What's happening in India's Silicon Valley

Bengaluru has no shortage of rain. However, the city did not adapt properly when the population increased many times over and drained traditional water sources.

Water tankers trying to fill their tanks pass through dry lakes in India's booming tech capital.

Bleary-eyed drivers waited in line to siphon as much water as possible from wells drilled a mile deep in dusty lots between application offices and apartment towers - all of which were built built before there were water lines and wastewater systems.

A problem that software cannot solve

At one well, where neighbors lamented the destruction of a mango orchard, a handwritten diary was found listing the times for drawing water during the crisis: 3:15 and 4:10 one morning; 12:58, 14:27 and 15:29 follow.

'I get 50 calls a day,' said Prakash Chudegowda, a water tanker driver in south Bengaluru, also known as Bangalore, as he connected a hose to a well. 'I can only get 15 calls'.

Silicon Valley in South Asia is facing a nature problem - a weakness that software cannot solve. In the central suburbs of Bengaluru, where dreams of technology riches are nurtured, schools lack toilet flushing water. The washing machines are silent. The rain always 'delays' and children without clean water to drink are being hospitalized with typhoid fever.

The big problem affecting Bengaluru is not a lack of rain but a barrier that is not unfamiliar in this giant, energy-rich country: strict management. As the city plunges into its digital future, tripling its population to 15 million since the 1990s and building a vibrant tech ecosystem, water management has fallen behind and has never been better. are now catching up with demand as healthy aquifers have been depleted by the uncontrolled spread of urban boreholes.

Failures in environmental management are a common occurrence in a country with severe pollution and an urgent need for economic growth to provide for 1.4 billion people. But Bengaluru's water struggle is truly daunting for many.

'There is no water crisis,' says Vishwanath Srikantaiah, a water researcher and urban planner in Bengaluru. 'It's a clear crisis of official failure.'

Looked at another way, it is a crisis caused by a lack of imagination, he added in an interview at his home, where books about water and rivers are stacked almost to the ceiling.

Too slow, too rigid

As public policy experts say, Bengaluru and Karnataka as a whole have been too slow in planning for growth, too divided among agencies and too rigid in their reliance on pumping water from reservoirs. along the Kaveri River, more than 80 km away.

Despite a long history of local hydrology – Nadaprabhu Kempegowda, the founder of Bengaluru in the 16th century, built hundreds of cascading lakes for irrigation – authorities have largely stuck to the traditional technical approach. system that their predecessors adopted in the 1950s and 1960s.

The cost alone and the challenges involved are a huge failure. The energy costs for pumping water alone consume 75% of the Bangalore Water Supply and Sewerage Board's revenue, while only providing about half of the city's needs.

The rest, over decades, came from boreholes - holes about 15 centimeters wide that act like siphons for water from the aquifer below. According to officials, an authority separate from the water authority has drilled 14,000 wells, half of which are now dry. Experts estimate that people have drilled an additional 450,000-500,000 wells.

In most cities, wells are everywhere. Failed wells are often silent; Successfully drilled wells are often covered in flowers, with a black hose threading into a house on the street.

'My well has no water'

Spending a day in the cab of Mr. Chudegowda's water truck can provide a glimpse into how a special system works, according to *the New York Times.* At a stop, drivers record their time in a logbook while cameras track how far they've gone. Elsewhere, the water supply is slow and organized: It took a half-dozen drivers 20 minutes to fill up about 6,000 liters of water, just a few steps from the dried-up lake. At the third stop, the building owner sold a batch of water to Mr. Chudegowda without having to wait.

'Every minute counts,' Chudegowda said as he climbed out of the truck.

His customers range from a bra factory with 100 workers to a small apartment building, all within a few miles to maximize profits. Chudegowda charges up to 1,500 rupees ($18) per refill, more than double the price a few months ago, which he says is reasonable because costs have increased.

Drills - which can be easily rented from companies across the city - often fail to find water or have to go deeper, which means more electricity and gas are spent on pumps to suck up the liquid. precious from the ground.

The effects, although not to the same extent as 'Dune', have become more apparent in recent weeks, especially in tech corridors, with the glamor of luxury apartments, slums, mobile phone stores, shopping malls, in vitro fertilization clinics and shiny offices.

In Whitefield, a bustling software hub, Sumedha Rao, a teacher at a new public school, asked the 12-year-olds in her class about their experiences with water scarcity. The school's hallways are painted bright colors with encouraging words - resilience, citizenship, collaboration. In class, the children were asked how often they had water at home.

'One day a week, ma'am,' said a female student with pigtails.

'My house only has one bucket of water,' said a boy near the back.

'There's no water in my well,' another student shouted.

Many students take small amounts of drinking water from school taps for their families - each student is limited to one bottle of water, as that is all the school can provide.

Behind the play area there is a broken well.

'The engine stopped working,' said Shekar Venkataswamy, a physical education teacher with a distinctive mustache.

Walking towards his house behind the school, he pointed to a dry hole - the remains of a failed borehole - and another borewell with water. Several thousand families take turns using water every hour, with a complex and tightly managed schedule.

'We are moving towards a greener solution'

Community leaders expressed pride in how they handled the crisis. Many others want to go even further.

One morning, four tech workers — turned clean water activists — showed up in a northern corner of the city, where Mr. Srikantaiah, a water researcher, had been working with the local community to revive a The lake was once filled with garbage. A small network of filters and pipes will provide 200,000 liters of potable water per day.

'The number will soon reach 600,000,' Mr. Srikantaiah said. And the price per customer: roughly one-third the price charged by water tankers.

Tech staff said they plan to share details with residents and officials to spread the word that a lake that uses rainwater and treated wastewater can be turned into a safe, affordable water source. both affordable and reliable.

In an interview at his office, water board chairman Ram Prasath Manohara, 43, a seasoned administrator appointed three months ago, was receptive to the idea.

Acknowledging that some officials in the past have thought narrowly about water management, Manohara said he hopes to attract budget and private investment for a more innovative approach that combines data-driven will revive lakes to allow aquifers to recharge and will expand rainwater harvesting and preservation.

'We are moving towards a greener solution,' he said. 'A more effective solution'.

However, so far, progress has been slow. Manohara said he couldn't hire any more staff and he worked from 6 a.m. to 2 a.m. every day.

He expects short-term relief to come in the next few weeks, when reservoir water returns to many parts of the city and spring rains are expected. Above all, like many others in India's Silicon Valley, he hopes all the public attention to water scarcity will add momentum to lasting change.

In the corner of Manohara's office, a quote from Benjamin Franklin was printed on paper and taped to the window: 'When the well runs dry, we will know the value of water'.

'This crisis', he said, rubbing his tired eyes, 'it also gives us an opportunity'.