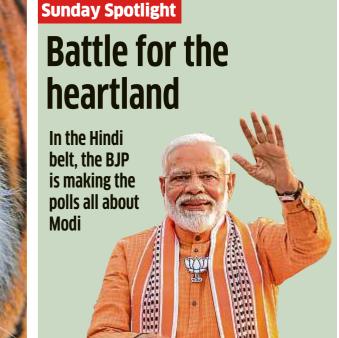


Bengaluru, Sunday April 28, 2019 Pages 34 Vol 72 No 117 ₹ 6 **B** www.deccanherald.com Sunday Herald Where does **India stand** today in its attempt to save its tigers?





Water in Lakshmisagar Lake at Narasapura in Kolar taluk has already turned green. An excavator removes hyacinth from the water on Friday. DH PHOTO/CHIRANJEEVI KULKARNI

KC Valley project: A costly experiment on people

Lack of a policy framework behind the project raises questions about the long-term impacts of treated sewage supplied to Kolar and Chikkaballapur districts

Chiranjeevi Kulkarni

asappa, the 72-year-old waterman at Rajakallahalli in mar, for their efforts. from Bengaluru to reach the village tank. "No matter how smelly it is, we want it. It becomes pure when it goes into the ground," he said.

The waterman is responsible for supplying water to about 800 houses. The from the sewage treatvillage has a lone reverse osmosis plant ment plant is contamiwhich gets water from the borewell in nated with heavy metals Doddaagrahara, 1.5 km away. "Only 20- and chemicals. In Kolar, 30 people get water. Others go to neigh- protests were held and bouring villages and some wait for the borewell to pump again after a gap of several hours. When water doesn't come, they get disappointed or angry. I'm tired of seeing all this and hope that our tank will be filled soon," he said.

At the other end of the spectrum, the Supreme Court lifting the stay on the release of secondary treated sewage water to Koramangala and Challaghatta Valley (KC Valley) has brought a sense of victory to officials in Bangalore Water Supply and Sewerage Board (BWSSB) and Minor Irrigation

of appreciation from Speaker of the among activists like Reddy. Legislative Assembly K R Ramesh Ku-

report which exposed that the water released an effigy of Anjaneya Reddy of Shashwatha Neeravari Horata Samithi was burnt for questioning the government's claim that

the water is fit for groundwater recharg- running of the treated water "over 20

The move to recharge groundwater by filling tanks of two districts, Kolar and Chikkaballapura, rendered dry by a truant monsoon has been welcomed by all. However, the lack of a policy framework behind the design and implementation

Department. They have also got a letter of the project has been a major concern nataka High Court and the Supreme

Violation of norms

Kolartaluk, said he can't wait for the treated waste water for the treated waste water doubts about the quality of water were for the treated waste water doubts about the quality of water were for the treated waste water for the treated waste water doubts about the quality of water were for the project is in the Union govern-"The only guideline that is closely related silenced. Indian Institute of Science ment's Manual on Sewerage and Sewage (IISc) professor T V Ramachandra treatment, which has been violated by the faced the risk of personal attack for his project. Groundwater is the only source

of water for the two districts. If heavy metals and chemicals contaminate it, where should we treated correctly." he

The guideline stipulates denitrification and tertiary treatment to remove inorganic compounds. It proposes

km and a 65-metre fall in a river course". Thereafter, it will be put through dual media and activated carbon filtration followed by ultrafiltration and reverse osmosis membranes.

Over the last five months, the officials had come under pressure when the Kar-

Court stayed the release of treated water. In March, a report from two IISc scientists, led by Prof H N Chanakya, played a major role in lifting the stay.

The two scientists based their opinion on the reports of tests on "single grab sample" of the water given by the Karnataka State Pollution Control Board. They ruled out pollution from heavy metals, which were at "permissible levels".

However, they noted: "In India, there are no water quality standards for indigo? We want KC Valley rect recharge (of groundwater) from water, but it should be secondary treated water." Prof Chanakya also recommended that "periodic monitoring, lab testing, documentation and reporting mechanism needs to be implemented through credible third-party

> People who were caught between doubt and desperation have finally embraced the latter, which is reflected in the fact that villagers of Mallasandra in Kolar taluk refused to vote on April 18 unless the government promised to fill their tank with treated sewage (see Page 4). Dasappa is a mild example of people who are ready to take 'any kind of water'. » KC Valley, Page 4

15 killed in Lanka gun battle; 2 outfits banned

COLOMBO, AGENCIES: Sri Lankan President Maithripala Sirisena on Saturday outlawed two Islamist groups suspected to be behind the Easter suicide bombings even as 15 people, including six children, were killed during a fierce gun battle with security forces in Sri Lanka's eastern province on Saturday.

The National Thawheedh Jamaath (NTJ) and Jamathei Millathu Ibrahim were banned under his emergency powers, President Sirisena said in a state-

Authorities could not act earlier to ban the little known groups because the law required them to show firm evidence against them, officials said.

Meanwhile, following a tip-off, the Special Task Force and Army troops raided a house in Kalmunai city, about 360 km from Colombo, on Friday night, leading to the heavy exchange of fire with the

As the men opened fire on troops, a civilian was killed. As the clashes intensified, three men are believed to have set

"Atotal of 15 bodies recovered, six men, three women and six children. At least four suspected suicide bombers are dead and three others who were injured are in hospital," a police spokesperson said.



Soldiers look at seized items at the site of a gunfight in Kalmunai. AFP

India issues advisory

India has advised its citizens to avoid all non-essential travel to Sri Lanka.

"In view of the prevailing security situation in Sri Lanka in the aftermath of terror attacks on 21 April 2019, Indian nationals intending to travel to Sri Lanka are advised not to undertake non-essential travel," the Ministry of External Affairs stated in a advisory on Saturday. Details, Page 13

Three suspected suicide bombers were among the 15 dead. The wife and a daughter of the suspected mastermind of the suicide attacks, Mohamed Hashim Mohamed Zahran, were wounded in the ensuing gun battle.

LING TERROR

▶ Militants at suspected to be members of NTJ.

▶ Bomb-making materials, dozens of gelignite sticks and thousands of metal balls were found during searches.

Police trying to track down 140 people believed to have links with Islamic State detained at least 76 people, including foreigners from Syria and Egypt, in their

Nearly 10,000 soldiers deployed to carry out searches and provide security.

Bengaluru on high alert; hoax caller arrested

BENGALURU, DHNS: Karnataka has put and Maharashtra would be targeted. The Bengaluru and other cities on high alert call had sent police in four states into a tizfollowing the recent terror attack in Sri zy. Taking the threat perception seriously, Lanka, Home Minister M B Patil said on Saturday. Patil, in a tweet, said he had had sent out fax messages to her couninstructed the state police to deploy additional forces in sensitive areas. "I urge citizens not to pay heed to fake news and inform police if you find any suspicious things/persons," Patil said.

Meanwhile, Central Crime Branch sleuths on Saturday arrested an ex-serviceman-turned-lorry driver for making a hoax call about possible terror attacks to the Bengaluru city police control room on Friday. The man had said that major cities in Karnataka, Tamil Nadu, Andhra Pradesh, Telangana, Puducherry, Goa

Karnataka police chief Neelmani N Rain terparts in Tamil Nadu, Kerala, Andhra Pradesh, Telangana, Puducherry, Goa and Maharashtra

Fax message leak

Headquarters of the state police, DG-IGP's office, on Nrupathunga road was abuzz on Saturday morning after Neelmani's fax message was leaked and went viral on social media. Sources said the chief minister was unhappy with Neelmani over the leak of message. An inquiry is on. Security up at city churches, Page 3

Campaigning for

fourth phase ends

'Malnutrition in state worse than Sub-Saharan Africa'

Akhil Kadidal

BENGALURU: Malnourishment in parts of the state is worse than that of Sub-Saharan Africa, an official said on Saturday

L K Atheeq, Principal Secretary of the Rural Development and Panchayat Raj, who tweeted state malnutrition figures released by the Department of Women and Children early on Saturday morning, said that there is an overall malnutrition rate of up to 41.2% in rural India and 31%

Figures for the state, which include statistics from 15 districts, show varying levels of malnutrition among children within the age group of 0-6 years, demographically belonging to economically weaker sections of society. Koppal district tops the list with a malnutrition rate of 29.98% in January 2019. Bidar, Raichur and Gadag come next with 27.81%, 27.09% and 25.65%, respectively.

Atheeq described malnutrition as a social problem. "Malnutrition begins at home," he said, explaining that if a pregnant woman is anaemic, the baby is also born anaemic

Nearly 70% of women in India are anaemic, Atheeq added. "The first thousand days of a baby's development which translates to three years, including nine months of pregnancy - are crucial to a child's development and if there is malnutrition at this early stage, it is irreversible in later years," he said.

This developmental hindrance, according to Uma Mahadevan, until recently secretary of the Women and Child Development Department and current secretary of the Panchayat Raj, affects DH News Service

MALNUTRITION IS BASED ON TWO FACTORS

1 Stunting, which means low height for age

Wasting which translates to low weight for height. According to the National Family Health Survey-4 (2015-16), **36.2%** of children in Karnataka are stunted and **26.1%** are wasted



not only physical development but also cognitive ability and chances of employment in adult years.

Uma said that cultural norms are at the heart of malnutrition, including sanitary practices of families. Atheeq said that despite the government having constructed 75 lakh toilets in the state as part of the Swachh Bharat Scheme, nearly 20% are not being used.

'Open-air defecation leaches fecal matter into the soil, and if babies happen to crawl around near drains, the resulting germs and infection by worms interferes with their ability to absorb vital nutrients." he said.

Five, including 4 siblings, drown in Siddara Betta pond

BENGALURU, DHNS: Five people, including four siblings, drowned in a pond in Siddara Betta near Dobbspet on Saturday afternoon, as a weekend getaway to a local dargah (shrine) turned tragic.

The deceased have been identified as Usman Khan (14), Yaarab Khan (21), Reshma (22), Mubeen Taj (21), all four siblings, and their neighbour Muneer Khan (49). Usman accidentally fell into the pond, following which the others jumped into the water one by one to rescue him. Police rushed to the spot following a call from the mother of the four, but it was too late. » Drowning, Page 3

EC orders FIR against Gambhir

NEW DELHI, DHNS: The election pitch seems to have turned a bit bouncy for cricketer-turned-politician Gautam Gambhir.

The BJP candidate is facing one trouble after another, with the latest being the Election Commission asking police to file an FIR against him for holding an election rally without permission.

The Delhi Police has initiated the process by lodging a complaint (kalandra) under relevant sections against Gambhir, BJP's East Delhi candidate, on the direction of the Election Commission for "holding a rally in East Delhi without per-

East Delhi Electoral Officer K Mahesh had instructed the police to file the case for organising a campaign rally in Jungpura



Gautam Gambhir

question to Gautam Gambhir: When you don't know the rules, why play the game?"

The latest development comes a day after Atishi approached the court against the cricketer, accusing him of holding two voter IDs, a criminal offence. Earlier, she had filed objections to accepting his nomination citing discrepancies in his affidavit, which was overruled.

the impressionable age of the victim girl

cannot be taken advantage of by a person

who is much older and crossed the age of

presumable infatuation or innocence,

Commission for Protection of Child Rights

(SCPCRs), Commissioner of Social De-

Justice Pathiban also directed the State

candidate from AAP, Atishi, tweeted, NEW DELHI, DHNS: Campaigning for the fourth phase of polling in 72 Lok Sabha "First, discrepancies constituencies came to an end on Saturin nomination paday evening.
Over 12.79 crore people in nine states pers. Then, criminal offence of having two voter IDs. Now, FIR for illegal rally. My

Gambhir's rival

are expected to cast votes on Monday to decide the fate of 961 candidates. The fourth phase will witness some

interesting contests — CPI's rising star Kanhaiya Kumar is taking on Union Minister Giriraj Singh in Bihar's Begusarai, while Chhindwara in Madhya Pradesh is expecting a 'son rise' as Chief Minister Kamal Nath's son Nakul is in the fray. Actor-turned-politician Urmila Ma-

tondkar is testing electoral waters in Mumbai North against sitting BJP MP Gopal Shetty. Jodhpur in Rajasthan is witnessing a keen contest as Vaibhav Gehlot, the son of Chief Minister Ashok Gehlot, takes on Union Minister Gajendra Singh Shekhawat. $In \, Kannauj, former \, Uttar \, Pradesh \, chief$

minister Akhilesh Yadav's wife Dimple is seeking re-election, while in West Bengal's Asansol, yesteryear actor Moon Moon Sen is locking horns with singer-turned-Union Minister Babul Supriyo.

The first, second and third phases of the seven-phase polling took place on April 11, April 18 and April 23 respectively. The last phase is scheduled to take place on May 19 and the votes will be counted on May 23.

Gadkari faints on stage again, Page 9 IPL2019 SRH 160/8 (20) lost to RR 161/3 (19.1) **MATCHES TODAY** DC vs RCB Delhi 4pm KKR vs MI Mumbai 8 pm **LIVE** on STAR Network

'Exclude consensual sex after 16 from POCSO

CHENNAI: Observing that the relationship between a girl under 18 years of age and a teenage boy or one little over the teenage years cannot be construed as "alien" or "unnatural", the Madras High Court suggested the exclusion of consensual sex after 16 years of age from the purview of

Justice V Pathiban gave the suggestion on Friday during the hearing of a plea by a petitioner who challenged his conviction and 10-year sentence by a Mahila court in Namakkal under the Protection of Children from Sexual Offences (POCSO) Act.

The petitioner, Sabari, was accused of abducting and sexually assaulting a 7-year-old girl. Suggesting amendments to the Act, the

be excluded from the rigorous provisions

of the POCSO Act and such sexual assault, if it is so defined can be tried under more liberal provision, which can be introduced in the Act itself...

The Act can be amended to the effect that the age of the offender ought not to be judge said, "Any consensual sex after the more than five years or so than the consenage of 16 or bodily contact or allied acts can sual victim girl of 16 years or more. So that

fence, Department of Social Welfare and Noon Meal Programme to place the matter before a competent authority. Justice Pathiban said though under Section 2(d) of the Act, a 'child' is defined as a

person below 18 years of age and in case of any love affair between a girl and a boy, where the girl happens to be 16 or 17 years old, the relationship invariably assumes penal character by subjecting the boy to the rigours of the law.

4 DECCAN HERALD Sunday, April 28, 2019

Water-starved regions have no choice

KC valley, from Page 1

The present setup of the sewage treatment plants is not equipped to filter nitrogen and phosphate. "The nutrients in water can turn into nitrates and nitrites, whose variants have been classified as carcinogenic. The proliferation of phosphate in the recipient lake will lead to eutrophication, where plants like hyacinths and other weeds occupy the lake," sources in KSPCB said. BWSSB officials, however, said the water from the sewage treatment plant (STP) conforms to the standards set by KSPCB. "We are ready for an inspection at any point of time. The results will prove that the STP's water is clean," a senior official added.

The KSPCB official termed it a "blunder" to take water in a pipe and release it directly into the Lakshmisagar Lake. "If they had taken the water in an open channel, the chemicals would have been reduced by the natural process," he added.

Faecal coliform

Sources said the reports submitted by the government to the Supreme Court did not specify how they plan to treat faecal

"Faecal coliform is a tricky matter, which can lead to complications. The government has set a limit of 200 Faecal Coliform per 100 ml. However, slightest changes in chlorination process will lead to multiplication of the bacteria. When it is pumped to Kolar in pipes, the water may cause health problems. Continuous checks are needed to ensure the quality of water is not compromised," the source said.

BWSSB stopped pumping water to KC Valley following reports of froth in water. "We took a voluntary decision to stop flow of water to ensure there is no contamination. Water from Bellandur lake breached the STP wall. The pipes have been cleaned now and water is clean too," an official said.

Asked whether there is risk of another breach, the official said the Minor Irriga-

Bagepalli

Chikballapur

Chintamani

Gauribidanur

Gudibanda

Sidlaghatta

Bangarapet

Srinivasapura

lakes

to benefit

from project

as per plan

₹1,342 cr

Cost of the project

440 million litres

Amount of water expected

to be treated by three

sewage treatment plants

6 pump houses

To send water to KC VALLEY

Total

Malur

Total

Quality of water in two districts

0

26

1

1

2

0

30

0

0

3

0

10

Iron Fluoride Salinity

1,151

255

705

278

200

387

2,976

199

210

153

130

221

913

Total

Sources

Tested

1,295

1,243

1,605

1,822

478

1,150

7,593

2,781

2,598

1,982

2,174

2,379

11,914





Waste water let into the sewage treatment plant in Bellandur; a view of the treatment plant. DH PHOTOS/S K DINESH

Types of water treatment

PRIMARY: Removes large particles, floating materials and other objects

SECONDARY: Degrades carbon and chemical ions; removes dissolved and suspended organic compounds

TERTIARY: Removes nutrients, inorganic compounds and chemicals like nirtrogen and phosphate

lake, was building a wall to ensure no such incidents happen in the monsoon.

Asked why an environment impact assessment, including long-term effects, was not carried out before going ahead with the project, BWSSB chairman Tushar Girinath pointed out that they were responsible only for the STP, which was operating as per the guidelines laid down by the KSPCB.

Minor Irrigation Department Secretary C Mruthyunjaya Swamy said the Union government has given a circular clarifying that groundwater recharging projects do not require such studies. "No heavy metals have been found in the lat-

Nitrate Arsenic Other

0

0

0

0

0

0

0

0

44

73

369

3

62

611

458

382

133

189

225

1,387

310 MLD

Koramangala

Bellandur Lake

KC Valley STP at

CHIKKABALLAPUR

36

57

205

136

18

209

661

KOLAI

117

104

29

33

122

405

30

KC Valley project

Koramangala-Challaghatta

0

0

0

0

0

0

0

0

0

0

0

124 km

Length the water travels to reach 134 lakes

in 5 taluks of Kolar and Chintamani

Nos. of Sources with Single Chemical Contaminants

tion Department, which looks after the est test report. The nitrate and phosphate will be removed after water starts flowing from Lakshmisagar Lake to Uddappanahalli and then to other tanks on the network," he said.

Some of the officials in Kolar refused to speak on the issue. Most of those who did speak said the water will be purified during the percolation process.

The few who didn't believe in the government's words said Chief Minister H D Kumaraswamy had promised to release water after tertiary treatment. Sources close to the chief minister could not confirm the statement but said a meeting will be called to address the issues.

No of Sources

with Other

17

0

17

0

10

Jackwell-cum-

pumphouse

Hoskote

No of Sources

with Multiple

contaminants

71

33

3

21

129

2

1

SOURCE: NATIONAL RURAL DRINKING WATER PROGRAMME

Phosphate and nitrate

- Algal bloom, eurotrophication, reduces water quality
- Nitrite increases risk of cancer

Heavy metals

- COBALT: Respiratory problems and eye damage
- LEAD: Affects bone density, can enter bloodstream
- CADMIUM: Kidney damage
- CHROMIUM: Respiratory disease. damage to eyes

Other ways ofingestion

KC Valley dream

CHINTAMANI

The Koramangala and Challaghatta (KC) Valley

project is first of its kind considering its nature

and scale. Three STPs of 440 MLD capacity will

Bengaluru. The treated water is pumped to Laksh-

misagar Lake in Narasapura, situated 45 km away.

The water will then flow into a drain network that

SRINIVASAPURA

MULBAGAL

ANDHRA

Ouster 12

connects 134 lakes in Kolar and Chikkaballapur

districts, recharging the groundwater aquifers.

KOLAR

BANGARPET

filter the sewage (secondary treatment) from

■ Chemicals, anti-biotics, heavy metals get into our bloodstream through fish, vegetables, milk, livestock, crops grown using the contaminated water

Water contamination is not a new problem for people here

Chiranjeevi Kulkarni

The are dying already. Even if the water from Bengaluru is contaminated, it will keep us alive for some more years. That's well and good," said H Srinivas, president of the Muduvadi Hosahalli Gram Panchayat in Kolar taluk.

Kolar and Chikkaballapur districts have not seen good monsoon in the last 14 years. Good rains in 2013 and 2016 were not spread across the districts. Searching for water, people across have sunk borewells up to 1600 feet and are invariably using water contaminated with fluoride. The treated sewage from Bengaluru is therefore seen as the light at the end of

So, the residents of Mallasandra in Kolar taluk held a protest on April 18 and announced that they will boycott the polls unless the government makes arrangements to fill their tank with the treated sewage. The KC Valley plan skips Mutturayaswamy Tank behind the village, situated 10 km ahead of Lakshmisagar Lake in Narasapura.

Decades of negligence

"After the Zilla Panchayat officials promised to fill the tank in three months, the voting started at 3 pm. We approached them several times before. I have already spent Rs 15 lakh on seven failed borewells. I will wait for the water to reach here before sinking the next one," said Gopala Gowda.

Decades of official negligence and ignorance which have rendered Kolar and Chikkaballapur districts bone dry will have a similar effect on other districts as plans of water security involve big-ticket projects that end up further harming the environment.

Muduvadi and its big tank are part of the folklore with songs recounting how the overflowing water from Muduvadi quenches the thirst of other water bodies in the area.

"Today, the entire village is dependent on two borewells and one of them is set to go dry anytime. Last year, 15 people suffered a stroke and three of them died. The doctors said the water we are consuming is dangerous and will lead to major health problems," said H Srinivas, president of the Gram Panchayat.

Srinivas was aware of the case in the Supreme Court but did not know about the row over heavy metals and chemicals. "At any cost, the government should not stop the water. Please write in your report that we are not worried even if the treated water is going to kill us in the next 10 years. We are already dying. However, if the government can purify it further, they should do it "he said Over

the last two decades, several reports have warned about the overexploitation of water in the region. By the time the reverse osmosis plants came to the villages seven years back, thousands of people have been affected by fluoride contamination. There has been no comprehensive survey to assess what fluorosis has done to the

A senior Asha worker in the village said that under the National Programme for Prevention and Control of Fluorosis, several measures have been taken to help those in need but said there were several complications.

dry districts of Karnataka.

"Sometimes a patient has to travel to some other village to reach the health camp for an inspection. There are several complications. Since there is no monetary support



Dasappa, who takes care of water supply in Rajakallahalli, said the government should release water regardless of its quality.

'Academics should be allowed to function freely'

IISc professor T V Ramachandra, who faced personal attacks for exposing the presence of heavy metals, said he would not like to comment on the issue. However, he said, "Academicians should be allowed to think and work scientifically and independently. Their work should be considered and dismissed in a scientific way. Any society that seeks to dismiss and attack them without considering their work risks its own well-being," he said.

involved, many patients do not even care to come for a check-up. There is hope that the water from Bengaluru will end this problem," she said.

In Bellur, situated next to the Lakshmisagar lake, residents were happy with the greenish water in the waterbody. Several villagers in the gram panchayat office said they are finally getting enough water to irrigate their land

"Last summer we hired two tankers to supply water to three villages. But thanks to water from Bengaluru, our borewells can now fill the overhead water tanks and reverse osmosis plant. We have been told that the KC Valley water gets better after it goes into the ground," Panchayat Development Officer Samparaju said.

Manjunath N G, a farmer from Naganayakanahalli, said people in his village have capped the borewells and waiting for the treated sewage to recharge aquifers. "There are about 300 borewells, most of them sunk below 1500 feet. Our tanks are at the tail end of the clusters and hence will get the water late. We are eagerly waiting for the government to pump the water,'

Kunteerappa Naik, 72, remembered that a 20'X20' well was enough to irrigate his two acres of land about 15 years ago. "The well always had a good amount of water till my neighbour sunk two borewells. No rain has filled it since then. The government should control the number of borewells in a village," he said.

DH News Service

No clarity on the long-term effects of treated sewage

TAMIL NADU

MALUR

J R Mudakavi

The state government has committed a blunder in not look ing at the long-term effects of a project which seeks to supply the treated

sewage of Bengaluru to the lakes in Kolar and Chikkaballapur districts.

The government is yet to acknowledge the problem of chemicals, surfactants, detergents and heavy metals in the water. Every year, more than 30,000 new chemicals are getting added to sewage. This is due to the increase in the number of chemicals used in our daily life. As a result, the sewage is not the same as what it was a few years earlier. And the long-term biological effects of this development are not known.

A complete analysis, including speciation of organic and inorganic chemicals, needs to be done to get a clear picture. The government should not have jumped into this kind of experimentation without involving prior scientific study. Analysis should be done to know the specific chemicals causing high levels of chemical oxygen demand and total organic carbon, which will destroy the lakes if not treated.

The assumption that heavy metal levels below detectable levels are fine is wrong. We should realise that such elements will accumulate in the soil. Over a period of time, the soil and the lake bed will be contaminated due to accumulation and absorption of chemicals and metabolites.

Lacks analysis

Moreover, how does the government plan to prevent the use of surface water by people or cattle? When these things accumulate in the body of an animal, will it not get transferred to humans over time? We have not even begun to make an analysis of the effect of treated sewage on agricultural land

The government convinced the Supreme Court to lift the stay on the KC Valley project. But my concern is about the idea of groundwater recharge itself. First, the sewage is not treated properly. More importantly, a proper procedure is not followed. Whenever you want to recharge a lake, it must flow for 20 km in natural circumstances and water should fall from a 20 ft height, as per the guidelines issued in the 'Manual on sewage and sewage treatment systems,

The concept of discharging sewage to lakes after secondary treatment is not envisaged in the urban water reuse

policy of the state government. A clear framework would have helped guide the project implementation in the best interest of its beneficiaries.

A view of the plant in Bengaluru where primary treatment of sewage is done. DH PHOTO/SATHISH BADIGER

The government should set up a continuous monitoring mechanism and a scientific and technical body that also has stakeholders from Kolar and Chikkaballapur committees on board. When we showed the presence of dangerous amounts of heavy metals and chemicals,

the government said it was the result of a breach. Such a breach should not be a ruse for a Rs 1,300 crore project.

Proactive measures like online monitoring will help avoid the situation of people falling sick due to contaminated water. All these are issues that do not require cutting-edge technology as much as the sincere efforts from officials. It's not just a question of one department or official doing it. It should

be a collective effort, and scientists and administrators should be a part of the proactive machinery.

We need studies and analysis. Natural water has classifications but we have no classification of treated sewage, which is crucial to know how safe it is.

Most of the sewage treatment plants are handled by civil engineers who have no practical approach to the complexity of the new-age chemicals. The foam in Bellandur has remained a challenge. A third agency should monitor the sewage before it enters the lake.

With this project, Bengaluru is setting an example for other cities, let the example be more about substance. At present, there is no transparency in the project.

(The writer is Chief Research Scientist, Department of Chemical Engineering, Indian Institute of Science, Bengaluru)

HAVE YOUR SAY

Do express your opinion, e-mail us at: insight@deccanherald.co.in