

DEATHS DUE TO HEAT WAVE

2015 547 deaths

2016 2,018

2017 549

2018 1,443

4,620

deaths because of heat wave in the last four years

4,246

people of these died in Andhra Pradesh and Telangana

"extreme precipitation events" in quick succession has become a norm rather than an exception.

Pradeep Mujumdar, chairman of the interdisciplinary centre for water research at the Indian Institute of Sciences, Bengaluru, says the intensity of urban events vis-à-vis non urban ones was increasing as the cities grapple to meet with these exigencies.

The IITM research shows that precise long term area-wise monsoon prediction will become difficult as influence of climate change intensifies.

The only way to prevent the catastrophe is by making climate proofing an integral part of policy making.