

News monitored for: Kotak Investment Banking



# Water presents a deluge of opportunity

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## The time is ripe for greater private sector investment in water, which was till now considered a public good

Akhilesh Tilotia



The time is ripe for greater private sector investment in water, till now considered a 'public good'.

Water supply to and disposal from residential and commercial segments are expected to grow significantly, even as massive government spending on irrigation continues. We estimate \$30 billion (Rs 1.39 lakh crore) is up for grabs every year in India's water business.

### Understanding the broad numbers

Globally, agriculture consumes the most amount of water (69%). Industry and residential segments split the rest of water consumption at 18% and 13%, respectively. Industry's consumption of water is expected to grow disproportionately (3.2% per annum) to overall demand growth (2.2% pa).

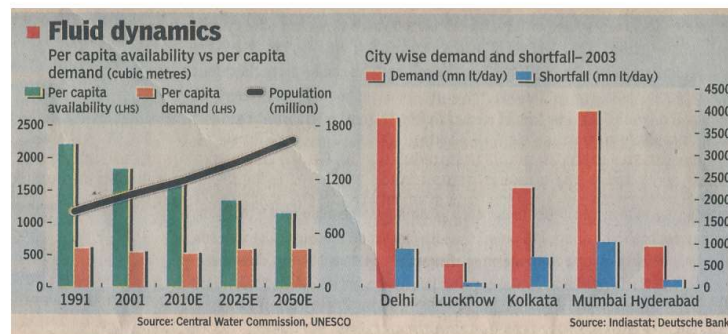
In India, the skew towards agriculture is more pronounced (85%). This is both due to a low-yield per drop of water and also the free or (low) fixed cost electricity offered to farmers, which promotes unchecked usage. As India urbanises, the needs of its energy and industrial sectors (currently 9% of demand) will significantly outpace growth in residential (6%) and agricultural demand.

According to the ministry of statistics and programme implementation (Mospi), India currently uses around 813 billion cubic metres (bcm) of water (a cubic metre of water is 1,000 litres), and this is expected to rise to 1,093 bcm by 2025. For reference, the four-month long monsoon delivers ~4,000 bcm of water and our rivers carry 1,869 bcm of water annually. Hence, while there is no physical scarcity of water, the issue is of space-time mismatch. Water is not available at the right place at the right time, which creates scarcity and hence, value.

### Supply side: Everyone loves big projects

Big ticket solutions on the supply side include the creation of more inventory and delivery infrastructure (dams, canals, etc) and supply sources (desalination plants). India's storage capacity of water is 212 bcm, which is a quarter of the country's annual requirement (whereas globally, countries look at storing at least a year's worth of water).

We hence expect the government to con-



tinue its focus on creating this infrastructure. However, such utilities face high capital expenditure and costs of supply and can be feasible only with practical revenue models, focused on either the user or the government as payee. Unfortunately, given the large population dependent on agriculture, it has been found politically expedient to rely on the latter.

We expect the government to sharpen its focus on urban infrastructure creation. Segments like sanitation and waste-water treatment will open new opportunities. Note that India generates ~38 billion litres of sewage daily, of which it treats only 30%; the rest is flowing untreated underground or into rivers and other water bodies.

Chennai has taken the lead in creating desalination plants for its citizens. The project (requiring an investment upwards of Rs 500 crore) will supply water to Chennai at Rs 48 per 1,000 litres. While other cities, notably Mumbai, are toying with the idea of desalinated water, unless the pricing of water from the final consumer increases, these projects may further strain water utilities.

### Demand drivers: Agriculture, industry and home consumption

Agriculture will continue to provide growth opportunities to the irrigation industry (87.2 million hectares of the ~140 million hectares of arable area is irrigated), pump companies (India has an installed base of ~30 million pumps) and irrigation equipment industry (only 3.5 million of 87.2 million hectares of irrigated area has micro/ sprinkler irrigation). Note that the high installed pump base means that the ratio of India's groundwater consumption to its surface water is highly skewed at ~50%, causing groundwater depletion worries in many areas.

Home-delivery of water (tanker services), bottled water and purifiers are expected to see increased demand. We expect tentative steps towards the creation of water utilities

in areas of city-water distribution, especially in the area of waste water treatment.

### Pricing: What is free is not valued

Water in India gets 'priced' according to political expediency or demand exploitation. Indians with access to water infrastructure pay a small fraction (Rs 5 per 1,000 litres, compared to global urban prices upwards of Rs 75 per 1,000 litres) of the price charged globally by water utilities.

Ironically, those without access to water pay a higher price (tanker water in Mumbai costs upwards of Rs 80 per 1,000 litres). Stable and enforced pricing mechanisms can help water users make rational and economically beneficial choices of their water use entitlement.

However, the urban local body-controlled water utilities in our cities are caught in a vicious cycle of low prices and limited collection leading to under-investment in infrastructure (causing leakages that can amount to as much as 32% in urban India, according to Asian Development Bank), resulting in further disinclination of the public to pay. We estimate the total annual collection of the urban water utilities in India to be \$646 million, while Indians will spend over \$650 million on purifiers annually.

Privatising water utilities, a contentious idea globally and being tried cautiously in India, could increase the cost of water for users from the very low levels currently.

### Increasing private sector participation

In India, Delhi and Mumbai have tried their hands at (partial area-based) privatisation without success. Smaller towns, however, have taken a lead in experimenting with the privatisation of water management and service delivery.

Nagpur is running a demo-project (pilot phase) of a 24/7 water supply project with Velia as the private party. The project is expected to be scaled up to a city level soon. Velia is also working with the government of

Karnataka in smaller cities like Gulbarga and Hubli-Dharwad.

Similarly, Khandwa in Madhya Pradesh has entrusted its water supply service to Vishwa Infrastructure and Services. Kolkata has awarded a consortium of JUSCO (which manages the water utility at Jamshedpur) and Voltas a water services contract for Sector V in Salt Lake (which is primarily a commercial area dominated by IT offices).

As cities begin to get more comfortable with the idea of the private sector handling its water needs, the trend could possibly pick up in right earnest across the country.

### Who is in charge?

According to the Indian Constitution, water is the subject of legislation at three levels: the Centre, states and local bodies, with the primary responsibility resting with the states, while the Centre looks at inter-state water disputes only.

There is no specific restriction on the entry of private or foreign players in the water sector. However, given that the user cost-recovery mechanism is not operational across the country, the private sector has been hesitant in investing in the sector.

For example, Latur in Maharashtra, which privatised its water supply, saw protracted delays in handing over to a private player on metering after facing public resistance—this, despite significant improvement in leakage reduction.

### Disparities in access underpin water wars

In India, the key issue is access rather than scarcity. For consumers, states and even countries, the value of water depends on location, geographically and in the socio-economic order. Geographic accidents of fate give one state an abundance of rivers and another endless arid plateau, triggering protracted battles over common resources like rivers and mountains located in neighboring states. Industry also is vulnerable to water allocation issues, facing risks of disruptions in operations and growth constraints.

### Gamechangers

Both demand and supply side changes are required to avert a man-made water crisis. Better water pricing, reasonable energy pricing, construction of dams and water conservation measures can all ease access to water. Privatising water utilities, especially on sewage disposal (politically more feasible) or based on pilot projects, can possibly lead to greater private investments in the sector and make services more accountable.

The writer is analyst, Kotak Securities (Institutional Equities). This is summary of a 'GameChanger' report on water. Kotak's GameChanger research explores ideas and developments that have implications on macroeconomics and on long-term market behaviour.