

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन नदी विकास एवं गंगा संरक्षण विभाग
केंद्रीय जल आयोग
जल प्रणाली अभियांत्रिकी निदेशालय



Government of India
Ministry of Jal Shakti
Dept. of Water Resources, RD&GR
Central Water Commission
Water System Engineering Directorate

दिनांक: 18.11.2019

विषय - समाचार पत्रों की कटिंग का प्रस्तुतीकरण।

जल संसाधन विकास और संबद्ध विषयों से संबंधित समाचार पत्रों की कटिंग को केंद्रीय जल आयोग के अध्यक्ष और सदस्य (कार्य योजना एवं परियोजना / अभिकल्प एवं अनुसंधान / नदी प्रबंध) के अवलोकन के लिए संलग्न किया गया है। इन समाचारों की कटिंग की सॉफ्ट कॉपी केन्द्रीय जल आयोग की वेबसाइट पर भी अपलोड की जाएगी।

अंशु
18/11/2019
वरिष्ठ कलाकार

जल प्रणाली अभियांत्रिकी निदेशालय

संलग्नक: उपरोक्त

उप निदेशक, (ज. प्र. आ.) निदे०

विवेक
18/11/2019

निदेशक, (ज. प्र. आ.) निदे०

सुवेप-आ.
18-11-19

सेवा में,

अध्यक्ष, के. ज. आ., नई दिल्ली

जानकारी हेतु - सभी संबंधित केन्द्रीय जल आयोग की वेबसाइट www.cwc.gov.in पर देखें।



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and documented at WSE Dte, CWC.

3 months after overflowing, Bhakra level below normal

VIJAY MOHAN
TRIBUNE NEWS SERVICE

CHANDIGARH, NOVEMBER 17

Just three months after the water level in the crucial reservoir at Bhakra Dam exceeded its maximum permissible limit, the storage has dipped below normal for this time of the year.

The present availability of water at Bhakra is 4.68 billion cubic metres (BCM) against its total capacity of 6.23 BCM, which is five per cent below normal, according to data compiled by the Central Water Commission (CWC). Till the end of October, storage was 4 per cent above normal.

While the current storage for this week is 75 per cent of the reservoir's total capacity, it was 86 per cent at this time last year and stood at an average of 80 per cent during the last 10 years.

Besides Bhakra, which lies on the Sutlej, there are three major reservoirs in Himachal Pradesh. The others are at Pong Dam on the Beas and Kol Dam on the Sutlej upstream of Bhakra. These have a com-



STORAGE 4% ABOVE NORMAL TILL OCT-END

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- While the current storage for this week is 75% of the reservoir's total capacity, it was 86% at this time last year and stood at an average of 80% during the last 10 years.

bined hydroelectricity generation potential of 2,575 mega watts besides providing water for domestic use and irrigation.

In August, parts of Punjab, especially those along the courses of the Sutlej and Beas, had experienced the worst floods in 40 years due to heavy rains in the

region. Bhakra had experienced record inflows, with 3.11 lakh cusecs of water being generated into its reservoir from the catchment area.

Water level in the reservoir had crossed the permissible limit of 1,680 feet by three feet requiring excess water to be dis-

charged through the floodgates in a controlled manner. Additional water was also generated into the Sutlej from numerous rivulets and nallahs downstream of the dam, inundating low-lying areas.

The total storage capacity available at the three dams in HP is 12.48 BCM and at present 8.79 BCM, i.e. 70 per cent, is available. This is seven per cent below normal. It was 10.72 BCM last year and on an average 9.42 BCM over the past 10 years, according to the CWC.

At Pong, which too had overflowed last year and had touched the upper mark this year, the storage is lower. It is 65 per cent this year as compared to last year's 86 per cent and past 10 years' average of 71 per cent.

At Kol Dam, and Thein Dam that lies on the Ravi in Punjab, the situation is better. At 92 per cent, the storage at Kol is a notch above the 10-year average of 91 per cent, whereas at Thein, the storage is 79 per cent vis-à-vis the 10-year average of 59 per cent, making it 44 per cent above normal.

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and documented at WSE Dte, CWC.

Seismometer, other key devices at Jayakwadi dam go 'out of order' H-18

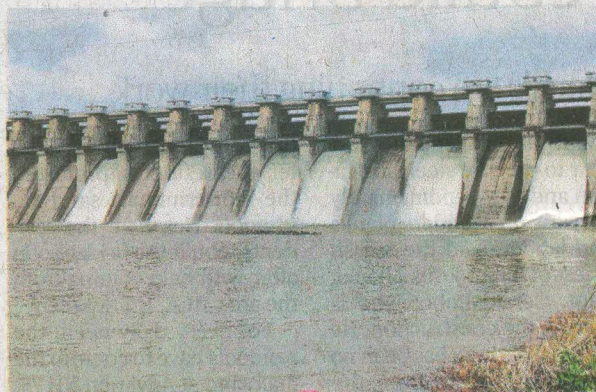
Retired MERI staff to be enlisted to repair equipment

PRESS TRUST OF INDIA
AURANGABAD

The seismometer, which helps measure the magnitude of an earthquake, and several other key instruments installed at the Jayakwadi dam in Aurangabad district have stopped functioning properly, an official said on Sunday.

Retired staff of the Maharashtra Engineering Research Institute (MERI), who have expertise in repairing these devices, are being roped in to get them fixed.

"The seismometer was installed at the Jayakwadi dam after the devastating earthquake in Killari in Latur district in 1993. This instrument is powerful as it has a range of 10,000 km. In the past, it has recorded the epicentres of earthquakes in Pakistan, Afghanistan, Rus-



The seismometer was installed at the Jayakwadi dam after the earthquake in Killari in Latur district in 1993. ■ FILE PHOTO

sia and Nepal," executive engineer Rajendra Kale said.

"But this and other instruments, like the piezometer, earth pressure cell and slope meter, have been out of order for the last two years. Every instrument is important and we are trying to get them re-

paired soon or get new ones as early as possible," he said.

"We hope to get [the seismometer] repaired within a week. If the repair work does not yield positive results then we will seek permission to purchase a new one," Mr. Kale said.

HINDUSTAN TIMES - 18.11.2019

Bills should include incentives



Bharati Chaturvedi
■ letters@hindustantimes.com

NEW DELHI: The Proposed River Ganga (Rejuvenation, Protection and Management) Bill, 2019, that is being tabled in the upcoming winter session of the Parliament, is one of India's most ambitious environmental bills. The bill seeks to protect the river from being ripped apart by sand mining on the one hand and being starved of water on the other. Sewage discharge is also one of the no-nos.

How will it be implemented?

To handle sewage discharge, the biggest cities have to shift to decentralised sewage management and grey water systems. This will cost a lot of resources—land, money, tech and social change. This is not new knowledge—India's Ganga Action Plan has been around for years, generating more revenue for consultants than public good. How can we change that?

Similarly, how will sand-mining be stopped?

The answer lies in improved construction debris collection and recycling, to partly replace the need for sand. Construction innovation is also important, as is innovation in the cement industry.

Why should anyone do all of this? And of course, you can't just de-commission the dams in the upper Ganges, the Himalayas. There's a lot of retrofitting that must be done, in order to manage the water flow. It's of course expensive, but also, unknown. Why should anyone take the risk?

I believe that while bills should include punitive measures, implementation should include top rate incentives. The bill could soon become a law. That is when we will need to try incentives to implement the new law and create competition to do it best. Less won't work.

(The writer is the founder and director of the Chintan Environmental Research and Action Group.)

Another election, another churn: Why the Mhadei's waters are muddy again

SMITA NAIR

PANAJI, NOVEMBER 17

ON OCTOBER 23, Environment, Forest and Climate Change Minister Prakash Javadekar announced on Twitter that the "Kalasa-Banduri drinking water project in Karnataka has been granted Environment Approval". Javadekar deleted the tweet subsequently, but Goa Chief Minister Pramod Sawant led an 11-member all-party delegation to New Delhi to demand that the clearance to the project be withdrawn.

On Twitter, the CM, who belongs to the BJP, posted: "[River] Mhadei [the water of whose tributaries, Kalasa and Banduri, Karnataka wants to divert to the Malaprabha basin in Karnataka] is more than mother to us. We shall protect it at any cost. Officially Govt. of Goa is not aware of any EC [environmental clearance] having been granted to Karnataka affecting Mhadei river." Sawant vowed to "defend the interest of the people of Goa and the state at any cost", and announced that "In case such EC is issued without hearing State of Goa, we shall challenge the same before appropriate forum including NGT".

The river and dispute

The Mhadei (or Mahadayi/Mahadeyi)

rises in the Western Ghats in Khanapur taluk of Karnataka's Belagavi district, and enters Goa in the Sattari taluk of North Goa. Several streams join it along its course, and the river grows in volume to become the Mandovi, one of Goa's two major rivers, before flowing into the Arabian Sea at Panaji.

Two-thirds (76 km) of the 111-km Mhadei flows in Goa (where it is called Mandovi). Since Goa's other 11 rivers hold salt water, the sweet-water Mandovi is crucial to water security and ecology, and an important source of fish. The Mhadei/Mandovi basin, along with its tributaries and distributaries, nourishes Goa and contiguous areas of Maharashtra and Karnataka.

Tensions over sharing the Mhadei's water started in the 1980s and escalated through the early 1990s as Karnataka designed several dams and canals to channel water to the Malaprabha basin to address endemic water shortages in its northern districts of Belagavi, Dharwad, Gadag, and Bagalkot.

Goa asked for a Tribunal in 2002 and, four years later, moved the Supreme Court. The central government set up the Mhadei Water Disputes Tribunal in November 2010.

In August 2018, the Tribunal awarded 13.42 thousand million cubic (TMC) feet from the Mhadei basin — including 3.9 TMC feet for diversion into the depleted Malaprabha



basin through the Kalasa-Banduri project — to Karnataka. Goa and Karnataka have both challenged the award, and the matter is pending in the Supreme Court.

The latest escalation

In April this year, the Karnataka Neeravari Nigam Limited (KNNL), the state government company in charge of all irrigation projects, submitted to the Union Environment Ministry documents related to the Rs 840-

crore "Khalasa Bhandura Drinking Water supply Scheme" that proposes to divert 3.90 TMC feet of "water flowing [in] streams/nalas in Mahadayi basin to water deficit Malaprabha basin by construction of three diversion dams across Haltara Nala, Kalasa Nala, and Bhandura Nala". The project, the KNNL said, "is exclusively proposed for drinking water facilities to Hubli-Dharwad towns, Kundgol town, and en route villages as part of commitment to National Water Policy 2012".

On October 17, the Ministry confirmed Karnataka's request for waiver of provisions of the Environmental Impact Assessment (EIA) Notification, 2006, provided some steps were followed. This upset Goa, and the delegation that met Javadekar on November 3 expressed "shock and surprise" at the Ministry's response, and accused Karnataka of misrepresenting facts before the Centre. Environmentalist Rajendra P Kerkar of the Mhadei Bachao Andolan, part of the Goa delegation, argued that the proposed project falls "within the ecologically sensitive area identified earlier by Karnataka Forests Department and the Western Ghats Ecology Expert Panel headed by Dr Madhav Gadgil in their report in 2011 and subsequently the high level working group appointed under the chairmanship of Dr Kasturirangan in their report of 2013".

The delegation said part of the project falls within the eco-sensitive zone of Bhimgad Wildlife Sanctuary, and the dam site was just 231.27 m and its canal systems just 3.17 km from Mhadei Wildlife Sanctuary — all of which required it to go through the EIA process.

Kerkar later told *The Indian Express* that most of Goa's paddy farming is by the Kazaan way, which requires the water to be of a certain level of salinity. "Of the 12 rivers in Goa, only Mhadei fulfils the needs and if seawater ingress happens in a weak Mhadei, we stand

to lose our entire paddy cultivation," he said.

Politics mixed in water

Politicians on both sides in Goa have sought to link the Ministry's approval to the project to December 5 Assembly byelections in Karnataka. Several of the 15 seats up for grabs are in the Malaprabha basin.

"Everyone should understand that bypolls are scheduled in that state (Karnataka). There could also be fresh elections in that state. Political situation is not very good over there. But we should not get distracted by any letters issued to them," Goa Ports Minister Michael Lobo told a press conference.

Lobo claimed such letters have been issued by the Centre "time and again", sometimes for "political reasons". Ahead of the Karnataka elections of 2018, former Goa CM Manohar Parrikar had, in a letter to then Karnataka Opposition leader BS Yediyurappa, shown willingness to consider Karnataka's request for water for its northern districts.

Parrikar's letter had followed a meeting with BJP president Amit Shah in New Delhi, where Parrikar and the BJP's state heads in Maharashtra and Karnataka were also present. And Javadekar in his tweet last month acknowledged the "follow-up" of Union Minister Pralhad Joshi, BJP MP from Dharwad, of which three of the bypoll seats are part.

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and documented at WSE Dte, CWC.

'Water schools' to connect kids with nature

GS PAUL
TRIBUNE NEWS SERVICE

AMRITSAR, NOVEMBER 17

In line with its catchphrase 'Building a future in which humans live in harmony with nature', the World-Wide Fund for Nature (WWF) India jointly in collaboration with the Punjab Forest, Wildlife Preservation Department and DCB Bank has come up with 'water school' programme around the Beas river and the Harike wetland.

Under this joint venture, schoolchildren are enabled to explore wetland treasure, while nurturing them to respect and conserve nature and biodiversity.

At present, students who are on the last leg of their course special sessions, have been undergoing field visit along the Harike wetland that supports rare, vulnerable and endangered species like the Indus river dolphin, gharials, testudine turtle and the smooth-coated otter.



JOINT VENTURE

Under the joint venture of the World-Wide Fund for Nature India with the Punjab Forest, Wildlife Preservation Department and DCB Bank, schoolkids are enabled to explore wetland treasure, while nurturing them to respect and conserve nature and biodiversity.

◀ Schoolkids during a visit to Harike wetland. TRIBUNE PHOTO

The water education programme is implemented in at least 10 schools around villages near the Beas like Harike, Chamba, Kambo Dhairwala, Gadka, Munda Pind, Bhail Dhairwala, Goindwal Sahib and Dhunda.

Gitanjali Kanwar, WWF senior project officer, said five months curriculum was aimed to create awareness and appreciation among students and teachers regarding the use and management of water

resources and enable them to take action to address the challenge of water conservation.

Though this course, they get specialised training to conduct an assessment of the health of the river using pre-designed scientific assessment kits so that they can communicate water issues accurately and effectively.

"The water schools programme was introduced in December 2018. Our trainers conduct sessions in schools,

train teachers who further make students aware of the water-related problems faced by the riverine system and wetlands and most importantly the role that they could play in solving these issues. We aim to train 30 teachers and more than 500 students every year. We plan to extend it in next 10 schools from December," she said.

Gitanjali said a series of programmes was in the pipeline in the long run where highly

motivated students would be chosen for involving them in studying migratory birds, gharials and Indus dohpin scenario. "At present we have 50-60 students from each of 10 schools belonging to riparian belt. We are preparing their background through this programme. Further, we propose to pick up the most motivated children for extensive course in wetland study, including bird watch, Indus dolphin, gharial etc," she said.

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Groundwater unsafe for drinking in state: Study

Recommends supply of canal water for consumption

RUCHIKA M KHANNA
TRIBUNE NEWS SERVICE

CHANDIGARH, NOVEMBER 17

The groundwater contamination in the state has reached alarming proportions. While the Majha region has high arsenic contamination, Doaba is afflicted by selenium and groundwater in Malwa has high uranium content.

These are the findings of a recent research conducted by physicist Hardev Singh Virk. The study points out how Punjab is facing a crisis situation due to high levels of heavy metals and uranium in groundwater. The research is based on the findings of the Punjab Water Supply and Sanitation Department report, which had collected samples from 2,080 habitations.

Talking to *The Tribune*, Hardev Singh Virk, whose preliminary report on water contamination was released in 2018, said the final report now analyses the high level of heavy metals, which is way beyond the permissible level of 10 parts per billion (ppb). "The study reveals how 504 habitations (where source of groundwater in through tubewells) in Amritsar, 324 Gurdaspur and 322 Tarn Taran have high arsenic content in groundwater. Various studies have shown how high arsenic content is linked to high cancer risk. Another recent research by the



Top 3 districts with uranium contamination

(Permissible limit is 30ppb)

District	Affected habitations	Range
Fazilka	217	30-366
Moga	203	30-346.7
Ferozepur	139	30-331.4

Selenium contamination

(Permissible limit 0.01 mg/l)

District	Affected habitations	Range
Jalandhar	105	0.010-0.040
Ludhiana	80	0.010-0.140
Kapurthala	30	0.010-0.082

Arsenic contamination

(Permissible limit 0.01mg/l)

District	Affected habitations	Range
Amritsar	504	0.010-0.111
Gurdaspur	324	0.010-0.104
Tarn Taran	322	0.010-0.100

Indian Council of Agriculture Research (ICAR) has reported arsenic beyond the safe limit in 13 districts," he said.

In Doaba, selenium content was found in 105 habitations in Jalandhar, 30 Kapurthala and 19 Nawanshahr. Besides,

Ludhiana, which otherwise falls in Malwa region, has high contamination of selenium with 90 habitations having higher than permissible limit of the metal. The acceptable limit is 0.01 mg/l, and these habitations have up to

0.140 mg/l content of selenium. Virk says though selenium toxicity has been reported in animals, human and laboratory studies carried out in seven villages of seleniferous area of Punjab has suggested that it may increase blood pressure. It can also lead to nausea, diarrhoea, abdominal pain, chills and marked hair loss, among other problems.

The uranium content was high in 217 habitations in Fazilka, 203 habitations Moga, 139 Ferozepur and 115 Barnala. This can have an impact on kidneys and in case of concentration being over 100 parts per billion, radioactivity will begin to be a consideration.

Virk says that though the Punjab Water Supply and Sanitation Department has started the process of removing the heavy metals from groundwater — coagulation for removal of uranium through reverse osmosis and bring down uranium content to 60 ppb; using AMRIT technology for removing arsenic — the need of the hour is to shift all drinking water supply to canal-based water. The canal-based was already being supplied in most parts and the state should immediately ensure that all areas get canal water. "There is also an urgent need to change the cropping pattern in Punjab to halt the depletion of groundwater table further," he says.

T-18

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and documented at WSE Dte, CWC.

Dam-hit families say they were caught unawares

Narmada flood victims struggle without amenities

STAFF REPORTER

BHOPAL

Families hit by the Sardar Sarovar dam project after the swelled up Narmada backwaters submerged 178 villages in August, took part in a public hearing in Bhopal on Sunday as the protests demanding rehabilitation entered the second day.

The hearing was conducted by journalist L.S. Harde-niya, Madhya Pradesh Kisan Sabha president Jasvinder Singh, Gandhian Dayaram Namdev and former Chief Secretary S. C. Behar outside the Narmada Bhavan and was led by the Narmada Bachao Andolan (NBA).

"Instead of following the Supreme Court orders in 2000, 2005, 2017 and the rehabilitation policy, the Narmada Valley Development Authority had let 178 villages submerge. This shows the government's callous attitude towards us," said Kamla Yadav, a farmer



Seeking relief: Social activist Medha Patkar, right, at a sit-in with the displaced villagers in Bhopal on Sunday. ■ PTI

from Chhota Barda in Barwani district.

"While the affected in Maharashtra and Gujarat had got a fair share, those in Madhya Pradesh had to do with bread crumbs," said Pema Bhilala, a farmer from Avalda village in the district.

No warning

The government had told the families that they would be alerted six months in advance.

"But we were caught unawares ... At sites of rehabilitation, drinking water and

electricity hasn't reached yet."

Referring to several riverine islands that had come up after the waters rose, Dadu, of Ekalbara, said: "The way to our fields is blocked now. What was just a kilometre away is now at a distant 18-20 km."

NBA leader Medha Patkar told *The Hindu* that members of the Prajapati community, who owned brick kilns in Dhar district, had returned to the relief camps as they were assured of a resolution at the district-level.

ST-18

Shimla overcomes problem of contaminated water

SANJEEV KUMAR
SHIMLA, 17 NOVEMBER

After the death of over 22 persons due to a jaundice outbreak in Shimla, which was the result of contaminated water supply, the 'Queen of Hills' seems to have finally overcome the problem of contaminated water and shortage of water supply.

The officials at Shimla Jal Prabhandhan Nigam Limited (SJPNL) and Municipal Corporation Shimla are overjoyed after the Central government ranked the quality of water, supplied in the hill town at 7th place in the country.

It has been long journey since the jaundice outbreak due to the supply of contaminated water from Ashwini Khad that resulted in over 700 falling sick and requests by state government in May 2018 to not to visit the state



owing to shortage of water.

The serious problem had led the MC Shimla and the Himachal Pradesh government to constitute a company, SJPNL to provide adequate, clean and safe drinking water in the state capital on daily basis.

"It is due to the concerted efforts of MC Shimla and state government that has

resulted in Shimla figuring amongst the top 10 cities in the country to provide safe drinking water to residents," MC Shimla mayor Kusum Sadret told The Statesman.

Sadret said the efforts were made to replace water supply pipelines till Shimla which helped in plugging leakages and it increased water supply to the hill town to 50 Million

Litre per day (MLD) as compared to 20 MLD in May 2018.

Several other measures as chlorination and cleanliness of tanks were ensured to provide good quality water to all on daily basis.

"We are happy that we are able to provide clean and adequate drinking water to all on daily basis even during summer season in 2019," she said, adding Shimla is now getting 40-50 MLD water every day as compared 33-40 MLD in yesteryears.

SJPNL Managing Director cum CEO Dr Dharmendra Gill said after the formation of the company, a protocol was developed for testing of water and the testing was then shifted to Indira Gandhi Medical College, Shimla.

"We also increased the number of samples from across Shimla to 20 from earlier 8 samples to ensure the quality of water.

20 samples are collected

daily from public taps and storage tanks now from where the water is supplied for Shimla town.

Besides, keyman are provided water sampling kits to check quality of water in their respected areas," Gill told The Statesman.

He said cleaning of tanks after every 6 months was ensured and the condition of water treatment plants in the hill town was improved upon. In addition, more water filtering and pumping units at Giri and Gumma and chlorination sensors were installed in water storage tanks.

"We are planning to setup Ultra-Violet (UV) treatment plant at Sanjauli and the project would soon be completed. After the completion of the project, SJPNL will even be able to provide even more safe and cleaning water to all," he added.

It worthwhile to mention here that Shimla has more than

century old lift water supply systems, one of its kinds in India that were started in 1875 with the capacity of 4.54 MLD, catering to a population of 16,000.

Thereafter, five water supply schemes were started for meeting the needs of the ever growing population.

Three of this augmentation schemes were commissioned prior to independence, while the fourth and fifth were commissioned after independence. The last augmentation scheme for the city was commissioned in 1992.

The total installed capacity of the various schemes of the Shimla water supply system is 61.5 MLD.

However, over the period of time, the competing demands from agriculture and horticulture with depletion of water in sources due to climate change, the availability of the water has gone down substantially.

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Filth and worship

The holy river from ancient times continues to retain its element of faith in spite of all the toxic pollutants released into the river. Notwithstanding the extent of filth that has been allowed into the once mighty river, the developments of modern times have taken such a form that the resilience of the river is challenged continually with without impunity as cities along its course grow and leave the noxious residue of such disbalanced growth to the river. Although much damage has been done, it is never too late to try and fix things up for good. As National Ganga Bill awaits introduction in Winter Session of Parliament, the government is looking to implement a 5-year jail term for construction of permanent residential or commercial structures in the active floodplains of Ganga and its tributaries and a Rs 50 crore fine—highest fine amount—for violation of norms regarding polluting Ganga or for obstructing the flow of the river without prior permission. Offences under the proposed Act (The National River Ganga (Rejuvenation, Protection and Management) Bill, 2019) will be cognizable and non-bailable for causing pollution in river Ganga. The draft Bill comprises 13 chapters and three schedules and lists graded penalties depending on the severity of the offence under a dozen sections. These include activities like illegal construction of ports or jetties; storage or diversion of water by any means causing obstruction to the flow of water; mining, stone quarrying or extracting ground water; and spoiling or defacing the ghats of the Ganga and its tributaries. The range of penalties introduced to check further pollution of the Ganga are a suitable deterrent to restore the condition of the river. A provision has also been put in place for regulating activities like mining, stone quarrying or extracting ground water, which may attract imprisonment of up to two years and/ or fine of up to Rs 10 lakh. Spoiling or defacing the ghats of the Ganga or its tributaries will be punished with imprisonment of up to one year and/ or fine up to Rs 10,000 or cost incurred for restoration (whichever is higher). The provisions, in a very obvious manner, point to the numerous aspects causing pollution of the river: the individual factor being the last on the category, and organised activities at the cost of the river being the most prominent ones. The discharge of industrial effluents sewage, the mining and quarrying pertain to a network of activities which need to be checked strictly in order to allow some room the restoration of the river. The proposed Act is also said to have a provision for setting up a Ganga Protection Corps which will have the power to arrest any person found violating the provisions of the Act and produce the person before the local police station.

The proposed Bill aims to prevent and control pollution of the Ganga and ensure continuous flow of water so as to rejuvenate the river to its natural and pristine condition. An ambitious target indeed, the proposed Bill also provides for constitution of a National Ganga Council, under the chairmanship of the Prime Minister. This will include the Chief Ministers of Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and West Bengal together with Central ministers. The pollution of India's largest river is definitely one to warrant a massive-scale drive to set thing right given that the ill health of the river poses significant threats to public health in general and the environment as a whole. Apart from industrial contaminants, human waste is a major source of pollution and the solution to that lies in effective waste management. The Ganges provides water to nearly 40 per cent of India's population across 11 states and serves an estimated population of 500 million people. This is the maximum strength of people in the world to be dependent on any river—and as matters stand, Ganga is the sixth-most polluted river in the world. It was only in late 1970s that the concern for polluted Ganga started gaining prominence in public discourse in general. Numerous initiatives undertaken to clean the river have yielded only little. Narendra Modi, upon his ascension to the office of India's Prime Minister made an affirmation to begin work in cleaning the river and curbing pollution. In line with this, the Namami Gange project was announced by the government in the July 2014 budget. An estimated Rs 2,958 crore (US \$460 million) have been spent until July 2016 in various efforts in cleaning up of the river. Apart from discharge of effluents, other causes of pollution include increase in the population density that result in the increase of various human activities such as bathing, washing clothes, the bathing of animals, etc on the river side. Considering such a factor must be addressed from a civic perspective, it come to light that the issue of pollution of Ganga can and must be addressed from numerous other perspectives that are only secondarily linked to the river. The extent of human waste going into the river is to the extent that since the river flows through 100 cities with populations over 100,000, a large proportion of the sewage water with higher organic load ends up in the Ganges is from this population through domestic water usage. Numerous industrial cities thriving on the bank of the river like Kanpur, Allahabad, Varanasi and Patna, only add to the woes of the river. Saving Ganga cannot be limited to only looking at the river for what it has become but requires an integrated approach including all the factors contributing to the river's dismal state.

Water of India ~ II SF-18

As India's water crisis worsens, environmental damage will intensify leading to serious harm to the country's biodiversity, and ecological balance. Red flags have already been raised over the cumulative impact of climate change, increasing temperatures, and change in hydrology due to dams and river diversion. Sedimentation and reduction in nutrients carried by the rivers can be altered by linking rivers

Water is essential for healthy and sustainable livelihood. Scarcity can disrupt social stability, economic prosperity and destroy ecosystems. Water scarcity impacts industrial growth and energy production. People's access to clean water has a positive impact on food security, health, social and political stability. Lack of well-considered water pricing for agricultural use and energy subsidies promote over-extraction, and sub-optimal matching of crops with the agro-climatic and water zones in states. Large quantity of water loss is created by water-intensive crops.

There has also been an increased emphasis on adoption of water efficient technologies, management systems, farmer education, and advisory services. India should develop an agricultural water export Index to track the amount of virtual water exported by India through trade commodities to other countries. This can enable better policy to support water sustainability. The Water Footprint Network is an interactive tool to map the water footprint by different users and identify strategic interventions for improving water use. Scaling up micro-irrigation can increase coverage and sustainability. Pradhan Mantri Krishi Sinchayee Yojana promotes use of drip and sprinkler irrigation by farmers.

Urban regional water planning can help mitigate water risks in urban settlements. An integrated approach to land-use planning and zoning, can ensure sustainable urban development. Water shortages have disproportionate impact on the Small-to-Medium Enterprise (SME) and Micro, Small and Medium Enterprise (MSME) segment. This can severely impact industrial production. The worst affected industries are likely to include water-intensive sectors such as food and beverages, textiles, and paper and paper products.

Industrial water-use can be optimized by introducing caps on water consumption by each user. Water-intensive industries ought not to be permitted in water-scarce regions. A water permit system can restrict water entitlements to industries annually which can be traded like the water market system in Australia's

Murray-Darling Basin. Such a system can cover the industrial wastewater. Water management practices can be incentivized by policy interventions. ESG compliance checks by banks can encourage sustainable use amongst the companies needing external funding for operations. ESG compliance checks for projects can ensure effective initiatives into practice. Indian banks can use pre-defined algorithm to raise red flags in case water availability in the region and conduct regular portfolio analysis for Environment and Risk management.

Thermal power constitutes more than 83 per cent of India's total power generation in 2016. An estimated 90 per cent of thermal power plants in India rely on fresh-water sources for cooling. About 40 per cent of India's thermal power plants are in water-scarce regions. Energy shortages due to thermal power shutdowns can impact businesses and slow down economic growth. MoEFCC introduced mandatory limits on their water consumption. Diversifying energy sources to include renewable energy can help India mitigate the energy crisis. Shifting to alternatives such as solar and wind energy can reduce dependence on water for energy production. The government has set targets for renewable energy to 175 Giga Watts by 2022. The new thermal power plants should be set up away from water-scarce regions.

There is need to improve the water-use efficiency amongst the existing thermal plants through modern technologies. As an example, NTPC promotes water conservation. Apart from adoption of water efficient technologies for operations and production, NTPC is using desalination plants and floating Solar PV systems. Desalination plants can create additional sources of water for human use. The floating Solar PV systems can reduce the natural rate of evaporation.

As India's water crisis worsens, environmental damage will intensify leading to serious harm to the country's biodiversity, and ecological balance. Red flags have

already been raised over the cumulative impact of climate change, increasing temperatures, and change in hydrology due to dams and river diversion. Sedimentation and reduction in nutrients carried by the rivers can be altered by linking rivers. Flora and fauna thrive on water resources. Impact on biodiversity manifests in changing migration patterns, decline and extinction of species, destruction of biodiversity hotspots due to human activities. The Western Ghats, the Himalayas, and the North-East have many hotspots with threatened species and ecosystem. Six



dams on the Kali River in the Western Ghats of India have decreased the forest cover from 85 per cent to 55 per cent between 1973 and 2016. Its biodiversity hotspots host 325 and 190 species of flora and fauna, respectively. Environmental impacts can be reduced by policy intervention. Incorporation of economic value of biodiversity in planning is a necessary step. Smaller projects in more locations can be encouraged rather than a large project. The environmental footprint of smaller projects might be lower compared to a large project.

Adapting approaches to restore ecological balance have yielded results globally. The US-Mexico Colorado river agreement led to collaboration by the two nations in reducing the environmental impact of Colorado river's natural flow. Conservation groups in the region have undertaken tree plantation to re-establish habitats and support resuscitation of the bird population and wildlife in the region. Nearly 30 per cent of India's land is impacted by desertification and land degradation.

Water management can reduce desertification. Extensive groundwater extraction contributes to loss of vegetation cover leading to desertification and land degradation. Decline in the land's capacity to recharge groundwater tables and water erosion and surface run-off are the major factors behind desertification in India. Degraded land is acquired for

infrastructure and construction projects. Land degradation can also cause up to 4 per cent losses in Agricultural Gross Domestic Product. Afforestation scientifically can lead to the right mix of flora, increase in green cover and groundwater rejuvenation. China's 'Great Green Wall' initiative is a great example of tackling desertification. China planted 66 billion trees and reduced sandstorms by 20 per cent and desertification by nearly 5,000 miles.

The National Water Mission (NWM) and the NAPCC launched in 2009 represent a nationwide effort to tackle climate change. Various Advisory Boards, High-level Steering Committees, Technical Committees and Secretariats are set up to run the Mission.

Six Sub-committees set up under the Mission for policy and institutional Framework, surface water, ground water, domestic and industrial water management, efficient use of water, basin-level planning and management.

Enactment of necessary legislation by the state governments is part of the strategy. Comprehensive water data base in the public domain, water resources information system, impact of climate change on water resources will be available for policy formulation and execution of projects. Intensive rainwater harvesting and groundwater recharge programme cover over-exploited, critical and semi-critical blocks.

Water use efficiency will have to be enhanced by incentivizing for recycling of water including wastewater. Mandatory water audit for drinking water purpose, review of financing policy and allocations and promotion of basin level integrated water resources management are significant steps.

Guidelines for uses of water for irrigation, drinking, industrial use along with review of National Water Policy and adoption of a revised policy will help to mitigate water stress in rural and urban areas. Inter-sectoral groups were constituted by combining resources from relevant ministries, industry, academia and civil society.

(To be concluded)

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पानी को लेकर तेज हुई बहस

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■ **प्रस, नई दिल्ली :** पानी पर दिल्ली की राजनीति तेज हो गई है। आप और बीजेपी एक-दूसरे पर आरोप लगा रही हैं। सोशल मीडिया पर दोनों पार्टी के नेता हमलावर हैं। बीजेपी के वरिष्ठ नेता और केंद्रीय स्वास्थ्य मंत्री डॉ. हर्षवर्धन ने ट्वीट कर सवाल उठाया तो दिल्ली के मुख्यमंत्री अरविंद केजरीवाल ने भी उन्हें ट्विटर पर जवाब दिया। मुख्यमंत्री ने उनके सारे आरोपों को सिरे से खारिज कर दिया। मुख्यमंत्री ने ट्वीट किया, 'सर, आप तो डॉक्टर हैं। आप

जानते हैं कि ये रिपोर्ट झूठी है, राजनीति से प्रेरित है। आप जैसे व्यक्ति को ऐसी गंदी राजनीति का हिस्सा नहीं बनना चाहिए।' इससे पहले हर्षवर्धन ने ट्वीट किया था, 'फ्री पानी के नाम पर दिल्ली की जनता को जहर पिला रहे हैं केजरीवाल। देश के 20 शहरों के पानी पर हुए सर्वे में दिल्ली का पानी सबसे जहरीला पाया गया।' आरोप लगाया कि विकास के बड़े-बड़े दावे करने वाली आम आदमी पार्टी सरकार लोगों को साफ पानी तक मुहैया कराने में नाकाम रही है।

डॉ. हर्षवर्धन के ट्वीट का सीएम ने भी ट्वीट कर दिया जवाब

24 घंटे साफ पानी दूंगा, यमुना में लोग गोता लगाएंगे : सीएम

रविवार को एक कार्यक्रम में मुख्यमंत्री अरविंद केजरीवाल ने कहा कि दिल्ली में 24 घंटे और साफ पानी देंगे, यमुना भी साफ करेंगे। उन्होंने कहा कि दिल्ली ने विकास की रफ्तार पकड़ी है। इसे रोकना नहीं है। साफ पानी घर-घर पहुंचेगा। इसके लिए प्लान बन गया है। चार-पांच साल में घर-घर पानी जाएगा। लंदन, पेरिस में लोग नल से पानी पीते हैं। उसी तरह यहां करेंगे। यमुना में 4-5 साल में सफाई कर गोता लगवा देंगे। सीएम ने कहा पांच साल पहले भी उनके पास पैसा नहीं था, आज भी नहीं है। उनकी ताकत लोग हैं। विपक्ष जितना विरोध करता है, उसका कोई असर नहीं होता। केजरीवाल ने लोगों से कहा कि जब तक लोगों का प्यार और विश्वास है, उन्हें किसी चीज की परवाह नहीं। उनका सपना दिल्ली को दुनिया का नंबर एक शहर के रूप में देखना है।

पीने के लिए एकदम खरा दिल्ली का पानी : डीजेबी

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■ **नई दिल्ली :** बीआईएस की रिपोर्ट आने के बाद दिल्ली में पीने के पानी पर फिर बहस तेज हो गई है। डीजेबी ने साफ किया है कि दिल्ली में पीने का पानी एकदम खरा है। सफ्टाई से पहले पानी की गुणवत्ता ट्रीटमेंट प्लांट स्तर पर ही चेक होती है। हर चार घंटे में पानी की गुणवत्ता की लैब में जांच करवाई जाती है। इसके अलावा एमसीडी भी दिल्ली की विभिन्न जगहों से पानी के सैंपल लेकर उनकी चेकिंग करवाती है।



डीजेबी के वाइस चेयरमैन दिनेश मोहनिया के अनुसार खुद केंद्रीय जल संशोधन मंत्री गजेन्द्र सिंह शेखावत ने पिछले दिनों कहा था कि दिल्ली की 20 जगहों पर पानी के सैंपल की जांच करवाई गई और दिल्ली का पानी यूरोपियन स्टैंडर्ड से अच्छा पाया गया। उन्होंने कहा कि कि

हम खुद पासवान से उस रिपोर्ट की बाबत पूछ चुके हैं कि उन्होंने कहा कि सैंपल चेक करवाए, कहा कि सैंपल कलेक्ट किए। इसकी रिपोर्ट साझा करें, ताकि हमें पता चल सके कि किन स्टैंडर्ड पर डीजेबी का पानी खरा नहीं उतरा और उसमें सुधार किया जाए। लेकिन अब तक उनकी तरफ से कोई जवाब नहीं मिला है। गौरतलब है कि बीआईएस ने दिल्ली से 11 सैंपल कलेक्ट किए और सभी 11 सैंपल इस रिपोर्ट में फेल पाए गए। इस रिपोर्ट में दावा किया गया है कि पानी के 28 मानकों में से 19 मानक पानी में अधिक पाए गए। दिनेश मोहनिया ने सवाल खड़े किए कि सोनिया विहार में गंगा का पानी आता है। गंगा का पानी देश में सबसे बेहतर माना जाता है। वहीं, सोनिया वॉटर ट्रीटमेंट प्लांट देश का सबसे अत्याधुनिक ट्रीटमेंट प्लांट है। ऐसे में उसका सैंपल भी फेल आना अविश्वसनीय है।

400 जगहों से पानी के सैंपल लेकर सीएम को भेजेगी BJP

■ **विस, नई दिल्ली :** दिल्ली में पीने के पानी की गुणवत्ता देश में सबसे खराब बताने वाली भारतीय मानक ब्यूरो की रिपोर्ट पर बीजेपी ने दिल्ली सरकार की घेराबंदी तेज कर दी है।

रविवार को बीजेपी ने हैशटैग #DillikaPaaniZahrila लॉन्च करके लोगों से उनके इलाके के पानी की गुणवत्ता बताने की अपील की। पार्टी ने कहा है कि वह सोमवार को दिल्ली में 400 जगहों से पानी के सैंपल लेकर मुख्यमंत्री अरविंद केजरीवाल को भेजेगी। पार्टी सीएम से कहेगी कि वह उस पानी को पीकर बताएं कि वह पीने लायक है या नहीं।

दिल्ली बीजेपी अध्यक्ष मनोज तिवारी ने कहा, हम मुख्यमंत्री को वह पानी पिलाकर ही लौटेंगे। पार्टी दफ्तर में प्रेस कॉन्फ्रेंस कर मनोज तिवारी ने कहा कि अभी तक दिल्ली की हवा में ही जहर घुला था। अब पानी

भी जहरीला होने की बात सामने आई है। मुख्यमंत्री के पास दिल्ली जल बोर्ड है। उन्हें पानी के मुद्दे पर राजनीति से ऊपर उठकर काम करना चाहिए। जहरीला पानी पीने से लोगों को कई तरह की जल जनित बीमारियां हो रही हैं। उनके स्वास्थ्य पर भी



मनोज तिवारी ने की प्रेस कॉन्फ्रेंस

इसका गंभीर असर पड़ रहा है। पानी की गुणवत्ता अच्छी नहीं होने की वजह से ही आज देशभर में सबसे ज्यादा वॉटर प्यूरीफायर दिल्ली में खरीदे जा रहे हैं। गरीब लोग वॉटर प्यूरीफायर नहीं खरीद सकते तो वह जहरीला पानी पीने को मजबूर हैं। तिवारी ने कहा कि हम इस मुद्दे पर दिल्ली सरकार से जवाब मांगेंगे। सोमवार को बीजेपी कार्यकर्ता 400 जगहों पर प्रदर्शन करेंगे। हाथों में तख्तियां लेकर पानी का सैंपल लेने जाएंगे। दिल्ली में बीजेपी सरकार बनने के बाद साढ़े तीन साल में हर घर तक पीने का शुद्ध पानी पहुंचाएंगे।

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मौलिक अधिकार बने शुद्ध पेयजल

जल के बिना धरती पर मानव जीवन की कल्पना भी नहीं की जा सकती। मनुष्य चांद से लेकर मंगल ग्रह तक की सतह पर पानी तलाशने की कवायद में लगा है। पानी का महत्व सभी लोग जानते हैं। जल न हो तो हमारे जीवन का आधार ही समाप्त हो जाएगा। वैज्ञानिकों ने पानी को लेकर काफी शोध किये हैं और पानी की गुणवत्ता को तय करने के मापदंड बनाए हैं। इन मापदंडों के अनुरूप इंसान को शुद्ध जल मिलना ही चाहिए। ज्यादा कैल्शियम और मैग्नेशियम वाला पानी कठोर जल होता है। जिस जल में हानिकारक रसायन होंगे तो वह स्वास्थ्य पर बुरा असर डालते हैं। भारत में स्वच्छ पेयजल की समस्या बहुत विकट है।

राजधानी दिल्ली में हम लगभग एक महीने से जहरीली हवा में सांस ले रहे हैं। हम सब हाफ रहे हैं। आंखों में जलन और सीने में चुभन महसूस कर रहे हैं। आसमान में छाये धुएं के चलते स्कूल बंद करने पड़ रहे हैं। प्रदूषण खतरनाक स्तर पर पहुंच चुका है। तेज हवाओं ने जरूर राहत दी है। भारतीय मानक ब्यूरो ने दिल्ली सहित 20 राज्यों की राजधानियों के पानी की जांच कराई तो पता चला कि दिल्ली की हवा ही नहीं बल्कि पानी भी काफी खराब है। दिल्ली में 11 जगहों पर पाइप से आने वाले पानी के नमूने लिए गए और सभी नमूने परीक्षण में फेल पाए गए। पेयजल शुद्धता के मामले में मुम्बई अव्वल स्थान पर आया जबकि दिल्ली सबसे निचले पायदान पर रही। इसके साथ ही स्पष्ट हो गया कि दिल्ली जल बोर्ड द्वारा सप्लाई किया जाने वाला पानी पीने के योग्य नहीं। इसी तरह लखनऊ, पटना, रायपुर, कोलकाता, चेन्नई और जयपुर समेत 21 शहरों के पानी को भी अशुद्ध पाया गया। एक तरफ प्रधानमंत्री नरेन्द्र मोदी ने 2024 तक देश के हर घर में नल लगाने और शुद्ध पेयजल उपलब्ध कराने का लक्ष्य रखा है। इसी के तहत देश के सभी राज्यों की राजधानी सहित सौ स्मार्ट सिटी योजना के तहत आने वाले शहरों में पीने के पानी की शुद्धता की जांच की जा रही है।

भारत में करोड़ों की आबादी को आज भी शुद्ध पेयजल नसीब नहीं। पूरी दुनिया में स्वच्छ जल से वंचित रहने वाले लोगों की आबादी भारत में सर्वाधिक है। इस आपदा के और गम्भीर होने की आशंका है क्योंकि 73 फीसदी भूमिगत जल का उपयोग किया जाता है। इसका अर्थ यही है कि हमने भरण क्षमता से अधिक जल का उपयोग कर लिया है। स्वच्छ जल की सभी धाराएं सुख चुकी हैं। बड़ी नदियां प्रदूषण से जूझ रही हैं। इन सबके बावजूद हम जल संरक्षण नहीं कर पा रहे। देश के 60 फीसदी हिस्से में भूमिगत जल स्तर में गिरावट आई है। झारखंड, ओडिशा, मध्य प्रदेश, छत्तीसगढ़,

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देश की बड़ी आबादी को यह भी पता नहीं है कि जीवित रहने के लिए जिस जल का उपयोग वे कर रहे हैं, वही जल धीरे-धीरे उन्हें मौत के मुंह में ले जा रहा है। नदियों के किनारे बसे शहरों की स्थिति तो अत्यंत खराब है।

नदियों में फैक्ट्रियों और स्थानीय निकायों द्वारा फेंका गया रासायनिक कचरा, मलमूत्र और अन्य अपशिष्ट पानी को विषाक्त बना रहे हैं।

नदियों का पानी इस्तेमाल करने वाले गम्भीर रोगों का शिकार हो रहे हैं। नदियों का सीना चीर कर खनन हो रहा है। देश में शुद्ध पेयजल का कोई कानूनी अधिकार नहीं है।

कर्नाटक, बिहार और आदि राज्यों में रहने वाले आदिवासी नदियों, जोहड़ों, कुओं और तालाबों के पानी का इस्तेमाल करते हैं। कई क्षेत्रों में विकास की कोई भी किरण आजादी के इतने वर्षों बाद भी नहीं पहुंच पाई है। बुंदेलखंड के गांवों में पानी इतना जहरीला है कि जानवर भी उसे नहीं पीते।

देश की बड़ी आबादी को यह भी पता नहीं है कि जीवित रहने के लिए जिस जल का उपयोग वे कर रहे हैं, वही जल धीरे-धीरे उन्हें मौत के मुंह में ले जा रहा है। नदियों के किनारे बसे शहरों की स्थिति तो अत्यंत खराब है। नदियों में फैक्ट्रियों और स्थानीय निकायों द्वारा फेंका गया रासायनिक कचरा, मलमूत्र और अन्य अपशिष्ट पानी को विषाक्त बना रहे हैं। नदियों का पानी इस्तेमाल करने वाले गम्भीर रोगों का शिकार हो रहे हैं। नदियों का सीना चीर कर खनन हो रहा है। देश में शुद्ध पेयजल का कोई कानूनी अधिकार नहीं है। पेयजल की सप्लाई करने वाले निकाय पानी की गुणवत्ता की जांच में लापरवाही बरतते हैं। क्या उन निकायों के अधिकारी दूषित पेयजल की सप्लाई के लिए दोषी नहीं जिन पर शुद्ध पेयजल की आपूर्ति का दायित्व है। शुद्ध पेयजल को मौलिक कानूनी अधिकार बनाया जाए और राष्ट्रीय जल नीति बनाई जाए। प्रधानमंत्री नरेन्द्र मोदी ने जल शक्ति मंत्रालय बनाया हुआ है लेकिन योजनाएं सिर नहीं चढ़ रही। पानी की शुद्धता की हानि का मूल कारण मनुष्य है। प्रकृति और उसके संसाधनों का स्वार्थी उपयोग पर्यावरणीय कहरों का कारण बना है। पर्यावरणीय मुद्दों का एक शांति चक्र पैदा हो गया है। प्रकृति से जितनी छेड़छाड़ मनुष्य ने की है, उतनी किसी ने नहीं की।

पानी को शुद्ध बनाने की प्रौद्योगिकी आज मौजूद है तो फिर लोगों को शुद्ध पानी भी नसीब क्यों नहीं हो रहा। इसके लिए पानी की आपूर्ति करने वाले निकाय के अधिकारियों और कर्मचारियों की जवाबदेही भी तय की जानी चाहिए। बढ़ते दोहन और बढ़ती आबादी के बोझ से व्यवस्थाएं चरमराने लगी हैं। अगर ऐसा ही चलता रहा तो फिर स्वस्थ कैसे होगा इंडिया। अब समय आ गया है कि केन्द्र सरकार को भोजन के अधिकार की तरह ही पीने का साफ पानी भी देश के हर नागरिक को उपलब्ध कराना होगा।

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सरदार सरोवर डैम की प्रतिकृति की सफाई



राजकोट. राजकोट महानगर पालिका (मनपा) की ओर से रेसकोर्स में बहुमाली भवन चौक स्थित सरदार सरोवर डैम की प्रतिकृति एक विशेष आकर्षण का केन्द्र बनी हुई हैं, लेकिन बारिश के दौरान उसके रंगरोगन पर असर हुआ है, ऐसे में अब उसकी साफ-सफाई की जा रही है। राजकोट में बनाई गई सरदार सरोवर डैम की प्रतिकृति में ऐसा दृश्य दिखाई देता है, मानों डैम लबालब हो गया हो। यह दृश्य बहुमाली भवन चौक एवं रेसकोर्स परिसर की खूबसूरती को और बढ़ाता है, लेकिन बारिश के दौरान उसका रंगरोगन कम हुआ है। मनपा आयुक्त उदित अग्रवाल ने शहर के विभिन्न स्थलों के दौरा किया तो वह बहुमाली भवन चौक भी पहुंचे और डैम की प्रतिकृति की सफाई व रंगरोगन करने के निर्देश दिए थे, जिसके बाद सफाई कार्य शुरू किया है और आगामी दो दिनों में सरदार सरोवर डैम की प्रतिकृति पुनः सुंदर बन जाएगी। लोगों के लिए विशेषकर बालक व युवकों के लिए यह डैम प्रतिकृति सेल्फी प्वाइंट के रूप में प्रसिद्ध है। डैम की प्रतिकृति के पास ही सरदार वल्लभभाई पटेल की प्रतिमा स्थित है।

शेखावत इजराइल यात्रा पर, जल पर होगा मंथन

8वीं वाटेक समिट आज से

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जोधपुर. वर्ष 2024 तक हर परिवार को नल-जल योजना साकार करने के लिए भारत इजराइल से भी सहयोग लेगा। इसके लिए केंद्रीय जलशक्ति मंत्री गजेन्द्रसिंह शेखावत इजराइल में सोमवार से शुरू हो रही 8वीं वाटेक इजराइल समिट 2019 में शिरकत करेंगे। वे इस समिट के की नोट स्पीकर्स में शामिल हैं।

इजराइल ने वाटर री-साइकिल

को रोजमर्रा के जीवन का अभिन्न हिस्सा बना रखा है। वहां घरों से निकलने वाले 80 फीसदी से अधिक जल री-साइकिल किया जाता है। इजराइल के जल प्राधिकरण के मुताबिक यह अनुपात किसी अन्य देश की तुलना में चार गुना अधिक है।

शेखावत इजराइल के ऊर्जा मंत्री युवाल स्तेनीत्ज और जल प्रबंधन के क्षेत्र में प्रमुख विशेषज्ञों, इस क्षेत्र में सक्रिय कुछ इजराइली कंपनियों और अन्य संबद्ध हितधारकों से भी बातचीत करेंगे। शेखावत जल पर भारत-इजराइल रणनीतिक साझेदारी बैठक की सह अध्यक्षता करेंगे।

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पेयजल पर सार

शुद्ध

जल प्राप्त करना हमारे जीवन का मूल अधिकार है, ठीक वैसे ही जैसे शुद्ध हवा में सांस लेना हमारे जीवन के लिए बेहद जरूरी है। लेकिन क्या यह भी राजनैतिक उठापटक और

चुनावी हानि-लाभ का विषय बनाया जा सकता है? भले यकीन करना मुश्किल हो लेकिन खबर तो यही है। केंद्रीय उपभोक्ता मामले और खाद्य और सार्वजनिक वितरण मंत्री रामविलास पासवान ने दिल्ली सहित कई राज्यों की राजधानियों में पेयजल में शुद्धता की स्थिति के बारे में भारतीय मानक ब्यूरो की रिपोर्ट जारी की तो दिल्ली सबसे निचले पायदान पर पाई गई। उसकी जलापूर्ति



में पानी की गुणवत्ता के सभी 11 नमूने गंध सहित 19 मानकों पर सही नहीं पाए गए। जबकि मुम्बई के दस नमूने सभी मानकों पर सही पाए गए। इसी तरह बाकी राजधानियों से भी दिल्ली में लोगों को शुद्ध पेयजल कमतर अवस्था में मिल रहा है। इन नतीजों के जाहिर होने के फौरन बाद दिल्ली जल बोर्ड के उपाध्यक्ष दिनेश मोहनिया ने फौरन इसका खंडन किया और कहा कि हर दोन्तीन घंटे पर

अलग-अलग जगहों से नमूने लिये जाते और उनकी गुणवत्ता की जांच की जाती है। उनके हिसाब से केंद्रीय जल शक्ति मंत्री गजेंद्र सिंह शेखावत भी हाल ही में दिल्ली में नल से प्राप्त होने वाले पानी को कई यूरोपीय शहरों से बेहतर पाया। फिर इसके फौरन बाद आप के प्रवक्ता सौरभ भारद्वाज ने केंद्र और उसके मंत्रियों को चुनौती दी कि किसी भी भाजपा शासित राज्य से दिल्ली के पानी की निष्पक्ष जांच कराकर देख लें। उनका यह भी कहना है कि केंद्र हरियाणा, पंजाब और उत्तर प्रदेश में पराली जलाने के कारण हो रहे वायु प्रदूषण को रोकने में नाकाम रहा तो दिल्ली के पानी की गुणवत्ता पर ओछी राजनीति हो रही है। यकीनन यह हैरानी का विषय है कि गुणवत्ता की जांच भी राजनीति के चंगुल में फंस गई है। अगर विवाद सही है तो निश्चित रूप से बेहद गंभीर है। इससे तो यह भी जाहिर होता है कि जांच के नतीजे अपने-अपने ढंग से निकाले जा सकते हैं, क्योंकि जांच चाहे जिस प्रयोगाला में की जाए, नतीजे तो एक जैसे होने चाहिए। खैर, हवा और पानी का मामला ऐसा है कि इस पर थोड़ी भी लापरवाही बर्दाश्त नहीं की जानी चाहिए क्योंकि यह लोगों के सेहत से जुड़ा मामला है। इस बारे में तो दलगत राजनीति से उठकर सोचने की जरूरत है।

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नागरिक संशोधन व गंगा नदी बिल लाएगी सरकार

■ नई दिल्ली (एसएनबी) ।

सरकार संसद के शीतकालीन सत्र में नागरिकता संशोधन विधेयक और राष्ट्रीय नदी गंगा पुनरुत्थान, संरक्षण एवं प्रबंधन विधेयक पेश करेगी। कुल 27 विधेयक पेश करने के लिए रखे गए हैं। इनमें आपदा प्रबंधन (संशोधन विधेयक), औद्योगिक संबंध संहिता, केंद्रीय संस्कृत विश्वविद्यालय विधेयक, गर्भ का चिकित्सकीय समापन (संशोधन) विधेयक भी शामिल हैं।

सरकार की दो अहम अध्यादेशों पर भी स्वीकृति पाने की योजना है। आयकर अधिनियम, 1961 और वित्त अधिनियम, 2019 में संशोधन को प्रभावी बनाने के लिए सितंबर में एक अध्यादेश जारी किया गया था,

जिसका उद्देश्य नई एवं घरेलू विनिर्माण कंपनियों के लिए कॉरपोरेट कर की दर में कमी लाकर आर्थिक सुस्ती को रोकना और विकास को बढ़ावा देना है।

संसद में कुल 27 विधेयक पेश किए जाएंगे

सरकार की दो अहम अध्यादेशों पर भी स्वीकृति पाने की योजना है

दूसरा अध्यादेश भी सितंबर में जारी किया गया था, जिसमें ई-सिगरेट और इसी तरह के उत्पाद की बिक्री, निर्माण एवं भंडारण पर प्रतिबंध लगाया गया है। विवाद वाला

नागरिकता संशोधन विधेयक 2016 में भी पेश किया गया था। इसे अगस्त में संसदीय समिति को भेज दिया गया था। समिति ने इसी साल जनवरी में अपनी रिपोर्ट दे दी थी। नागरिक संशोधन विधेयक में प्रावधान है कि इच्छुक गैर मुस्लिम बांग्लादेशी, पाकिस्तानी और अफगानिस्तानी भारतीय नागरिकता पा सकते हैं। सरकार विवादित नागरिकता (संशोधन) विधेयक को पारित कराना चाहेगी जो भाजपा के वैचारिक एजेंडे का अहम हिस्सा है। विपक्ष ने इस विधेयक की आलोचना करते हुए इसे धार्मिक आधार पर भेदभावपूर्ण बताया है। असम और पूर्वोत्तर में इसका विरोध हो रहा है। कांग्रेस के लोकसभा में नेता अधीर रंजन चौधरी ने कहा भी है कि संसद में इसका विरोध किया जाएगा।

Capital's tap water is most unsafe, Mumbai's best: BIS

Sample From
Mantri's Home
Too Fails Test

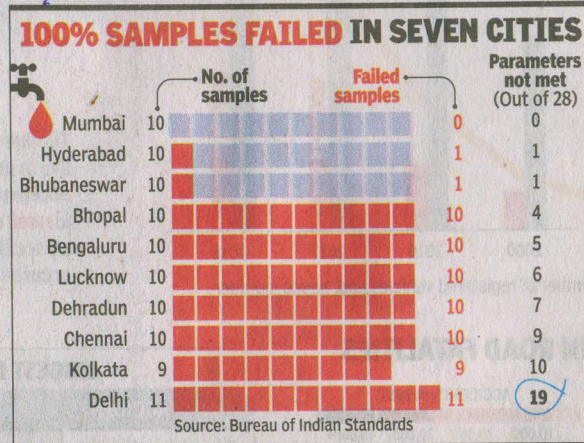
Dipak.Dash@timesgroup.com

New Delhi: Tap water in Mumbai is the safest for drinking while Delhi's water is the worst among 21 big cities, according to a report based on sample tests done by Bureau of Indian Standards (BIS). Of greater concern is the fact that

FULL COVERAGE: P 5

all the samples of tap water taken from 14 out of 21 cities failed to meet one or more safety parameters during tests carried out in laboratories.

With Chandigarh, Gandhinagar, Patna, Bengaluru, Jammu, Lucknow, Chennai and Dehradun recording below-par performance, the



first-of-its-kind report has exposed the failure of agencies across cities to provide safe drinking water — a basic right for living. The samples were tested on 28 parameters as prescribed for drinking water standards of BIS notified in 2012.

Releasing the report, con-

sumer affairs minister Ram Vilas Paswan said, "We have been working to provide people's with their fundamental right to safe drinking water. This issue should not be politicised." Samples picked from the minister's house and office in Delhi were among those that failed to me-

Our water meets WHO norms: DJB

Rebubishing the report, Delhi Jal Board vice-chairman Dinesh Mohaniya said the city's water quality is regularly being monitored. "The water that we are supplying meets all WHO standards for drinking water. The quality is so good that even Union Jal Shakti minister G S Shekhawat had recently said samples tested in Delhi were found to be on a par or better than what's available in European cities," he said. **P 5**

et norms on 19 parameters.

According to the test findings, only one of the samples in Hyderabad and Bhubaneswar failed, and the two cities were ranked second in the list followed by Ranchi and Raipur.

► Next test in NE, P 8

Next phase to test water quality in NE & smart cities

► Continued from P 1

In the case of Delhi, all the 11 samples picked from different parts of the national capital, including Paswan's home, his office in Krishi Bhawan and several residential areas, failed to meet the norms on a maximum of 19 parameters.

The report showed that in most cases samples across cities failed on parameters of total dissolve solids (TDS), turbidity, total hardness, total alkalinity, minerals and metals, and presence of coliform and E Coli, which can cause severe illness.

Citing the alarming test findings, Paswan said there is a need to make the drinking water standard notified by BIS mandatory for all water supplying agencies. He added this becomes all the more important considering it's not easy to snap water supply and hence efforts have to be made to ensure that the tap water is safe.

Sensing that the report may kick off a fresh political battle, the minister said the objective of the study is not to demotivate anyone rather it is to encourage state governments to ensure quality potable tap water is provided



All the 11 samples picked from different parts of Delhi, including Paswan's home, his office and several residential areas, failed to meet the norms

to all. He added that samples across states have failed and in the subsequent phases, BIS will come out with test reports of samples lifted from capital cities of north-eastern states and from smart cities. Later, samples will be picked up from the district headquarters and their test results will be made public. The test results of these two batches of samples will be announced in mid-January and by August 15, respectively, consumer affairs ministry officials said.

BIS officials said they will soon hold meetings with public health departments, municipal corporations and see how test facilities can be strengthened there.

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'NON-BAILABLE OFFENCE'

Ganga pollution: Govt plans 5-yr jail, Rs 50 cr fine

National Ganga Bill to be introduced
in Winter Session of Parliament **TE-17**

HARIKISHAN SHARMA
NEW DELHI, NOVEMBER 16

POLLUTING OR "obstructing the flow" of Ganga may attract a penalty of up to five years imprisonment and a fine as high as Rs 50 crore under the proposed "The National River Ganga (Rejuvenation, Protection and Management) Bill, 2019", which the government plans to introduce and pass during the Winter Session of Parliament beginning Monday.

"Offences under this Act to be cognizable and non-bailable for causing pollution in river Ganga," states the draft Bill circulated by the Ministry of Jal Shakti for Cabinet approval.

According to sources, the draft Bill, which comprises 13 chapters and three schedules, lists graded penalties, depending on the severity of the offence, under a dozen sections. These include activities like illegal construction of ports or jetties; storage or diversion of water by any means causing obstruction to the flow of water; mining, stone quarrying or extracting



Maximum fine for obstructing the flow of the river. *Express Archive*

ground water; and spoiling or defacing the ghats of the Ganga and its tributaries.

A maximum fine of Rs 50 crore has been proposed for causing obstruction to the flow of the Ganga without prior permission, said sources.

Similarly, the maximum imprisonment of up to five years has been proposed for construction of permanent residential or commercial structures in the active floodplains of Ganga and its tributaries, said sources.

According to sources, a provision has been made for regulating activities like mining, stone quarrying or extracting ground water, which may attract

CONTINUED ON PAGE 2

Ganga pollution: Govt plans 5-yr jail, Rs 50 cr fine

imprisonment of up to two years and/or fine of up to Rs 10 lakh.

Spoiling or defacing the ghats of the Ganga or its tributaries will be punished with imprisonment of up to one year and/or fine up to Rs 10,000 or cost incurred for restoration (whichever is higher).

According to sources, the proposed Act also has a provision for setting up a Ganga Protection Corps, which will have the power to arrest any person found violating the provisions of the Act and produce the person before the local police station.

"The central government will constitute an armed force called the Ganga Protection Corps. The Ganga Protection Corps is to be provided by the Ministry of Home Affairs," said sources.

The aim of the Bill is to prevent and control pollution of the Ganga and ensure continuous flow of water so as to rejuvenate the river to its natural and pristine condition.

The proposed Bill also provides for constitution of a National Ganga Council, under the chairmanship of the Prime Minister, which will include the chief ministers of Uttarakhand, Uttar

Pradesh, Bihar, Jharkhand and West Bengal along with central ministers.

Water of India ~ I

Effective water management is vital to India's economic growth, wellbeing of its people and sustainability of ecosystems. Data-based decision-making and competitive and cooperative federalism can lead to significant improvements in water management in the country

As India needs a comprehensive water policy and strategy for managing the vital life sustaining water resources, the Ministry of Jal Shakti, Government of India, recently announced the National Water Mission. The National Action Plan on Climate Change (NAPCC) is already in place to ensure integrated water resource management by conserving water and minimizing wastage and ensuring equitable distribution of water across and within the states. The National Water Policy facilitates development of a framework to optimize water-use efficiency through regulations on entitlements and pricing.

Water Stress Index ranks India as the 46th highest risk country in the world; 11 of India's 20 largest cities in the country are facing extreme risk, notably Delhi, Chennai, Agra, Jaipur, Ahmedabad, Indore, Kanpur, Nashik, Lucknow, Hyderabad, Bengaluru. Seven other cities are also at high risk. Water Stress Index measures water use by households, industry and agriculture compared with available supplies from rivers, streams and lakes. 'Day zero' in Chennai shows decades of poor water resource management.

The UN estimates show that Greater Delhi's population will grow by 52 per cent from 28 million to above 43 million by 2035. Chennai is expected to grow by 47 per cent to reach 15 million. The average population growth rate among the 11 extreme water stressed large cities is projected to grow by 49 per cent to reach about 127 million by 2035. Bengaluru and Surat are at high risk with greatest increases in water demand. Water supply in Mumbai and Kolkata is critical. Climate change increases pressure on diminishing water resources. India is rated 'high risk' based on Climate Change Vulnerability Index.

Appropriate technological solutions can reduce, reuse and recycle water resources as well as utilize ocean water by building desalination plants.

The National Water Policy is reoriented in consultation with states to optimize rain harvesting, water storage and efficient water resource governance. Water regulations combined with appropriate entitlements and water pricing optimize efficiency of existing irrigation systems and recharging of underground water sources. Relying on sprin-

klers, drip irrigation and ridge and furrow irrigation can reduce water loss. The central and state governments, experts from industry, academia, media, and civil society are engaged to support the goals of the National Mission. Appropriate technological solutions will be used to manage surface water and regulation of ground water resources, upgrading storage structures for fresh and drainage system for wastewater, conservation of wetland for meeting the goals of the National Water Mission.

Niti Aayog came out aptly with the revised water index to guide the policy makers and planners for implementation of integrated water management. What the nation needs is firm action to translate the mission goals into reality.

The bureaucratic inertia must be overcome to keep in place a proactive, futuristic water strategy. The water mission must be owned by the people of the country to grow as a nationwide mass movement. Prime Minister Modi provided adequate momentum to the mission when he addressed the nation at Red Fort on this year's Independence Day. Mahatma Gandhi's vision to build Swachh Bharat with self-reliant villages where pollution free air and water are plenty for sustainable agriculture and livelihood can be realized if the mission is effectively and efficiently implemented for realizing the envisioned outcome and impact.

As scientific management of water is vital to India's growth and ecosystem, the Jal Shakti Abhiyan aims at water security in 1592 water stressed blocks in 256 districts. Along with water conservation and rainwater harvesting, renovation of traditional and other water bodies/tanks, reuse, borewell recharge structures, watershed development and intensive afforestation must be intensified. Efficient water use for irrigation and better choice of crops must be promoted. As data-based decision-making is essential for water management, the National Institution for Transforming India (NITI) Aayog's Composite Water Management Index (CWMI) must be used for effective water management in all states and UTs. CWMI

establishes a clear baseline and benchmark for state-level performance on key water indicators, showing how the states have performed. A composite, national-level data management platform for all water resources in India must now be developed in collaboration with the stakeholders to be made available on a portal in the public domain to monitor groundwater restoration, irrigation management, on-farm water use, rural and urban drinking water supply.

Effective water management is vital to India's economic growth, wellbeing of its people and sustainability of ecosystems. Data-based decision-making and competitive and cooperative federalism can lead to significant improvements in water management in the country.

Decisions pertaining to irrigation policies, watershed management, water supply processes, water pricing must be taken on the basis of water resource data and the best practices.

CWMI 2019 helps benchmarking. Eighty per cent of the states have improved their water management.

However, 16 out of 27 states score less than 50 points on the Index out of 100 collectively account for 48 per cent of the population, 40 per cent of agricultural produce, and 35 per cent of economic output of India. The top performing states are Gujarat, Andhra Pradesh, Madhya Pradesh, and Himachal Pradesh and the low-performing states include Haryana, Goa, and Telangana, Jharkhand, Uttar Pradesh, Odisha, Bihar, Nagaland, and Meghalaya. Ineffective water management leads to reduced economic activity, employment and livelihood opportunities. Besides, it leads to food insecurity. Improved knowledge-sharing amongst states and learning from each other can enhance water management practices across the states. Proper water policy in place and effective water administration with improved legal, administrative, and operational framework can lead to better outcomes.

A number of states follow participatory irrigation management programmes to promote decentralized water manage-

ment. Rajasthan's Mukhya Mantri Jal Swavlambhan Abhiyan, launched in 2016 aims to make villages self-sufficient in water through a participatory water harvesting and conservation initiatives. Advanced technologies such as drones can identify waterbodies for restoration. Gram Sabha in villages are budgeting of water resources for different uses. The Andhra Pradesh government launched the Neeru-Chettu programme to transform the state as a drought-proof state, emphasizing on improving irrigation and water supply in drought-prone areas. Repair, renovation, and maintenance of irrigation assets are essential.

The Maharashtra government launched the Jalyukt Shivar Abhiyaan in 2015-16 to make 5000 villages water scarcity free every year by deepening and widening of streams, construction of cement and earthen stop dams, work on *nullahs* and digging of farm ponds. The programme involves geotagging of waterbodies and use of a mobile application. Telangana's flagship Mission Kakatiya programme, launched in 2014, aims to restore over 46,000 tanks across the state and develop minor irrigation structures, promoting community-based irrigation management, and restoration of tanks. Gujarat focuses on deepening of waterbodies before monsoons and increasing water storage for rain-water collection.

Madhya Pradesh launched schemes to provide financial aid to farm owners for the construction of irrigation structures on private land. Punjab launched a scheme to incentivize farmers for efficient water use in irrigation through financial rewards. "Sujalam Sufalam Jal Abhiyan" helps to conserve water in Gujarat. The MGNREGA programme develops irrigation facilities on private land of small and marginal farmers, through construction of wells, farm ponds, check dams. Punjab provided incentives to farmers for saving electricity. Bundelkhand was one of the most water scarce regions of India. Rigorous efforts were initiated in water conservation by construction of farm ponds, restoration/rejuvenation of waterbodies, raising of farm bunds, and intensive plantation of trees. Jakhani village is an example for water-budgeting and storage of rainwater.

(To be continued)



KP SHASHIDHARAN

The writer is former Director-General, CAG of India. Views are personal

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राष्ट्रीय राजधानी समेत 17 राज्यों की राजधानियों का पानी पीने लायक नहीं

आफत : दिल्ली में हवा ही नहीं पानी भी सबसे खराब

नई दिल्ली | विशेष संवाददाता

एक पखवाड़े से जहरीली हवा का कहर झेल रहे दिल्ली के लोगों के लिए पानी के मुद्दे पर भी बुरी खबर है। राष्ट्रीय राजधानी का पानी भी पीने लायक नहीं रहा। देश के 21 शहरों में लिए गए पेयजल नमूने में दिल्ली के पानी की गुणवत्ता सबसे खराब है।

केंद्रीय उपभोक्ता मंत्री रामविलास पासवान ने शनिवार को पेयजल पर अध्ययन रिपोर्ट को जारी किया। इस रिपोर्ट के मुताबिक 17 राज्यों की राजधानी का पानी पीने लायक नहीं है, सिर्फ चार राजधानी शहरों का ही पानी ठीक पाया गया है।

पासवान ने कहा कि हम साफ पानी की मुहिम को जारी रखना चाहते हैं। अगले चरण में सभी प्रदेश की राजधानियों में भी पानी की जांच की जाएगी। इसके बाद स्मार्ट सिटी और फिर सभी शहरों के पानी की गुणवत्ता की जांच होगी, ताकि 2024 तक सबको स्वच्छ पेयजल मिल सके।

दिल्ली के सभी नमूने फेल: भारतीय मानक ब्यूरो की रिपोर्ट के अनुसार दिल्ली में पिछले महीने 11 अलग



हमारा मकसद किसी राज्य सरकार को दोष देना या राजनीति करना नहीं है। हम चाहते हैं कि लोगों को पीने के लिए स्वच्छ पानी उपलब्ध हो। पानी की गुणवत्ता को सुधारने के लिए राज्य सरकारें केंद्र से कोई मदद चाहती हैं तो हम इसके लिए तैयार हैं।

- राम विलास पासवान, खाद्य एवं उपभोक्ता मंत्री

वायु गुणवत्ता

दिल्ली के हालात गंभीर

दिल्ली में शनिवार को प्रदूषण के स्तर में थोड़ा सुधार हुआ, हालांकि हवा की गुणवत्ता अब भी गंभीर श्रेणी में है। दिल्ली का वायु गुणवत्ता सूचकांक (एक्यूआई) शनिवार को 412 रहा।

जल गुणवत्ता

इन मानकों पर जांच हुई

बीआईएस ने देश के 21 राजधानी शहरों के पेयजल में टॉक्सिक पदार्थ, रासायनिक पदार्थ, जीवाणु तत्व और गैरनैट्रिक की मौजूदगी जैसे 19 मानकों पर जांच की।

पराली जलाने पर योगी सख्त

अलग जगहों से नमूने लिए गए थे। जांच में ये नमूने सभी मानकों पर फेल हो गए। वहीं देहरादून, पटना और लखनऊ के दस-दस नमूने भी फेल हो गए। रांची में दस नमूने लिए गए थे जिनमें से नौ पास

बढ़ते वायु प्रदूषण के कारण यूपी की योगी आदित्यनाथ सरकार पराली जलाने पर कड़ाई करेगी। मुख्यमंत्री के निर्देश पर प्रमुख सचिव एसपी गोयल ने सभी डीएम से पराली जलाने वालों पर सख्ती बरतने को कहा है।

हुए और एक फेल हो गया। वहीं भुवनेश्वर और हैदराबाद से लिए दस में से सिर्फ एक-एक नमूना फेल हुआ है।

मुंबई का पानी सबसे अच्छा: जांच में देश में सबसे अच्छा पेय जल मुंबई

शहर	कितने नमूने	फेल नमूने
मुंबई	10	0
रांची	10	1
हैदराबाद	10	1
भुवनेश्वर	10	1
रायपुर	10	5
अमरावती	10	6
शिमला	10	9
कोलकाता	9	9
देहरादून	10	10
लखनऊ	10	10
पटना	10	10
चंडीगढ़	10	10
तिरुवनंतपुरम	10	10
भोपाल	10	10
गुवाहाटी	10	10
बंगलुरु	10	10
गांधीनगर	10	10
जम्मू	10	10
जयपुर	10	10
चेन्नई	10	10
दिल्ली	11	11

का है, जहां सभी नमूने मानकों पर खरे उतरे हैं। वहां के लोगों को पानी साफ करने के लिए अपने घर में आरओ लगाने की जरूरत भी नहीं है।

➤ 19 मानकों पर फेल पेज 02

Hindustan Times (New Delhi)
The Statesman (New Delhi)
The Times of India (New Delhi)
The Indian Express (New Delhi)
The Hindu (Delhi)
Pioneer (Delhi)
राष्ट्रीय सहारा (दिल्ली)

☐ Deccan Herald (Bengaluru)
☐ Deccan Chronicle
☐ The Economic Times (New Delhi)
☐ Business Standard (New Delhi)
☐ The Tribune (Gurugram)
☐ Financial Express
☐ दैनिक भास्कर (नई दिल्ली)

☐ हिंदुस्तान (नई दिल्ली)
☐ नव भारत टाइम्स (नई दिल्ली)
☐ पंजाब केसरी (दिल्ली)
☐ राजस्थान पत्रिका (नई दिल्ली)
☐ दैनिक जागरण (नई दिल्ली)
☐ जनसत्ता (दिल्ली)
☐ अमर उजाला (नई दिल्ली)

and documented at WSE Dte, CWC.

P-11

भारतीय मानक ब्यूरो की रिपोर्ट में खुलासा, अलग-अलग जिलों से लिए सभी 11 नमूने विफल

संकट : दिल्ली का पानी सभी 19 मानकों पर फेल

H-17/11

1200

एमजीडी प्रतिदिन (मांग)

924

एमजीडी प्रतिदिन (आपूर्ति)

नई दिल्ली | वरिष्ठ संवाददाता

देश की राजधानी में खराब पानी की आपूर्ति हो रही है। भारतीय मानक ब्यूरो (बीएसआई) की पेयजल परीक्षण रिपोर्ट में दिल्ली का पानी सभी 19 मापदंडों पर विफल साबित हुआ। अलग-अलग प्रदेशों की राजधानी के साथ हुए परीक्षण में यह रैंकिंग में आखिरी स्थान 21 वें नंबर पर आया है।

बीएसआई की ओर से यहां अलग-अलग जिलों से लिए गए पानी के 11 नमूने जांच में फेल साबित हुए। जो स्वास्थ्य के लिए हानिकारक है। रिपोर्ट के मुताबिक दिल्ली में लिए गए पानी के सभी नमूने बदबूदार थे। उसमें गंदगी थी। जांच में उसमें ठोस पदार्थ के अंश मिले। पानी में संभावित हाइड्रोजन का स्तर तय मानक यानि सात से अधिक पाया गया। इससे उसमें कुछ खट्टापन है। पानी का रंग भी ठीक नहीं था। कई नमूनों में कालापन और खारापन मिला। इसके अलावा पानी में एल्युमीनियम, मैगनीशियम, नाइट्रेट, अमोनिया आदि शरीर को हानि पहुंचाने वाले कई अन्य पदार्थ व जीवाणु मिले हैं। दिल्ली का पानी 19 मानकों पर खरा नहीं उतरा है। बीएसआई की रिपोर्ट के मुताबिक दिल्ली का हाल सबसे बुरा है। वहीं, मुंबई का पानी पहले स्थान पर है। उसके सभी 10 नमूने सभी मापदंडों पर पास हुए हैं।



- वजीराबाद पुर्नशोधन संयंत्र : 10.5 एमजीडी
- हैदरपुर पुर्नशोधन संयंत्र : 16 एमजीडी

- भागीरथी पुर्नशोधन संयंत्र : 5 एमजीडी
- रैनी वेल व ट्यूबवेल से मिलने वाला जल : 86 एमजीडी

तीन चरण में जांच

भारतीय मानक ब्यूरो (बीएसआई) की ओर से पीने के पानी की जांच तीन चरणों में की जा रही है। पहले चरण में सभी राजधानियों के पानी की जांच की गई है। दूसरे चरण में स्मार्ट सिटी के पानी की जांच और तीसरे चरण में सभी जिलों में पीने के पानी की जांच की जाएगी।

इन मानकों पर खरा नहीं उतरा

- | | |
|--------------------------------------|----------------------|
| 1. गंध | 11. कैल्शियम |
| 2. पूरी तरह घुले ठोस पदार्थ (टीडीएस) | 12. नाइट्रेट |
| 3. संभावित हाइड्रोजन | 13. अमोनिया |
| 4. गंदगी | 14. क्लोराइड |
| 5. रंग | 15. फेनोलिक कंपाउंड |
| 6. शुष्कता | 16. एनीऑनिक डिटरजेंट |
| 7. खारापन | 17. क्लोराइड |
| 8. एल्युमीनियम | 18. सल्फाइड |
| 9. मैगनीशियम | 19. कॉलिफॉर्म |
| 10. आयरन | 20. इशरीकिया कोली |

लीवर को नुकसान

एम्स में मेडिसन के प्रोफेसर डॉ. नवल विक्रम के मुताबिक पीने के पानी में एल्युमीनियम, मैगनीशियम, नाइट्रेट, अमोनिया, क्लोराइड, सल्फाइड आदि हानिकारक रसायनों की मात्रा अधिक होने के चलते हमारे शरीर पर इसका बुरा प्रभाव पड़ता है। ये सभी पदार्थ धीरे-धीरे हमारे शरीर के अंगों पर असर डालते हैं। तुरंत तो इसका कुछ असर नहीं दिखता। लेकिन लंबे समय तक दूषित पानी पीने से जीवाणु शरीर के किसी एक अंग को पूरी तरह संक्रमित कर देते हैं। इससे किडनी, लीवर, आंतों में समस्या आ सकती है।

जहरीला पानी पीने को मजबूर : तिवारी

नई दिल्ली | वरिष्ठ संवाददाता

दिल्ली भाजपा अध्यक्ष मनोज तिवारी ने शनिवार को दिल्ली सरकार को आड़े हाथों लेते हुए कहा है कि दिल्ली के लोग जहरीला पानी पीने को मजबूर हैं, लेकिन दिल्ली जल बोर्ड साफ पानी तक मुहैया नहीं करा पा रहा है।

दरअसल, भारतीय मानक ब्यूरो की ओर से प्रदेशों की राजधानी से पानी के नमूने लिए गए थे जिनमें दिल्ली आखिरी



स्थान पर है। तिवारी ने कहा कि मुख्यमंत्री अरविंद केजरीवाल के पास सिर्फ दिल्ली जल बोर्ड है, लेकिन दिल्ली में या तो पानी आता नहीं, या

दूषित पानी आता है। इतना ही नहीं, जहां पर जल बोर्ड साफ पानी भेजने का दावा करता है वहां का पानी भी पीने लायक ही नहीं है।

तिवारी ने कहा कि दिल्ली में बुराड़ी, अशोक नगर और नंद नगरी सहित 11 स्थानों से बीआईएस द्वारा पानी के नमूने लिए गए थे जो पूरी तरह फेल हो गए। ऐसा पानी स्वास्थ्य के लिए हानिकारक है और इसे लगातार पीने से कई बीमारियां होने का खतरा बन जाता है।

पहले भी सवाल उठ चुके

दिल्ली में पीने के पानी को लेकर पहले भी सवाल उठ चुके हैं। अक्टूबर माह में ही पानी को लेकर केंद्र और दिल्ली सरकार आमने-सामने आई थी। उस समय जहां एक तरफ केंद्रीय मंत्री राम विलास पासवान का कहना था कि दिल्ली में पानी की गुणवत्ता बीआईएस के अनुरूप नहीं है, वहीं दिल्ली जल बोर्ड का दावा था कि सितंबर में पानी के 12,483 नमूने लिए गए जिनमें से सिर्फ 217 नमूने ही फेल हुए। दिल्ली जल बोर्ड ने दावा किया था कि वह साफ पानी की आपूर्ति कर रहे हैं। रिपोर्ट ने इस दावे पर सवाल खड़े कर दिए हैं।

Hindustan Times (New Delhi)
The Statesman (New Delhi)
The Times of India (New Delhi)
The Indian Express (New Delhi)
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☐ Financial Express
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☐ हिंदुस्तान (नई दिल्ली)
☐ नव भारत टाइम्स (नई दिल्ली)
☐ पंजाब केसरी (दिल्ली)
☐ राजस्थान पत्रिका (नई दिल्ली)
☐ दैनिक जागरण (नई दिल्ली)
☐ जनसत्ता (दिल्ली)
☐ अमर उजाला (नई दिल्ली)

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and documented at WSE Dte, CWC.

'India seeks Israel's help to ensure tap-water to every Indian by 2024'

PRESS TRUST OF INDIA
TEL AVIV, 15 NOVEMBER

India is seeking Israel's help to ensure functional tap-water to every Indian household by 2024 with a senior minister visiting the country next week to fulfill the government's mission, India's envoy here has said.

During his Independence Day speech, Prime Minister Narendra Modi said that more than Rs 3.5 lakh crore will be spent in the coming years under the 'Jal Jeevan Mission' to bring piped water to households by 2024.

"During the historic visit of our Prime Minister (Modi) to Israel in July 2017, India and Israel agreed to establish a 'Strategic Partnership in Water and Agriculture' in view of the centrality of these areas to development. Under Prime Minister Modi's leadership, the Government of India is according top priority to conservation, development and management of water resources", India's newly appointed Ambassador to Israel, Sanjeev Singla, said.



"The visit by Jal Shakti Minister, Gajendra Singh Shekhawat is significant as both sides will explore possible areas for further collaboration and tangible outcomes. It is also in line with the Prime Minister's vision to ensure functional tap-water to every household in India by 2024 under the Jal Jeevan Mission," Singla, who served as Private Secretary to Prime Minister Modi, emphasised.

Israel has made water recycling an integral part of daily life.

More than 80 per cent of household waste water is recycled, amounting to 400 million cubic meters a year, the Environment Ministry

says. That ratio is four times higher than in any other country, according to Israel's water authority.

Shekhawat, who will be on a three day visit to Israel between November 17 and 19, will interact with Yuval Steinitz, Israel's Minister of Energy, who is also responsible for natural resources like water, with leading experts in the field of water management, some identified Israeli companies active in the field and other relevant stakeholders.

Shekhawat will co-chair the India-Israel Strategic Partnership on Water being organised by the Embassy of India in Tel Aviv, along with the Israeli Ministry of Energy and Ministry of Foreign Affairs, on November 18, 2019.

The Jal Shakti minister will also be the keynote speaker for the prestigious biennial WATEC event on November 19. The Union Cabinet Minister is being accompanied by a large delegation from the states of Andhra Pradesh, Maharashtra, Karnataka, Tamil Nadu, Punjab and Delhi.

ProBure - 16.11.2019

Reviving 10 rivers in UP, Yogi tells NITI Aayog

Lucknow: Uttar Pradesh Chief Minister Yogi Adityanath told NITI Aayog that his government was reviving at least 10 rivers in the state. The CM held a meeting with NITI Aayog Vice Chairman Rajiv Kumar on Friday and explained to him the development work the state government was carrying out to tackle the water crisis, a government spokesman said. The revival work is being carried out through various schemes involving people, like the Mahatma Gandhi National Rural Employment Guarantee Act, he said. IANS

Sewage plants to miss NGT's 2020 target

Paras.Singh@timesgroup.com

New Delhi: Though National Green Tribunal (NGT) has fixed December 2020 as the deadline for completing work on four under-construction sewage treatment plants (STP) in the city, it's unlikely that the target would be met.

Delhi Jal Board CEO Nikhil Kumar said that work on only two of the STPs would be completed by the deadline, while the other two plants would become operational by 2022. The plants are located at Rithala, Kondli, Okhla and Coronation Pillar.

Once operational, these plants would have a combined capacity to treat 275 million gallons of sewage per day. They form a key component of the Yamuna Action Plan by significantly increasing wastewater treatment capacity. Currently, Delhi has the capacity to treat 607 MGD of sewage.

Kumar submitted that commissioning of the projects is a part of the legal contractual agreements between DJB and the concessionaire and the mutual-

2 TO MEET DEADLINE

ly agreed deadline cannot be breached. DJB officials said that the agreement cannot be preponed by two years. The targets for commissioning the plants are between 2020 and 2022.

The 70 MGD plant at Coronation Pillar is expected to be ready by June 2020, while the 20 MGD Rithala facility would be ready by December 2020. DJB had submitted that the Kondli STP (45 MGD) would be commissioned in July 2022, while the 140 MGD plant in Okhla would be ready by December 2022.

DJB vice-chairman Dinesh Mohaniya said that the NGT deadline was impractical and work on this massive scale couldn't be finished two years earlier. "We don't know why the Yamuna Monitoring Committee has given deadline relaxation for the Coronation Pillar facility," he added.

On September 11, NGT ordered DJB to finish the construction of all four STPs as per an action plan. The order also said that environmental compensation of Rs 5 lakh per month would have to be paid to Central Pollution Control Board for discharging untreated sewage in any drain connected to the Yamuna and Rs 10 per STP per month penalty would also apply.

NGT had also asked DJB to commence work on all proposed STPs before January 1, 2020. Kumar submitted that some STPs proposed under Sewerage Master Plan 2031 were decentralised facilities and the projects were getting delayed due to non-availability of land. The Yamuna Monitoring Committee told DJB that if it wants the deadline changed, it should approach NGT.

DJB clears various plans to recharge groundwater

TIMES NEWS NETWORK

New Delhi: Besides unveiling the new septage collection scheme, Delhi Jal Board in its 150th board meeting on Friday cleared a host of projects aimed at reviving lakes, improving the green cover and groundwater levels in south Delhi.

The projects include revival of four completely dry lakes using phytoid technology, creation of a 34-acre wetland near Timarpur, oxidation ponds and laying of pumping infrastructure to carry treated wastewater from Okhla to Bhatti Mines for groundwater recharge.

Four waterbodies at Rasulpur, Bindapur, Dhichau Kalan and Tikri Kalan would be rejuvenated using phytoid treatment technology. The wastewater treatment plants would be able to purify 300 million litres a day, which would be pumped into the waterbodies, ultimately improving groundwater levels.

"The work includes construction of phytoid beds along with screen chamber, collection tank, sedimentation tank and installation of hypo-dosing system. It also includes excavation of a lake in case of dry waterbodies and has a provision of maintenance for 12 months. The work is expected to be completed in six months," said an official.

The revival of lakes is now at the centre-stage of the groundwater revival project. "Due to rapid urbanisation and consequent overexploitation of groundwater, the water table has gone down alarmingly. There is a substantial increase in demand of water. The availability of water is 900 MGD against the requirement of 1,300 MGD," the official said.

DJB also approved the creation of a 32-acre wetland at Timarpur, which would be developed as a mini-biodiversity park. "The project for revival of the defunct oxidation pond at Timarpur through engineered ecological system for wastewater treatment will lead to creation of a new tourist attraction," said the official.

The official said, "There are 15 abandoned mine pits that will be used for groundwater recharge in Chhatarpur, Deoli and Sangam Vihar. The work will be completed in 18 months."

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Notes from Underground

Part 1 of 2

A conservation effort in Delhi and Hyderabad demonstrates how traditional water bodies can help the country deal with a looming water crisis, writes Veenu Sandhu

Back in my father's ancestral house in a village in Punjab's Amritsar district, there was an old well that served the needs of two extended families. My father's uncles, aunts and their children and grandchildren, my uncles, aunts and their kids, the family that lived next door, all drew water from it for bathing, drinking, cooking, washing clothes. Even when piped water came to the village, the well remained in use. The taps would sometimes run dry; the well wouldn't. So they never had to store water in buckets or drums the way we in the city needed to. As a child it never occurred to me what a luxury that was.

What made me think about that well all these years later was a visit to the Humayun's Tomb and the nearby Sunder Nursery in Delhi where centuries-old wells and baolis (stepwells) have been or are being restored to once again hold water and replenish aquifers. Drawing on lessons from the past, the Aga Khan Trust for Culture (AKTC), which, along with the Archaeological Survey of India and the Central Public Works Department, restored the Humayun's Tomb and Sunder Nursery and is also working on the Qutb

Shahi Tombs in Hyderabad, demonstrates how traditional water bodies can help the country deal with an imminent water crisis.

In one corner of the Humayun's Tomb complex, away from the Mughal emperor's grand mausoleum and hidden from the eyes of tourists, stand the ruins of Arab ki Sarai (*sarai* means hostelry, or inn). Built in the 1560s by Humayun's widow, Hamida Banu Begum, to accommodate the 300 Arabs whom she had brought from Mecca, the walled complex houses a unique L-shaped stepwell. Work is on to restore it, with funds from the German Embassy. "After just eight feet of cleaning the earth from the baoli, we hit the springs," says AKTC CEO Ratish Nanda.

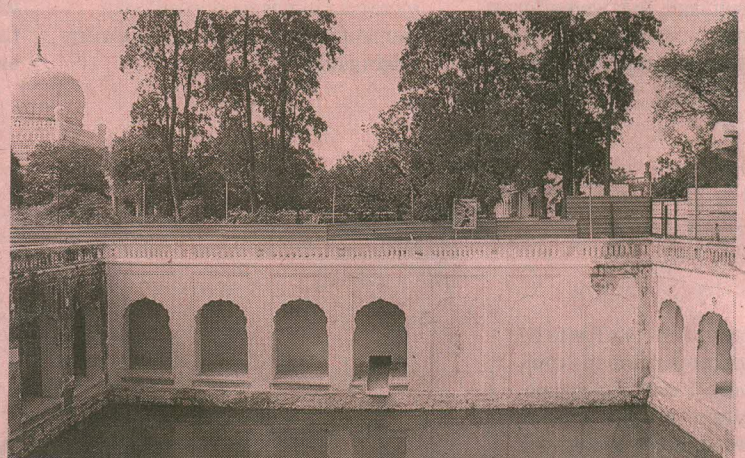
An ancient well near the baoli has also been cleaned. The whole Arab ki Sarai complex is being regraded so that rainwater, rather than going waste, flows into this well and from there into the baoli.

Between the Humayun's Tomb Complex, Sunder Nursery and the nearby Nizamuddin basti — an expanse of approximately a kilometre — there are an astonishing 15 such Mughal-era wells. All of them have been desilted, one could say in

keeping with the Union government's water conservation campaign, the Jal Shakti Abhiyan. The water from these wells is now being used to irrigate the gardens at the heritage sites.

When AKTC began its engagement with the Humayun's Tomb site in 1997, the first thing it needed to do was restore its sprawling gardens. That required water. As the restorers started cleaning the gardens, they found remains of five 16th-century wells, each filled with compost, rock, stone and construction waste. "We started digging this muck out and some 40-50 feet deep down hit wooden foundations. Would you believe that?" recalls Nanda. One of the most interesting — and remarkable — discoveries was that these wells had been built not just to draw water but to also collect rainwater and divert it back to the aquifer. "This," says Nanda, "was an attempt at rainwater harvesting in the 16th century." Later, more wells were discovered, some through old drawings, others by chance. If there are even more, the conservationists are yet to discover them.

Both the Humayun's Tomb complex and Sunder Nursery are garden sites. So their builders made provisions for collecting every possible drop



BEFORE AND AFTER: The Bari Baoli at the Qutb Shahi Tombs in Ibrahim Bagh near the Golconda Fort, Hyderabad

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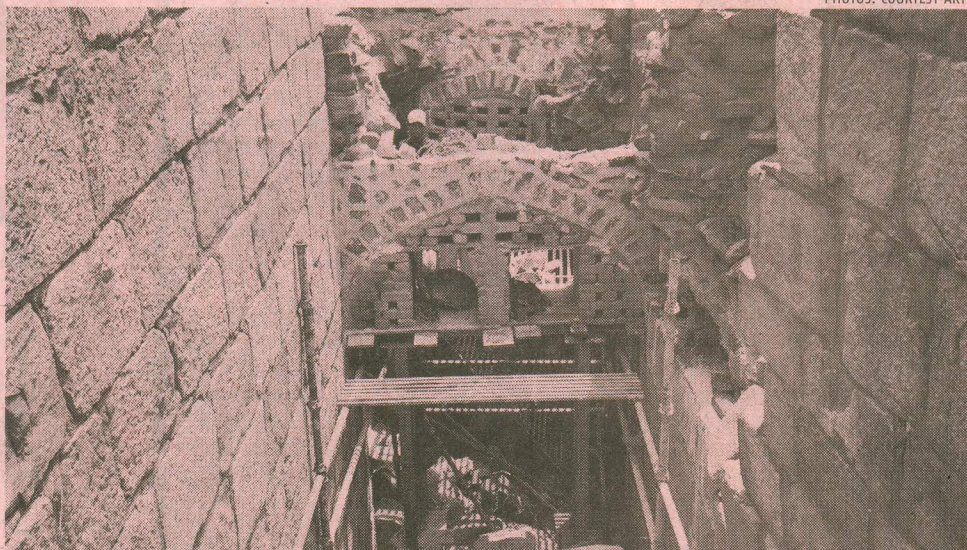
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Part 2 of 2



PHOTOS: COURTESY AKTC

of water — even though both were built near a river, the Yamuna. Inspired by this, the conservationists have put 128 groundwater recharge pits in the gardens of Humayun's Tomb. These pits contain rocks and boulders through which rainwater can seep down to the aquifer. On the surface they are neatly covered with earth and grass.

The 90-acre Sunder Nursery, however, doesn't depend on historic wells alone. "We also have our own rainwater harvesting tanks," says Nanda. Together with the ancient wells and traditional conservation methods, the area is water-sufficient.

The site of the 16th- and 17th-century Qutb Shahi Tombs located in the Ibrahim Bagh near the Golconda Fort in Hyderabad, however, has only stepwells — seven of them. The tombs are built on hard rock with hardly any underground aquifer, so these stepwells serve mainly as water-collecting chambers or holding tanks.

When AKTC started restoring the tombs in 2013, it had to buy tonnes of litres of water. The biggest stepwell, the 60-foot-deep Bari Baoli, had collapsed over the ages and was unusable. It took three years to restore it. Now, 10 million litres of water get collected in the baolis each monsoon, enough to meet the irrigation and conservation needs at the site that has 72 monuments and is spread over 108 acres.

The builders from the Qutb Shahi period were careful to lay the channels and gradations in a way that rainwater would flow seamlessly into the baolis through the openings that are visible just under the surface. Meanwhile, work is on to restore their façades.

Back in Delhi, in 2008, just a year after the trust began the Nizamuddin Urban Renewal Project to engage the community in the conservation efforts, the 14th-century stepwell near revered Sufi saint

Nizamuddin Aulia's dargah partly collapsed. Its water considered holy, the community requested AKTC to repair and clean it. Forty feet of rubbish were removed to expose a circular stepwell within the rectangular enclosure. "As we hit the bottom, the aquifers erupted like jets," says Nanda. "We got the water tested — extremely clean."

The stepwell is choked on three sides by built structures, some of which had to be pushed back to allow it to breathe. Shanties atop one of its thick walls were removed and their residents relocated to homes that the trust built for them.

But challenges remain. The Nizamuddin dargah gets about five million pilgrims a year, so a lot of garbage still ends up in the baoli. Some young men from the community are employed to enter the water with safety tubes to physically clean the stepwell. There's fish, too, that eats up the algae and mosquito larvae.

Baolis and wells do two things: collect precious rainwater and recharge the groundwater. "Both are equally important," says Nanda. "And what does it cost to clean them? Only human labour. I am not talking about conservation, but cleaning." It took 8,000 man hours to clean the Nizamuddin baoli with buckets, he says. This work of cleaning traditional waterbodies — wells, temple tanks, baolis, moats and village reservoirs — can easily be done under the Mahatma Gandhi National Rural Employment Guarantee Scheme, he adds.

The Ministry of Jal Shakti was launched in May this year with the mandate to find solutions to India's escalating water crisis. A combination of traditional knowledge and modern methods could offer some answers. The picture of Rani ki Vav, "the queen's stepwell" in Gujarat, which is on the new 100-rupee note, could act as a reminder.

B Dasarath Reddy contributed to this report