

FORTUNE

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INDIA

THE
GREEN
ISSUE

THE NEW THINKING ON DEFENCE

NARENDRA MODI'S CALL TO AGGRESSIVELY
OPEN UP THE SECTOR COMES AT A TIME
WHEN **PRIVATE ARMS MAKERS** HAVE
ALREADY BUILT SUBSTANTIAL CAPABILITY.

FROM **RAM TO
RUPEE:** THE
NEW HINDUTVA

MARISSA MAYER'S
MOMENT OF
TRUTH
PLUS: YAHOO'S
BIG PUSH IN INDIA



JUNE 2014




HOW EITHAD IS
**RUNNING
JET**



Rs 85,500 CRORE

IS THE WORLD BANK ESTIMATE OF INVESTMENTS NEEDED FOR INDIA TO
ACHIEVE THE MILLENNIUM DEVELOPMENT GOALS FOR THE WATER SECTOR.

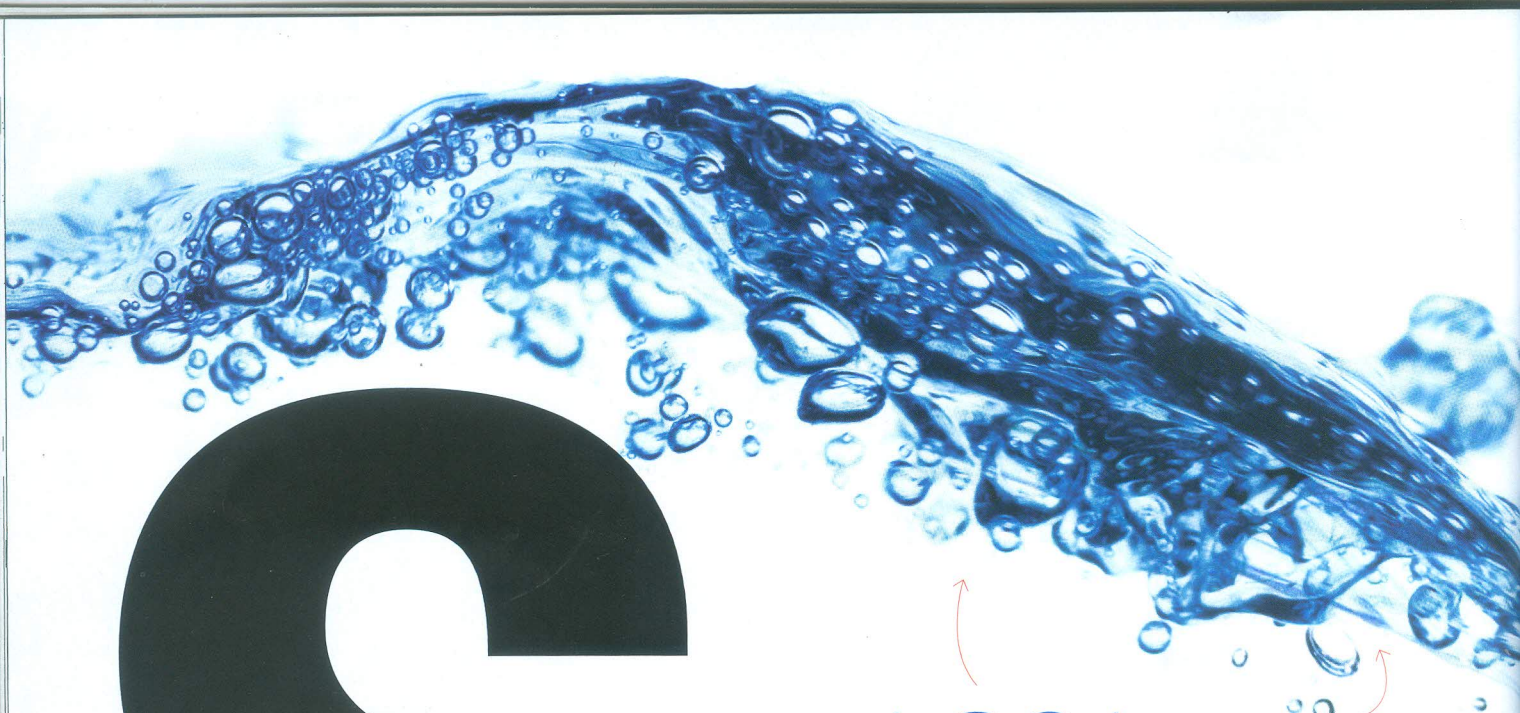


THE LURE OF WATER

PRIVATE
COMPANIES
ARE SEEING
OPPORTUNITY IN
WATER. HERE'S
WHY THAT'S GOOD
NEWS.

By KUNAL N.
TALGERI

ILLUSTRATIONS BY
NILANJAN DAS



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THE GREEN ISSUE

Science fiction fans, remember the arid planet Arrakis in Frank Herbert's cult classic, *Dune*? The Fremen in that world treated water as the most precious commodity ever; all water, even that produced by the human body, was recycled. Luckily, Planet Earth is not as dry, but all indications are that despite 90% of the planet being water, the liquid is going to be more scarce than we like.

Unlike the Fremen, global bodies such as the World Health Organisation and the Asian Development Bank consider water a social right, not an (economic) commodity. Populist governments echo this view, although most are realistic enough to charge a tariff for a regular supply of clean water. India, which has among the lowest water tariffs in the world (\$0.14 or Rs 8.25 per cubic metre compared with \$4.3 in Denmark, according to Global Water Intelligence, a research outfit that tracks water projects around the world), tries to balance between water as a right and water as a commodity.

4,861

OF THE 5,161 CITIES IN INDIA DO NOT HAVE EVEN A PARTIAL SEWERAGE NETWORK, POSING RISKS TO SURROUNDING WATER BODIES.

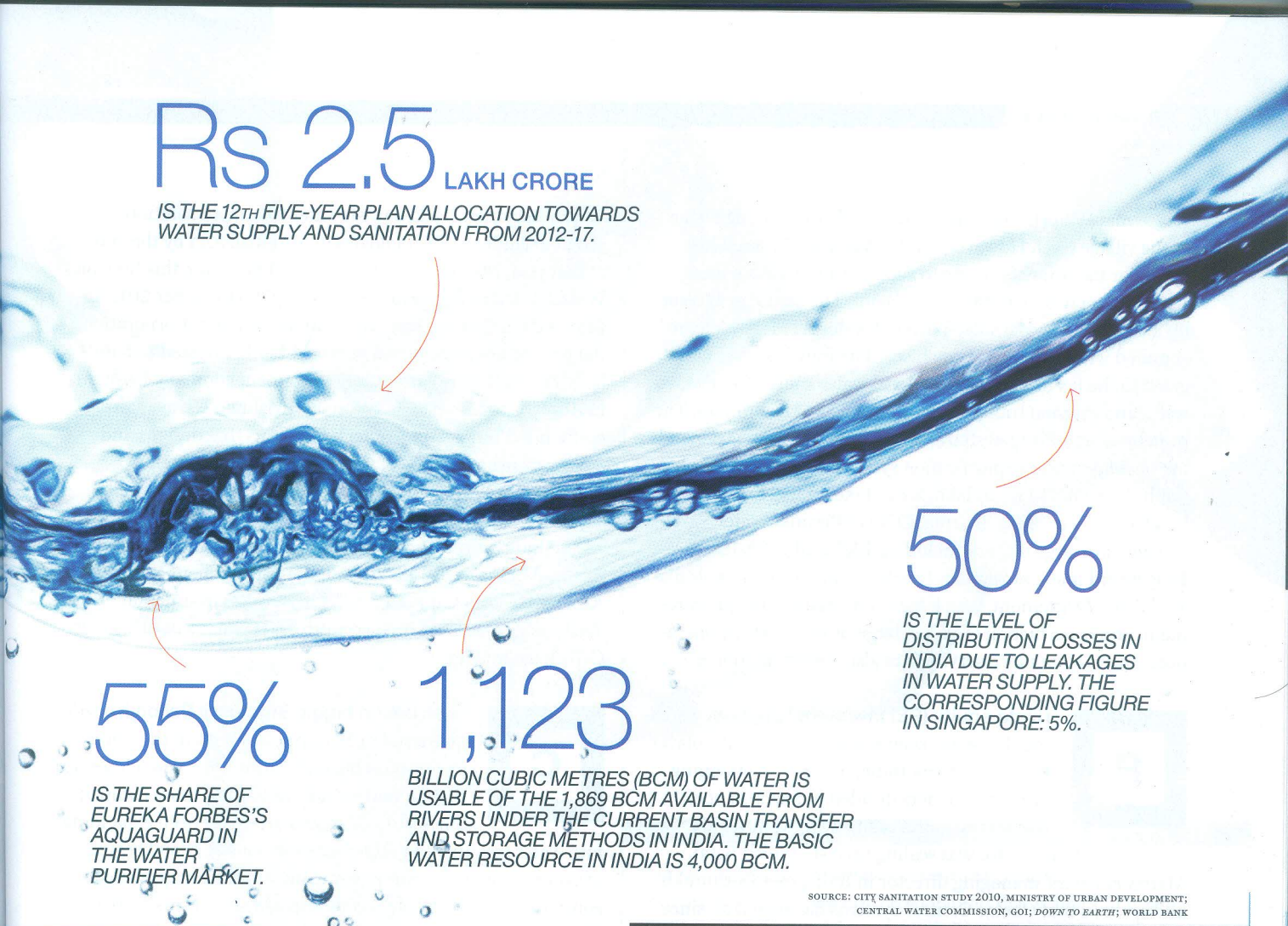
13

IS THE NUMBER OF PUBLIC-PRIVATE PARTNERSHIP PROJECTS IN THE URBAN WATER SUPPLY SECTOR SINCE 2005.

"Water is provided free or at a nominal price," says Chaitanya Kalia, partner for climate change and sustainability at advisory Ernst & Young. "Economically, making water free is not going to make an impact. Treating water as a commodity [as has happened with power] is one of the key things to build a holistic view, which will take time to happen."

Water is a state subject, so state governments can provide it free or at a tariff they fix. That's what former Delhi Chief Minister Arvind Kejriwal banked on, when he announced that his government would provide every household 20,000 litres of water free every month. Anything above that would be charged—except that the Delhi Jal Board, which regulates water supply, did not then (and does not now) have an automated central monitoring system to track consumption.

That was so worrying to Mahesh Deshmukh, founder of Chetas Control Systems, which designs and manufactures water meters, that he came to Delhi from Pune to meet Kejriwal. The meeting was to tell Kejriwal that automated measurement is inexpensive—41% of government tender estimates. Unfortunately, nothing came of the meeting, since Kejriwal abruptly resigned after 48 days in power. The water monitoring project lies in limbo.



Rs 2.5 LAKH CRORE

IS THE 12TH FIVE-YEAR PLAN ALLOCATION TOWARDS WATER SUPPLY AND SANITATION FROM 2012-17.

55%

IS THE SHARE OF EUREKA FORBES'S AQUAGUARD IN THE WATER PURIFIER MARKET.

1,123

BILLION CUBIC METRES (BCM) OF WATER IS USABLE OF THE 1,869 BCM AVAILABLE FROM RIVERS UNDER THE CURRENT BASIN TRANSFER AND STORAGE METHODS IN INDIA. THE BASIC WATER RESOURCE IN INDIA IS 4,000 BCM.

50%

IS THE LEVEL OF DISTRIBUTION LOSSES IN INDIA DUE TO LEAKAGES IN WATER SUPPLY. THE CORRESPONDING FIGURE IN SINGAPORE: 5%.

SOURCE: CITY SANITATION STUDY 2010, MINISTRY OF URBAN DEVELOPMENT; CENTRAL WATER COMMISSION, GOI; DOWN TO EARTH; WORLD BANK

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hetas was not the only company to see opportunity in water, though it may have been the most proactive in this particular case. The need for water will last as long as humans do, so the market opportunity in this space is huge.

Municipal water treatment projects form a Rs 7,000 crore market, as estimated by brokerage Edelweiss in April 2014. Large conglomerates such as L&T as well as smaller ones like the Rs 80 crore Chetas are fighting for a slice of this.

Most water projects are government sponsored. There have been sporadic attempts to implement public-private partnerships (PPPs) in large projects, but these have not really taken off. Between 1990 and 2011, there have been only 26 PPPs in water projects. Consultants in the space say that it's difficult for private companies and governments to see eye to eye on projects.

The opportunity for private players lies in smaller projects—innovative models developed and implemented by scientists and entrepreneurs. But companies, however innovative, can't enter this space unless state governments are willing. That's because managing water depends on many factors, including soil condition, ground water availability, and climate. This means states need to adopt different measures to manage and

distribute water. Somnath Sen of the Indian Institute for Human Settlements (IIHS) in Bangalore, says state governments and utilities "prefer to stick to national norms". This, despite the fact that "our policies and programmes talk about local adaptive flexibility".

This is where private companies have stepped in. For instance, Hyderabad-based Waterlife India provides safe drinking water to more than 4,000 villages across the country. The company first sells its project to state governments, which in turn provide money for water purification and dispensing. The company typically selects the appropriate water purification technologies, depending on the hydrological zone. It then sets up a "decentralised micro-utility", or a system that purifies and dispenses water to 1,000 to 3,000 people. From there, it sells 20 litre cans of water at Rs 5 to Rs 7. (To put this in perspective, a 20 litre can from Bisleri costs roughly Rs 70.) Waterlife also maintains these dispensers for up to 15 years, with the money it makes from selling the water.

Waterlife is now attempting a more ambitious project in Haryana, where it is collaborating with the Defence Research and Development Organisation in a pilot to treat the state's water for heavy metals and chemical contamination.

Then, there's Piramal Water's Sarvajal project that attempts

to do what Waterlife is doing—provide clean drinking water at the village level. However, unlike Waterlife, Piramal has opted for the franchise route to supply water to more than 1.2 lakh people in five states, and Delhi. The company has set up a chain of Sarvajal solar-powered water ATMs, which are supplied with water by a franchisee. The franchise is generally given to the licensed owner of a local water source (borewell or well), and Piramal trains them in purification techniques. The franchisee and Piramal share the revenue, with ratios depending on who owns the purification systems. “If a franchisee has put in Rs 8 lakh to Rs 10 lakh, it can take up to 24 months to break even,” says Anuj Sharma, COO of Piramal Water.

There are large players, including L&T and Infrastructure Leasing & Financial Services Limited, and multinationals like Veolia and Degremont, which focus on engineering, procurement, and construction (EPC) of large projects, where operations and maintenance services are also a revenue source.

P **private equity (PE) investors** have been watching this space keenly since 2011. For PE player Matrix Partners India, water is an emerging area. Its partners decided to focus on one, maybe two, parts of the water value chain where the private sector was scaling up fast. Avnish Bajaj, Matrix Partners’ managing director in India, met Deshmukh and realised that Chetas Control Systems has seen it all since 1989, even before technology companies became active in the domestic water industry. In 2011, Matrix Partners backed Chetas, putting in Rs 60 crore after studying more than 50 mid-sized companies. “Since Chetas is in water measurement, it can expand into automation, which is a large market,” says Gautam Chhugani of Matrix Partners.

In India, over 50% of freshwater is unaccounted for or doesn’t generate revenue. The corresponding figure is less than 5% in Singapore, and in high single digits in Britain (where water is privatised). That is the scope for Chetas, whose only local competitor is L&T.

Other PE players have also looked at water entrepreneurs favourably. The same year Matrix invested in Chetas, Nexus

Venture Partners backed wastewater treatment solution provider Jaldhara Technologies in Mumbai. And by the end of that year, Matrix made its second bet on water, this time on Waterlife India. It invested Rs 22 crore in December 2011. In March the following year, International Finance Corporation, the private investment arm of World Bank, invested \$25 million (Rs 147.3 crore) in water management company Doshion in Ahmedabad. Last year, Infoscian Krishnan Narayanan co-founded Innokriti Cleantech Solutions that designs and engineers urban and rural water management systems.

Investments are happening in global companies as well, such as VA Tech Wabag, an Austrian water treatment company whose Indian division was bought out by ICICI Ventures and the local management in 2007. Pune entrepreneur Sandeep Asolkar has also acquired a stake in SFC Environmental Technologies, Austria, to own worldwide patents of SFC’s C-Tech technology.

C **onstruction biggie Shapoorji Pallonji**, headquartered in Mumbai, has been in the water purification business since 1982, when it set up Eureka Forbes, now a Rs 1,100 crore company. Since 2013, Eureka Forbes has been expanding into water treatment in real estate and construction because of synergies with the parent company, apart from growing its community water supply business in towns and small cities. The water purification devices business, says Bangalore-based industry consultant Ganapathy P.G., will eventually overtake the bottled water market.

“In the metros and large cities, electric water purifiers would account for 33% of the market,” says Shashank Sinha, GM marketing, Eureka Forbes. In small towns, it follows a franchise model to sell purifiers. “We want to tackle water end to end, from consumer homes to purification solutions for buildings,” says Sinha, referring to Eureka Forbes’ division, Forbes Pro Water Solutions. It is simultaneously working with municipal corporations for water treatment.

Eureka Forbes has also served as an incubator of sorts for entrepreneurs. In 2002, IIT Madras nano-science researcher T. Pradeep did pioneering work on a nano-particle based on gold and silver that can degrade pesticides found in water. In 2004, Pradeep took this to Eureka Forbes, which commercially launched AquaGuard Gold Nova using his invention.

In 2007, Pradeep, along with Anshup, an IIT Madras alumnus with whom he had worked on a prior project, M. Udhaya Sankar, and Amrita Chaudhary, co-founded InnoNano Research first under Eureka Forbes, before they took it to IIT Madras for incubation as shareholder scientists. Their first product came out last year.

Most of the work so far has been in the area of drinking water. Wastewater treatment tends to be overlooked, which is

FUNDING FOR URBAN WATER SUPPLY HAS GONE UP, BUT RURAL AREAS REMAIN UNDERSERVED.

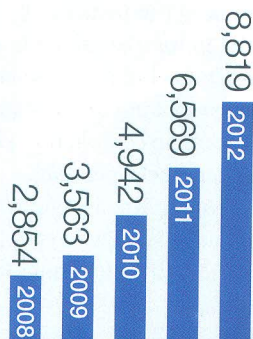
2007-12	53,600
2002-07	19,760
1997-2002	18,620

ALLOCATION (RS CRORE)
SOURCE: PLANNING COMMISSION OF INDIA



**BOTTLED
WATER SALES
HAVE SOARED,
BUT PURIFIERS
HAVE TAPPED
LESS THAN 10%
OF THE INDIAN
MARKET.**

SALES (RS CRORE)
SOURCE: EUROMONITOR INTERNATIONAL



dangerous because wastewater eventually reaches freshwater sources like rivers. "We don't understand that water and wastewater are two sides of the same coin," says Sen of IIHS. "The mindset in society and government has been to bring water even from far away, and forget about the rest." Treated water can reduce dependence on fresh water by as much as 30%.

In the private sector, the likes of VA Tech Wabag, Suez, and SFC Environmental Technologies have the lead. U.S.-based MWH Global is optimistic of wastewater treatment and sewage networks being huge opportunities for it to be technical advisors and design consultants to municipal boards.

But others like Thermax, an energy and environment engineering company in Pune, don't see water becoming more than the highest single-digit contributor to revenues. This is because municipal boards prefer lowest bidders over the best technologies to treat waste and industrial waters, says S. Unnikrishnan, managing director and CEO, Thermax.

Still, there's always going to be demand. "We can live without electricity, but nobody can live without water," says Vasu Padmanabhan, CEO of Piramal Water. On the policy front, if Kejriwal's aborted thrust disappointed the private sector, there's recently been good news from the Centre. One of the first projects announced by the new government is cleaning up the Ganges. The river is arguably the most polluted water body in the world, presenting a mammoth challenge that will require the expertise of private-sector companies. It's a good start; the Fremen of Arrakis would approve. ■