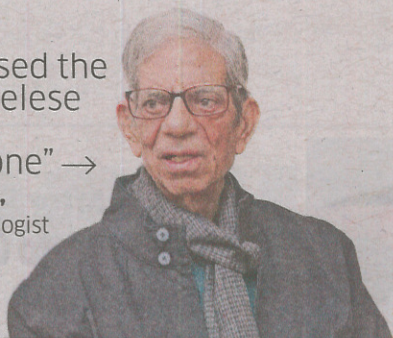


"I'm surprised the Sentinelese killed someone" →
TN Pandit,
Anthropologist
p.04



Startup →
India is taking off as states take the mantle
p.10



Tycoons who have fallen from grace
p.14

The monk who solved Champagne's bottling problem
p.23

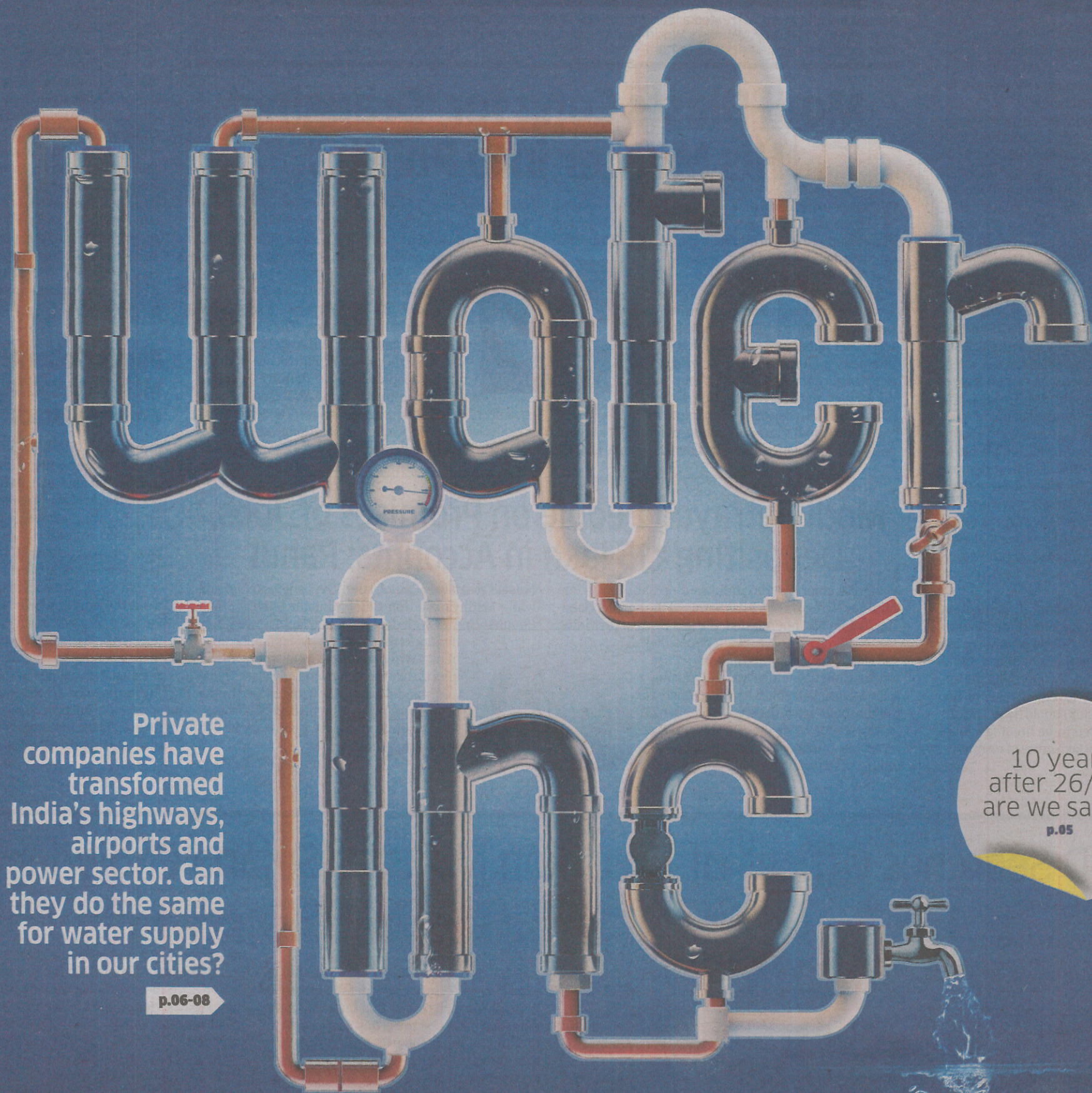


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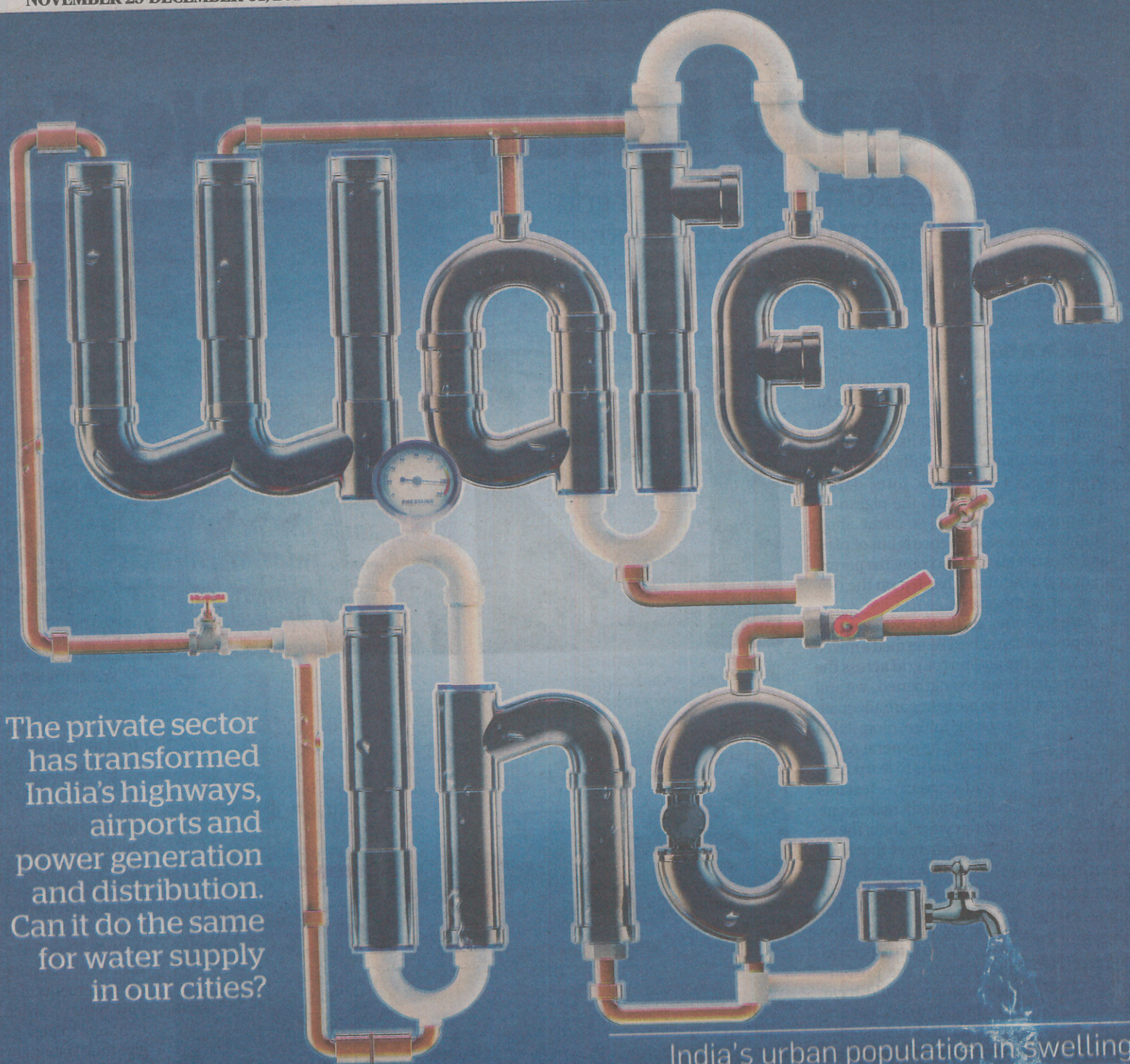
November 25-December 01, 2018



Private companies have transformed India's highways, airports and power sector. Can they do the same for water supply in our cities?

p.06-08

10 years after 26/11, are we safer?
p.05



The private sector has transformed India's highways, airports and power generation and distribution. Can it do the same for water supply in our cities?

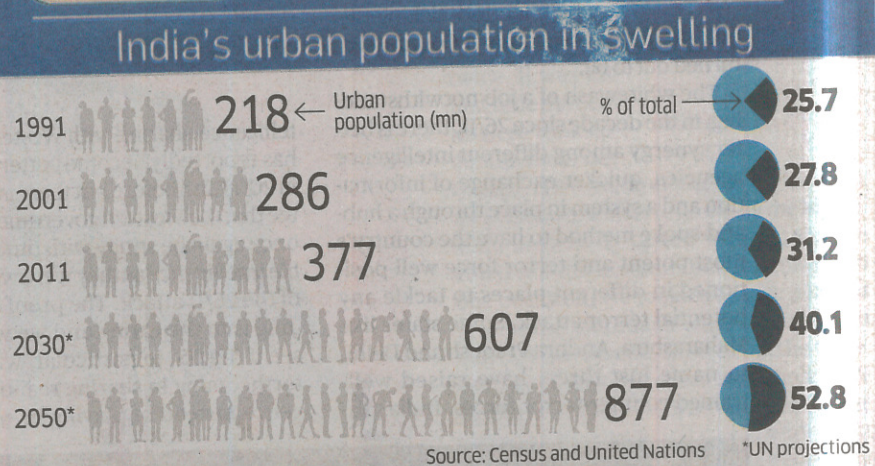
G Seetharaman | Nagpur

Diving through the verdant premises of the cantonment in Nagpur, you would not usually expect to see a water treatment facility. But soon you come across an unassuming building at a turn, marked by a small board at the gate, where nearly 200 million liters per day (mld) of water from the confluence of two rivers – Kanhan and Kolar – is treated before it is sent to homes and offices.

This is the largest – and one of five – water treatment plants which are part of the country's largest public-private partnership (PPP) project in urban water supply. In 2012 Orange City Water (OCW), a 50:50 joint venture between Veolia Water India, the local arm of a French company, and Nagpur-based Vishwaraj Environment, was awarded a 25-year concession by the

Nagpur Municipal Corporation (NMC) to upgrade and maintain the city's water pipelines and supply pressurised water 24x7 to a population of 2.7 million and collect tariffs on behalf of the NMC. Of the ₹390 crore capital outlay, 70% was to come from the government and the rest from the concessionaire.

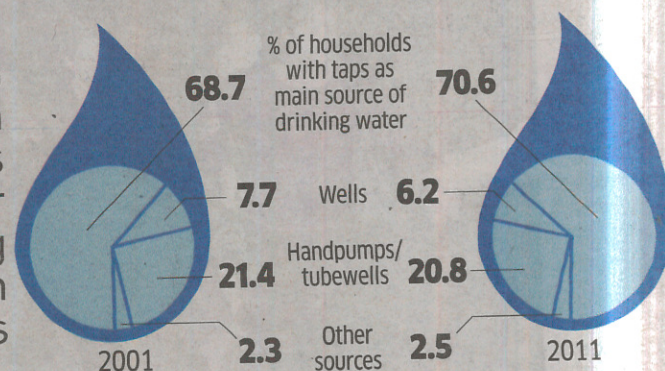
The treatment plant, which replaced a British-era facility, is mostly automated and not more than a couple of personnel are to be seen. Among the processes used to make the water potable is one where it flows in a cascade. This is done to expose the water to air, which removes certain dissolved gases and metals. The oxygen added in the aera-



TL;DR

- Despite attempts since mid-1990s, privatisation of urban water supply has not taken off in India
- Sensitivity over private companies' handling of distribution of water makes the business tricky
- Politics at the local level and absence of solid revenue model deter companies
- Success of current PPP water supply projects could determine the future of the model

Only 70% of urban households get their drinking water from taps



Note: Figures rounded off
 Source: WaterAid India, Central Public Health and Environmental Engineering Organisation



"A lot of private players are not coming into water supply because you see profits only after 6-8 years"

Sanjoy Roy,
CEO, Orange City Water, Nagpur

tion process makes the water taste as it does when it reaches our taps.

There have been PPP experiments in urban water supply since the 1990s, but none on this scale. More projects have failed than succeeded, because of which neither local governments nor companies have been keen on the sector. But that could change, especially as cities have to up the efficiency of their water distribution network, ensure equitable distribution of water, reduce leakages and theft, and make those who can afford it pay for the water they use. This project is being closely watched as its success or failure could determine whether more cities are willing to engage the private sector in delivering one of our most essential needs.

OCW claims it provides round-the-clock water to nearly 400,000 people in Nagpur and that more than four times as many have seen an improvement in the water they receive, maybe in quality or availability or both. No attempt to entrust the distribution of water with a private company is without controversy and this project has also been criticised for its failure to supply water to some households and for over-billing. A company spokesperson says there could be some cases of

Water tankers are a common sight in cities in summers



Less than half of households in slums have tap water access

Slum	% of total households using tap water	Non-slum
74		69.9
45.6	Tap on premises	55.9
23	Tap near premises	11.2
5.4	Tap away from premises	2.9

Source: WaterAid India, Census 2011

Note: Figures rounded off



"Payment security mechanism continues to be a serious issue with municipal clients and projects"

Shyam J Bhan,
CEO, Suez India

Uttarakhand tops in water supply and charging for it

% of urban households that got water and were charged for it, as of March 2017

Uttarakhand	90
Gujarat	87
Telangana	75
Rajasthan	73
Karnataka	60

Source: NITI Aayog

India's water supply in 2030 will only be half of demand

(billion cubic metres)

Water supply	Water demand
650	2008
744	2030*
	1,498

Note: * projection
Source: NITI Aayog, TN Narasimhan, McKinsey and Water Resources Group

Private participation in water and sanitation projects has been minuscule

Electricity	391
Roads	407
Railways	11
Ports	7.4
Airports	5.3
Water and sanitation	11.3

PPP projects that reached financial closure since 2001

Investment in projects (\$ bn)

Source: World Bank

water goes up," says Arun Lakhani, chairman of Vishwaraj Infrastructure, referring to the investments needed to plug the leakages. The Nagpur project involves replacing 30% of the city's existing pipelines.

According to the 2011 Census, 377 million, or under a third of India's population, lived in urban areas. That number is expected to swell to 607 million in 2030 and 877 in 2050, which will be more than half the national population. India's demand for water is set to be twice its supply by 2030, which means no time can be lost in making our water distribution network more efficient, and putting a price on the increasingly precious resource. At the same time, no one can be denied their right to a minimum of 135 litres per day, as recommended by the government. Over 70% of India's urban households get their drinking water from taps, a fifth from handpumps and tubewells, and the rest from wells and other

sources, according to the 2011 Census. Across the country, water supply is either intermittent or at low pressure or both. Continuous supply is needed to keep the water clean, otherwise waste-

water and contaminants can be sucked into the pipes.

One of the most pressing problems in charging users for water is the lack of meters to determine their usage. It becomes all the more difficult when one tap is used by multiple homes, as is often the case in slums, if at all there is a tap. Our cities have mostly unmetered supply of water. "There is a psychological barrier to increasing tariffs. The willingness to pay is there, but not the willingness to charge," says Lakhani. Water tariffs in Nagpur range from ₹7.40 to ₹22.2 per 1,000 litres for residences.

Yogita Uke, a slumdweller in Nagpur, says her family of seven pays Rs 150-200 quarterly for the water supplied by OCW and they do not mind since now water reaches their doorstep. Each house in the slum has a tap outside it and this reporter found one with a lock on it to prevent others using it. More than a third of the city's population lives in slums.

The hesitation of local bodies in charging users, combined with the complications of having to deal with corporators, makes privatisation of water supply quite tricky. Most projects in urban water management are management contracts for not more than 10 years, usually involving upgrading existing networks as

well as operation & maintenance. The company is not expected to collect tariffs or invest in the project.

Another concern private players have is over the financial muscle of urban local bodies. "I believe the biggest challenge is the

over-billing because of leakages resulting from poor plumbing. "People were apprehensive. They thought with meters they would be charged more. But now the opposition is not so severe," says Abhijit Bangar, Nagpur's municipal commissioner.

The project, which was to be partially funded by the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), was in financial limbo for a year-and-a-half after the scheme was scrapped in 2014. Sanjoy Roy, chief executive of OCW, says funding has since resumed though the project is running behind schedule. The company's revenues are based on the volume of water supplied, billed and tariffs collected for, making it performance-linked.

That means it is in the company's interest to reduce the share of non-revenue water (leakage and theft), which is usually at 50% or higher. "Non-revenue water of 25% if reasonable. Reducing it further means the cost of



"Politicians are not convinced people will pay for water"

Vinayak Chatterjee

chairman, Feedback Infra

poor financials at the municipal level, which need to be improved significantly to make private sector investments more viable. Payment security mechanism continues to be a serious issue with municipal clients and projects," says Shyam J Bhan, CEO, Suez India, another French company. Suez has bagged water supply projects in cities such as Delhi, Coimbatore, Bengaluru and Davanagere (Karnataka).

According to Vinayak Chatterjee, chairman of Feedback Infra, a consultancy, given that the credit rating of municipal corporations, who pay private companies, is low, banks are not willing to finance water projects. Fund-starved local bodies could rely on private investment in water management, but that is easier said than done. "Unlike in highways and power, there is no clear model for return on investment in water," adds Puneet Srivastava, policy manager at WaterAid India. Moreover, dealing with the Union government or state government, as is the case in highways, ports, airports and power generation projects, is a lot easier than handling an urban local body.

Since 2001 India has had 391 PPP projects in electricity that achieved financial closure and had an investment of \$136.7 billion, and 407 road projects with an investment of over \$80.5 billion, according to the World Bank.

Comparatively, there have only been 19 water and sanitation projects with an investment of \$1.3 billion.

Without private investment we would not have most of our upgraded highways or the improved airports in Delhi and Mumbai. Moreover, private companies run power utilities in both these cities, something that elicited the same kind of opposition two decades ago as privatisation of water supply now do. But now, not many pay it much thought.

Water supply projects have a chequered history both globally and in India. Several residential and bulk water supply projects in Pune, Goa, Bengaluru and Hyderabad were scrapped even before they were awarded to companies. A report by Transnational International, a think-tank, in 2014 found that between 2000 and 2014, 180 privatised water supply projects in 35 countries, with 59 in the US and 49 in France, went back to local administrations.

While some private water supply projects across the world, most notably in Cochabamba and La Paz in Bolivia, have been scrapped following protests, some attempts, including in Manila, have been relatively successful. Manila has had private water suppliers for over two decades now.

Of the 180 projects tracked by Transnational, 92 were cases of contractual termination. Among these projects was one in Latur in the drought-prone Maharashtra region of Maharashtra. In 2016 a project awarded to Essel Infraprojects in Aurangabad was scrapped for running behind schedule. The

Political opposition to private ownership and control of water remains strong in India



A water treatment plant in Nagpur and (inset) a locked tap with a meter at a slum in Nagpur

Mumbai and Delhi rank lowest on water sustainability

Rank		Score (%)
1	Rotterdam	85.5
2	Copenhagen	85.4
3	Amsterdam	83.9
4	Berlin	82.9
5	Brussels	79.8
6	Toronto	79.6
7	Frankfurt	78.2
8	Sydney	77.1
49	Mumbai	29.0
50	New Delhi	27.3

Source: Sustainable Cities Water Index 2016 by Arcadia, a consultancy

Note: The study covers 50 cities from 31 countries

Some PPP Projects in Urban Water Supply

NAGPUR

In 2012 a 25-year concession was awarded to Orange City Water, a 50:50 joint venture between Veolia Water, a French company, and Vishvaraj Environment, to upgrade and maintain water distribution network and supply 24X7 water to all households within the municipal corporation limits. The ₹390 crore project, 30% of which will come from the concessionaire, is the first city-wide PPP project in urban water supply. The company says roughly 400,000 people out of the total 2.7 million get 24X7 water now

KARNATAKA

After a World Bank-funded pilot begun in 2005 to privatise water supply to 200,000 people in Hubballi-Dharwad, Belagavi and Kalaburgi, the state has awarded projects in Hubballi-Dharwad, Bijapur and Ilkal to Veolia, to supply 24X7 water to 285,000 people

DELHI

Private companies like Veolia, Suez (another French company) and SPML Infra have been tasked with providing 24X7 water to parts of Delhi like Nangloi, Malviya Nagar and Mehrauli. These projects had an initial cost of ₹1,350 crore



"We need the private sector's efficiency but pricing will have to be controlled by a public body"

Ajoy Mehta, Mumbai municipal commissioner

company has taken the municipal corporation to court and the case is pending in the Supreme Court. In May a municipal drive against illegal water connections in Aurangabad took a communal turn and in the ensuing riot two died and more than 60 were injured.

Among states, Karnataka has seen a fair amount of activity in privatising urban water supply. After a World Bank-sponsored pilot project to supply water to 200,000 people in Hubballi-Dharwad, Belagavi and Kalaburgi in Karnataka, similar projects in Hubballi-Dharwad, Bijapur and Ilkal have been awarded to Veolia, where there are 285,000 beneficiaries. West Bengal has also awarded water supply projects to private companies in Haldia and a part of Salt Lake City. Jamshedpur Utilities and Services Company, a wholly owned subsidiary of Tata Steel, is executing both projects through JVs.

Veolia, Suez (another French company) and SPML Infra, among others, have been tasked with providing 24X7 water to parts of Delhi like Nangloi, Malviya Nagar and Mehrauli. These projects, which had an initial cost of Rs 1,350 crore, reportedly came under the Central Bureau of Investigation scanner for alleged irregularities in the tendering process.

"The political opposition to private ownership and control of water remains strong. The municipal bodies and water utilities also feel that they will lose control of water supply to private companies due to long contract periods," says Subhash Sethi, chairman of SPML Infra.

If a water utility run by an Indian private company is problematic to many, one run by a multinational company could be considered disastrous. "Nobody objects to an MNC in a road project," says Chatterjee. Ajoy Mehta, Mumbai's municipal commissioner, believes the private sector will have to come into water supply at some point. "We need their efficiency but pricing will have to be controlled by a public body."

Availability of water 24X7 is crucial to the Union government's Smart Cities Mission. A city with a metro rail network and smart traffic management still does not amount to much if it cannot ensure continuous water supply to its residents. While it is true the PPP models of highways and airports cannot be replicated in urban water supply, it is clear that private companies can play a critical role in whipping our urban water infrastructure into shape. It goes without saying the government needs to monitor these projects more closely than other infra projects given the criticality of water. ■

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