

Towards Universal Water Supply and Sanitation for all in Urban Areas

V. Srinivas Chary

Dean of Research and Management Studies & Director,
Urban Governance and Infrastructure Development, ASCI
(schary@asci.org.in)

Learning Objectives

- Gain better understanding :
 1. Urban Water and Sanitation – Situation Analysis
 2. 24-7 Water Supply in Cities – Experiences and lessons
 3. Universal sanitation – Good practices
 4. Lessons for achieving scale

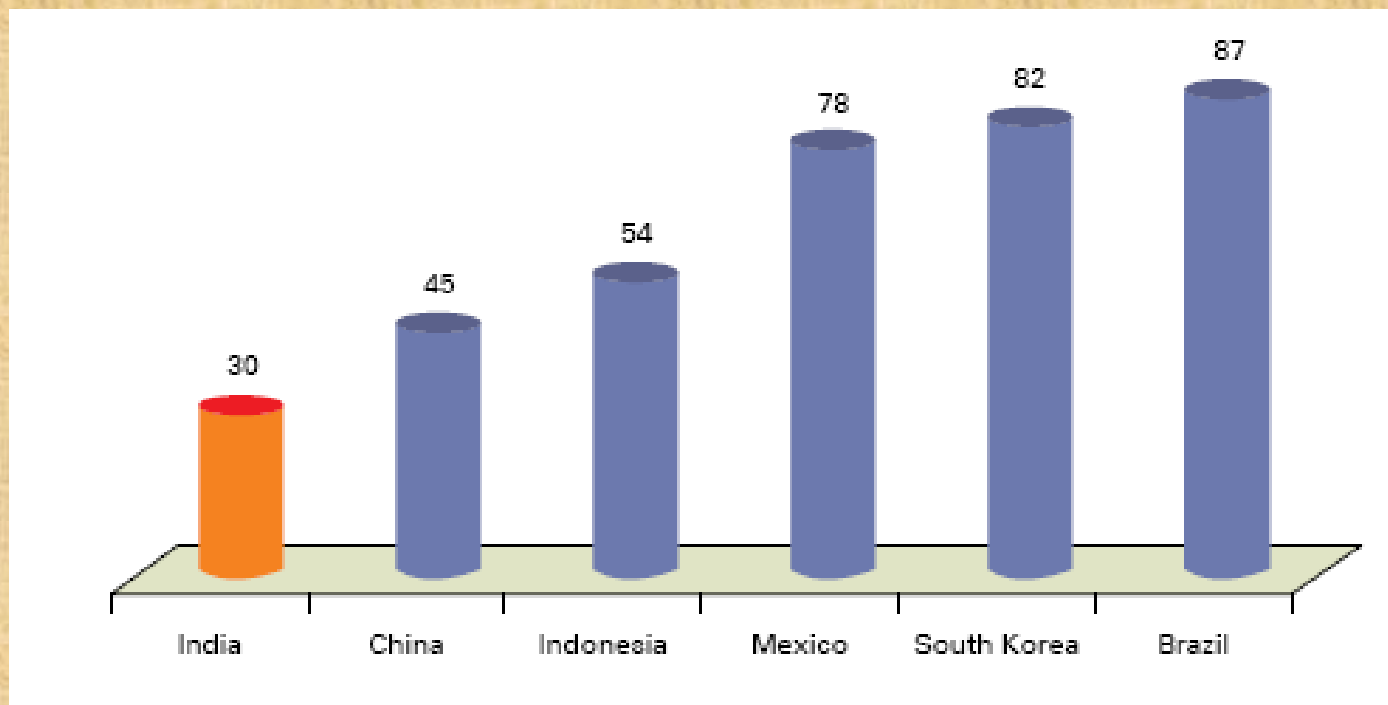
CONTEXT

Urban Transformation

India is the second largest urban system next to China

India is urbanizing fast

India is urbanising...



India's urban population to increase

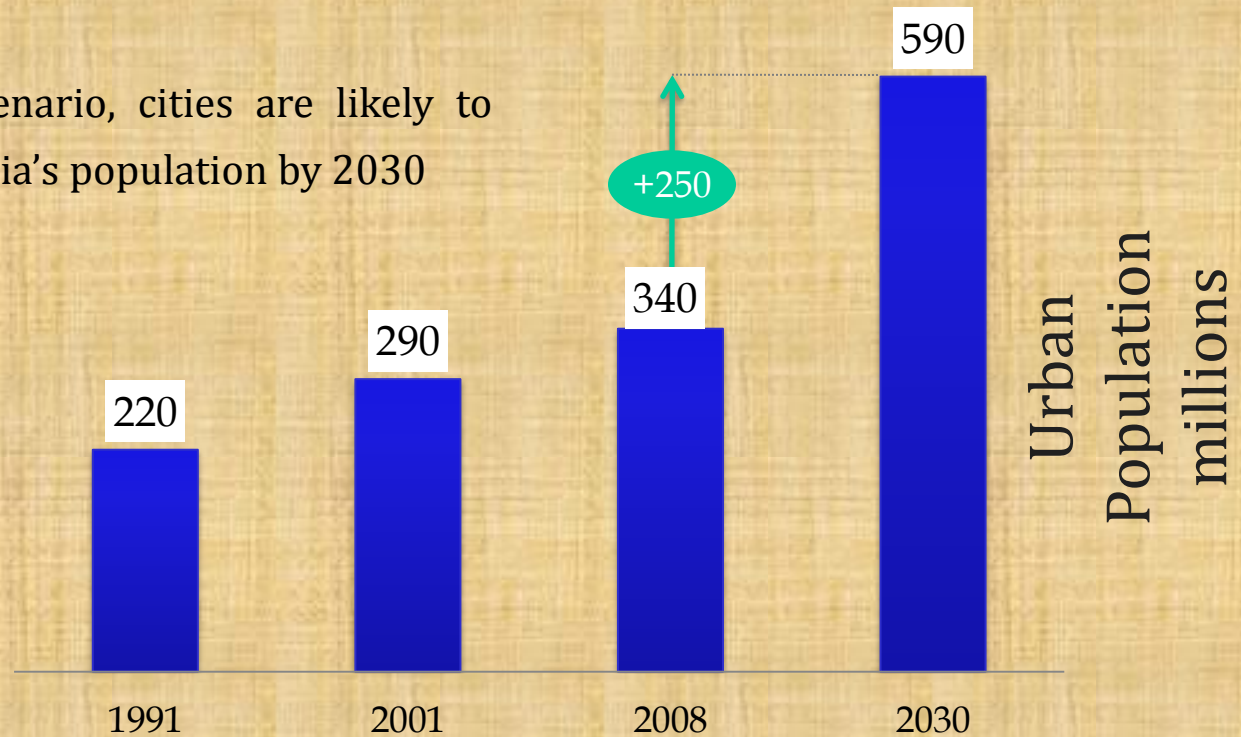
- From 350 mn today to 600 mn by 2031
- From 50 cities with population of 1 mn and above today to 87 by 2031

On average, 25 per cent of the population in Indian cities lives in slums.

Urban planning, urban infrastructure development and public service delivery of universal standards must address this challenge.

Urbanisation scenario

In MGI's base-case scenario, cities are likely to house 40 percent of India's population by 2030



Total Population millions	856	1,040	1,155	1,470
Urbanisation rate %	26	28	30	40

Source: India Urbanisation Econometric Model; McKinsey Global Institute analysis

Urban Areas and Economy

Cities and Economy

- Engines of Growth – over 60% contribution to the economy
- Hubs for enterprise, innovation, people and politics
- Increasing dependence of national/state eco growth on the productivity of cities



Indian Cities and the Economy

Contribution to GDP

1980-81	47%
1990-91	55%
2000-01	60%
2021	73%

Efficient urban areas are essential for achieving ***growth*** and ***poverty reduction*** targets. .

Cities are competing for investments

Cities are competing

- It's no longer India vs China
- Guangzhou vs Gurgaon

Chennai, not Shanghai

If Tamil Nadu should become the investors' chosen destination in the near future, it must be sold as one. The INDIA TODAY think tank debates what is holding the state back.



CREATING A NEW IMAGE: ICONS members (from left, front row) Bhaskaran, Editor Prabhu Chawla, Venkatachalapathy and Vasanthakumar; (back row) Rao, Radhikaa, Haasan, Srinivasan, Jain, Muthiah and Reddy

POSITIVES

- The state has a high percentage of skilled manpower that can attract entrepreneurs.
- With surplus power and a high road connectivity, Tamil Nadu can provide the infrastructure that investors crave.



NEGATIVES

- Tamil Nadu failed in marketing its potential. It lost out as Kerala moved ahead in the tourism front and Karnataka in IT.
- The state did not have a long-term plan for development. The policies changed along with the parties in power.

■ By Shankar Aiyar

ICONS

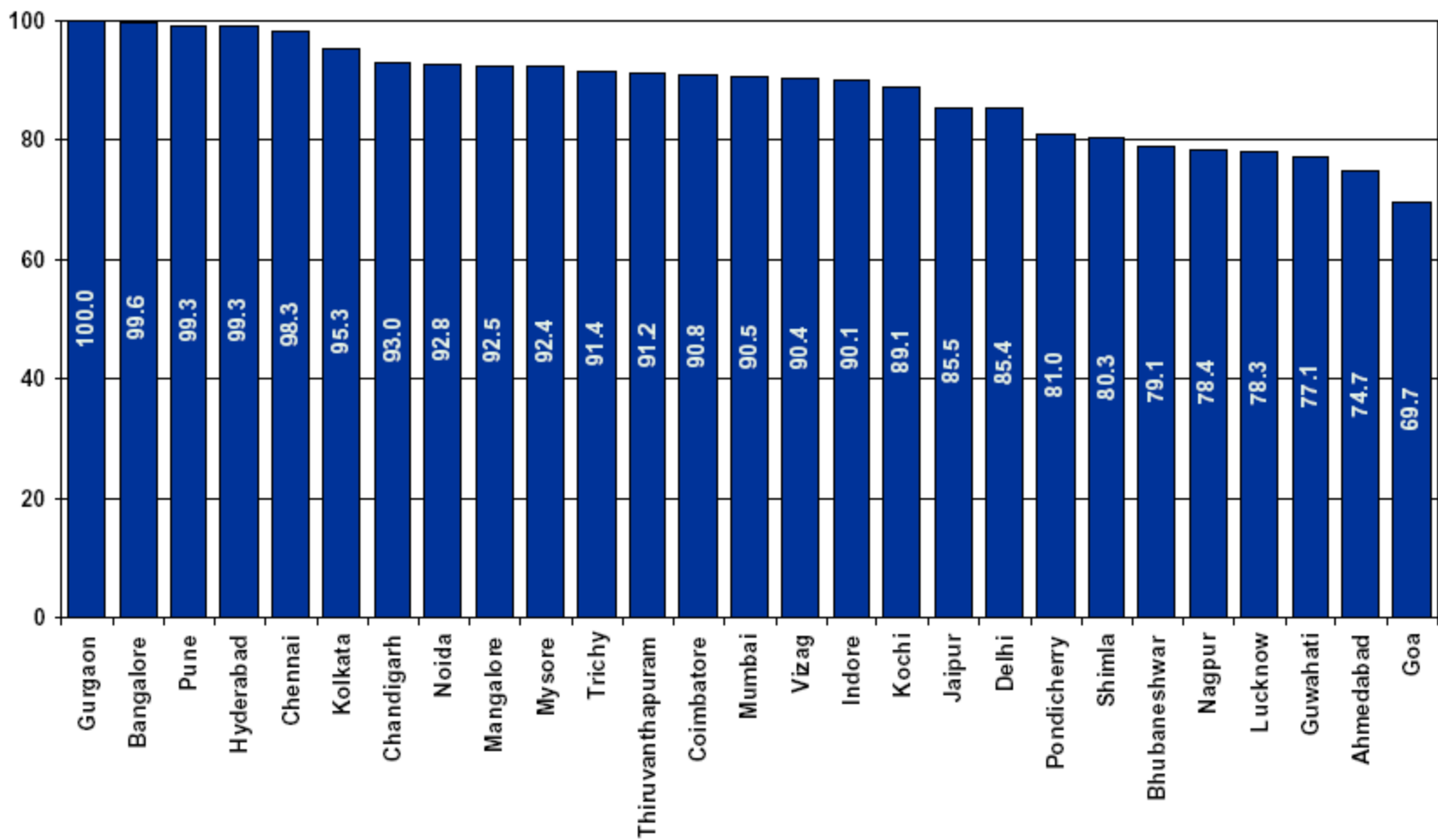
It is the third largest economy in the country. On per capita income it ranks 10th nationally and an astounding 78 per cent of its population live above the poverty line. With a literacy rate of 73 per cent as against the national average of 64, school enrolment higher than that of even Kerala and 232 engineering colleges churning out graduates, it is poised to lead the skills-set race. Add a rare distinction, surplus power, to 92 per cent road connectivity and 42 per cent urbanisation

and you have a picture investors would drool over. Yet Tamil Nadu ranks No. 3, behind Maharashtra and Gujarat, in terms of investment. Why would this be so?

It is a question that was worth three hours of debate by leaders of industry, trade and society. To commemorate the 15th anniversary of the INDIA TODAY Tamil edition, the India Today Group unveiled two initiatives: an interactive series called ICONS, the India Today Council for News and Society, and a celebratory series called Stigaram 15 which will recognise 15 achievers from different walks of life every three months. Over the year, ICONS, a think tank comprising five permanent members, a guest panelist and special

Cities and enterprise

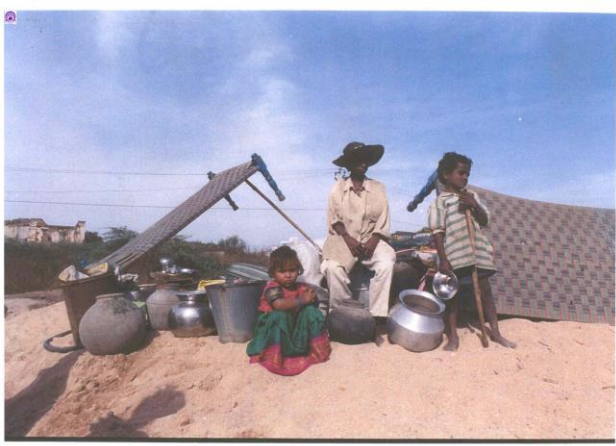
Outsourcing competitiveness Index



Cities and Poverty

Cities and Poverty

Urbanization of Poverty

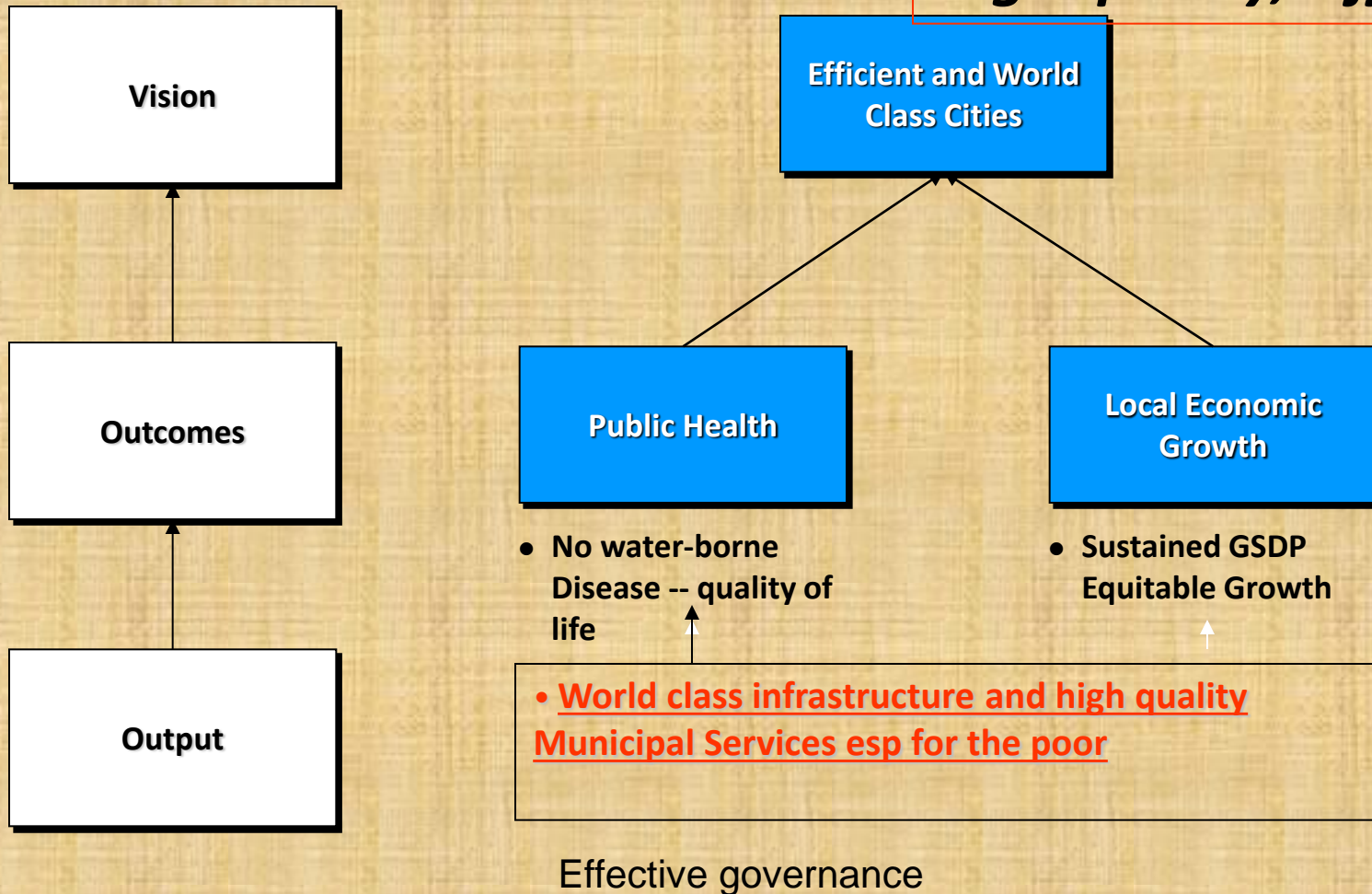


City	Slum Population (%)
Mumbai	49
Kolkata	33
Nagpur	35
Ludhiana	23
Meerut	44
Faridabad	47

Poverty moves to cities

Model Town

*Reliable, Continuous,
High quality, Affordable*



Benchmarks : Water Supply

Proposed Indicator	Benchmark
<i>Coverage of Water Supply Connections</i>	100%
Per capita availability of water at consumer end	135 lpcd
Extent of metering of water connections	100%
Extent of non revenue water	15%
<i>Continuity of Water Supply</i>	24X7
Efficiency in redressal of customer complaints	80%
Adequacy of Treatment and Disinfection and Quality of Water Supplied	100%
<i>Cost recovery in water supply services</i>	100%
Efficiency in collection of water supply related charges	90%
Number of persons receiving less than 70 lpcd	0%

Benchmarks : Sewerage

Proposed Indicator	Benchmark
Coverage of Waste Water Network Services	100%
Collection Efficiency of Waste Water Network	100%
Adequacy of waste water treatment capacity	100%
Quality of waste water treatment	100%
Extent of reuse and recycling of treated waste water	20%
Extent of cost recovery in waste water management	100%
Efficiency in redressal of customer complaints	80%
Efficiency in collection of sewerage charges	90%
Extent of Sewer House Connection	100%
Coverage of Toilets	100%

Benchmarks : Solid Waste Management

Proposed Indicator	Benchmark
Household level coverage of Solid Waste Management services	100%
Efficiency of collection of municipal solid waste	100%
Extent of segregation of municipal solid waste	100%
Extent of municipal solid waste recovered/recycled	80%
Extent of scientific disposal of municipal solid waste	100%
Extent of cost recovery in solid waste management services	100%
Efficiency in redressal of customer complaints	80%
Efficiency in collection of user charges	90%
Extent of processing and treatment of MSW	100%

Benchmarks : Storm Water Drainage

Proposed Indicator	Benchmark
Coverage of Storm Water Drainage Network	100%
Incidence of water logging/ flooding	0%

Current Status

Water Supply - Median Analysis

S.no	Indicator	Unit	Benchmark	Median Value
1	Coverage of water supply connections	%	100	67.5
2	Per capita availability at consumer end	Lpcd	135	93
3	Extent of metering of water connections	%	100	0
4	Extent of Non Revenue water	%	20	30
5	Continuity of Water Supply		24 X 7	1.3
6	Efficiency in redressal of customer complaints	%	80	90
7	Adequacy of Treatment and Disinfection and Quality of Water Supplied	%	100	70
8	Cost recovery in water supply services	%	100	25
9	Efficiency in collection of water supply related charges	%	90	60

Sewerage - Median Analysis

S.no	Indicator	Unit	Benchmark	Median Value
1	Coverage of Toilets	%	100	70
2	Coverage of Waste Water Network Services	%	100	23.5
3	Collection Efficiency of Waste Water Network	%	100	0
4	Adequacy of waste water treatment capacity	%	100	0
5	Quality of waste water treatment		100	0
6	Extent of reuse and recycling of treated waste water	%	20	0
7	Extent of cost recovery in waste water management	%	100	0
8	Efficiency in redressal of customer complaints	%	80	0
9	Efficiency in collection of sewerage charges	%	90	0

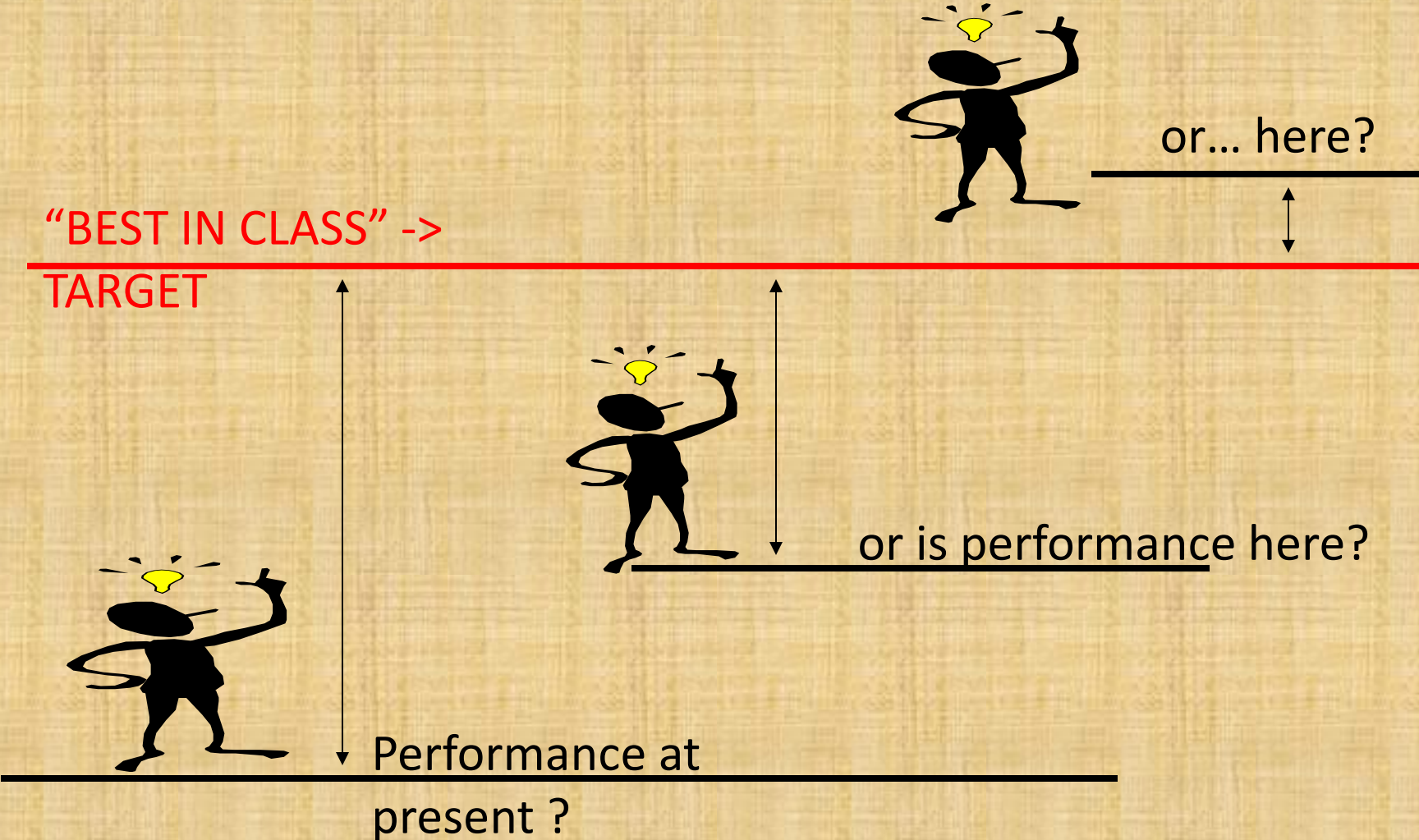
Solid Waste Management – Median Analysis

S.no	Indicator	Unit	Benchmark	Median Value
1	Household level coverage of Solid Waste Management services	%	100	47.5
2	Efficiency of collection of municipal solid waste	%	100	70
3	Extent of segregation of municipal solid waste	%	100	10
4	Extent of municipal solid waste recovered/recycled	%	80	67.5
5	Extent of scientific disposal of municipal solid waste	%	100	20
6	Extent of cost recovery in solid waste management services	%	80	4
7	Efficiency in redressal of customer complaints	%	80	65
8	Efficiency in collection of user charges	%	90	30

Strom Water Drainage - Median Analysis

S.no	Indicator	Unit	Benchmark	Median Value
1	Coverage of Storm Water Drainage Network	%	100	60
2	Incidence of water logging/ flooding	Number	0	3

Service delivery gap

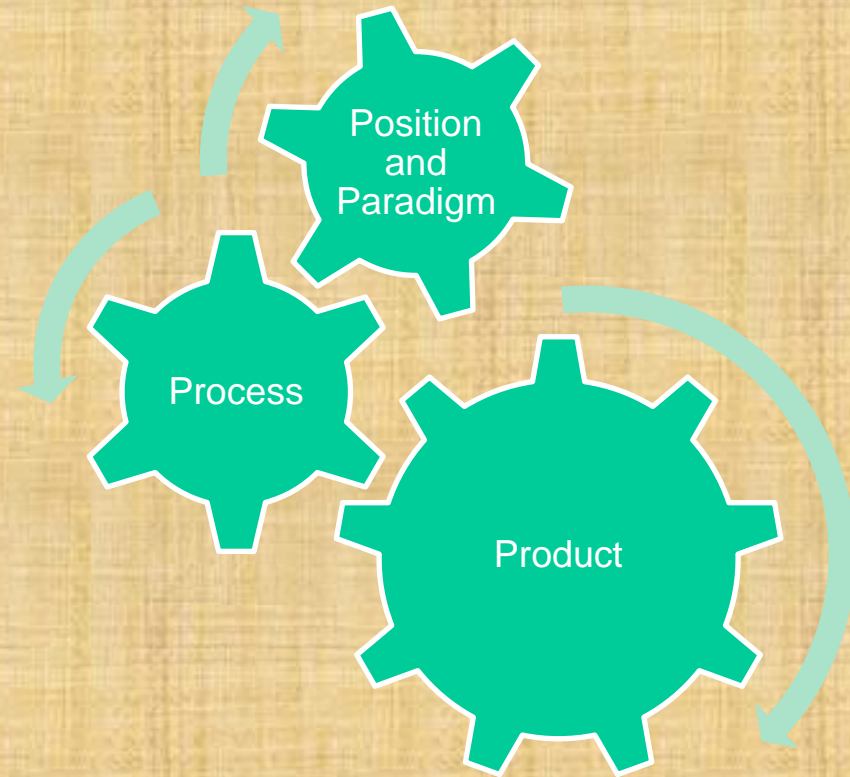


**Good urban areas are essential for
sustaining economic growth**

**High quality municipal infrastructure &
services are essential for enhancing
urban productivity
especially to the poor**

Need for innovations

- To improve service delivery
- To optimize cost



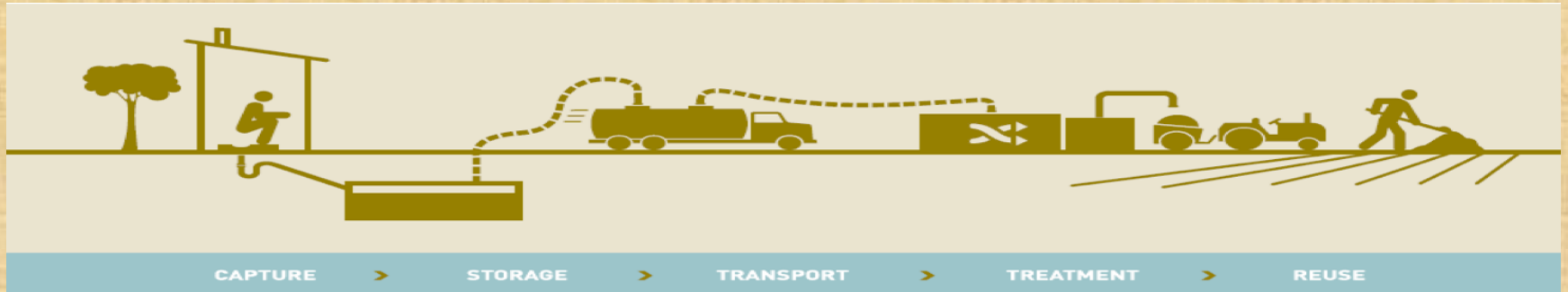
- **Innovation** is the creation of better or more effective products, processes, services, technologies, or ideas that are accepted by markets, governments, and society.

Transformational Change for Urban Water Security – Action Imperatives

- Business as usual approach will not work
- Innovation is the mantra – We need to think differently



Reinventing traditional approaches



Biotechnology Industry Research Assistance Council (BIRAC) , A Government of India Enterprise

**Announcing a Grand Challenge India Funding Opportunity
“Reinvent the Toilet Challenge - India”**

Readiness for Change..

Areas

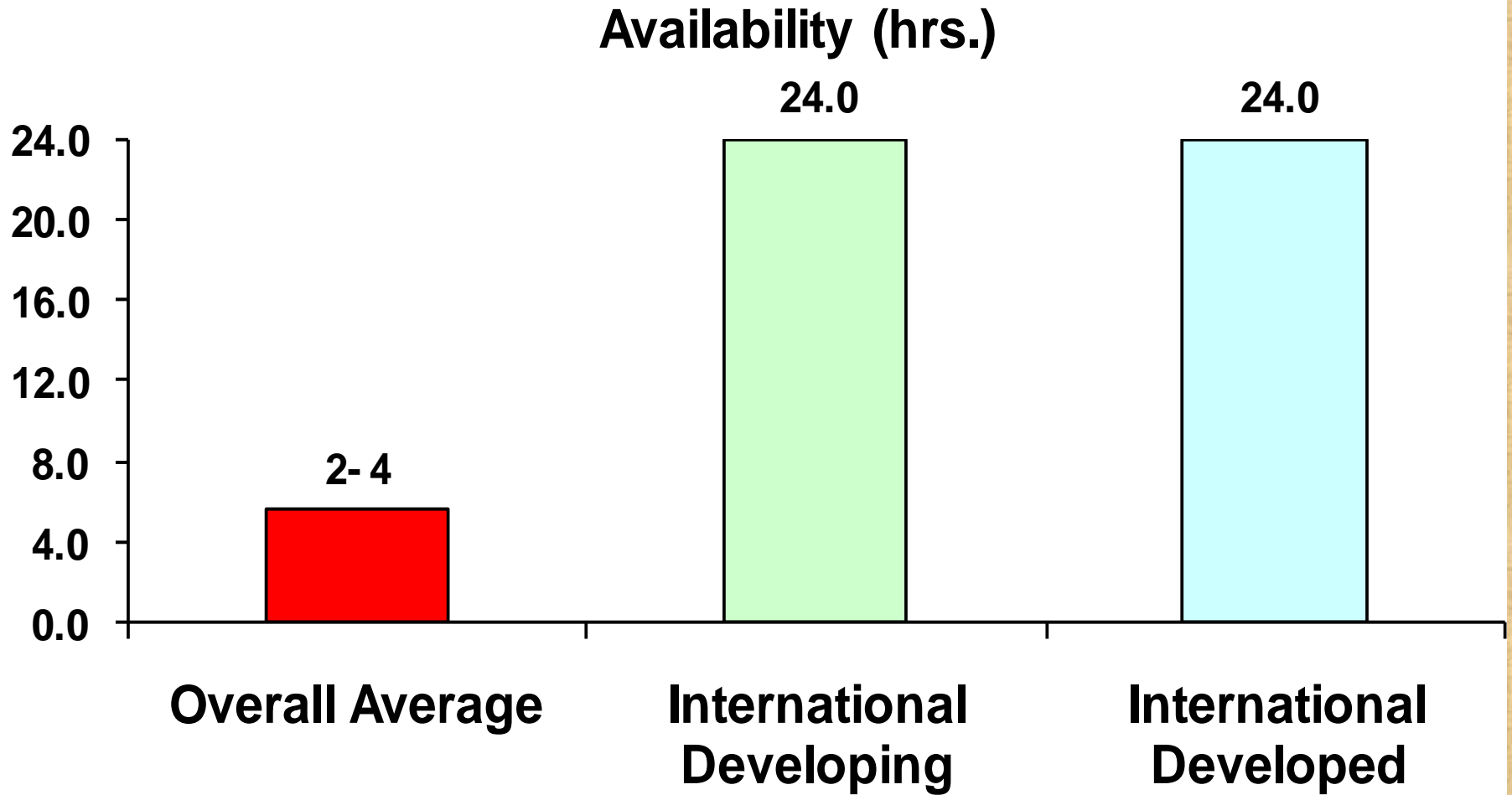
Water

Sanitation

SWM

CONTINUOUS WATER SUPPLY

Hours of service: India



Why is Intermittent Supply Bad?

Problems caused by an intermittent water supply:

1. Risk to Public health
2. Reduction in life of assets
3. Inconvenience and economic loss to citizens especially the poor

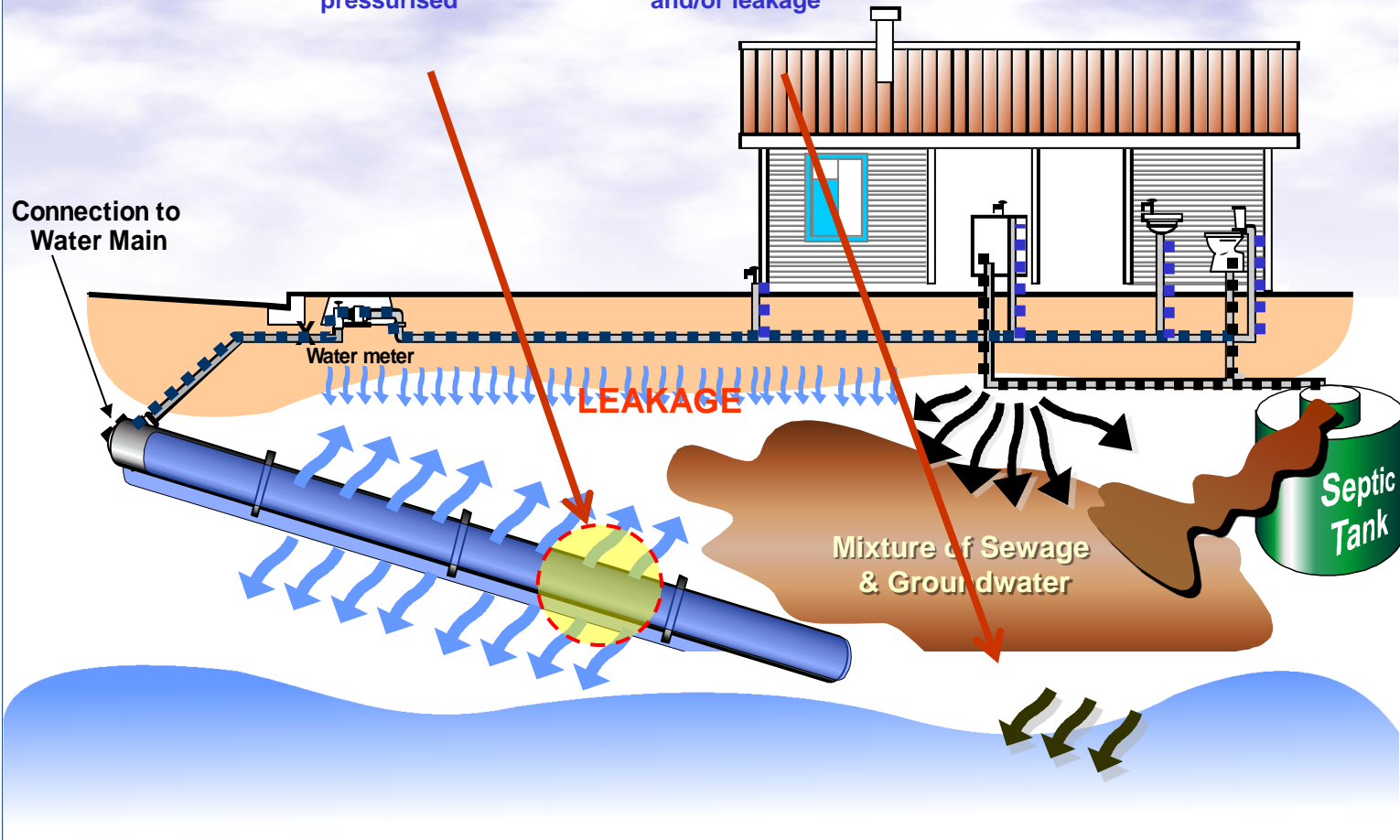
Continuous supply avoids these problems



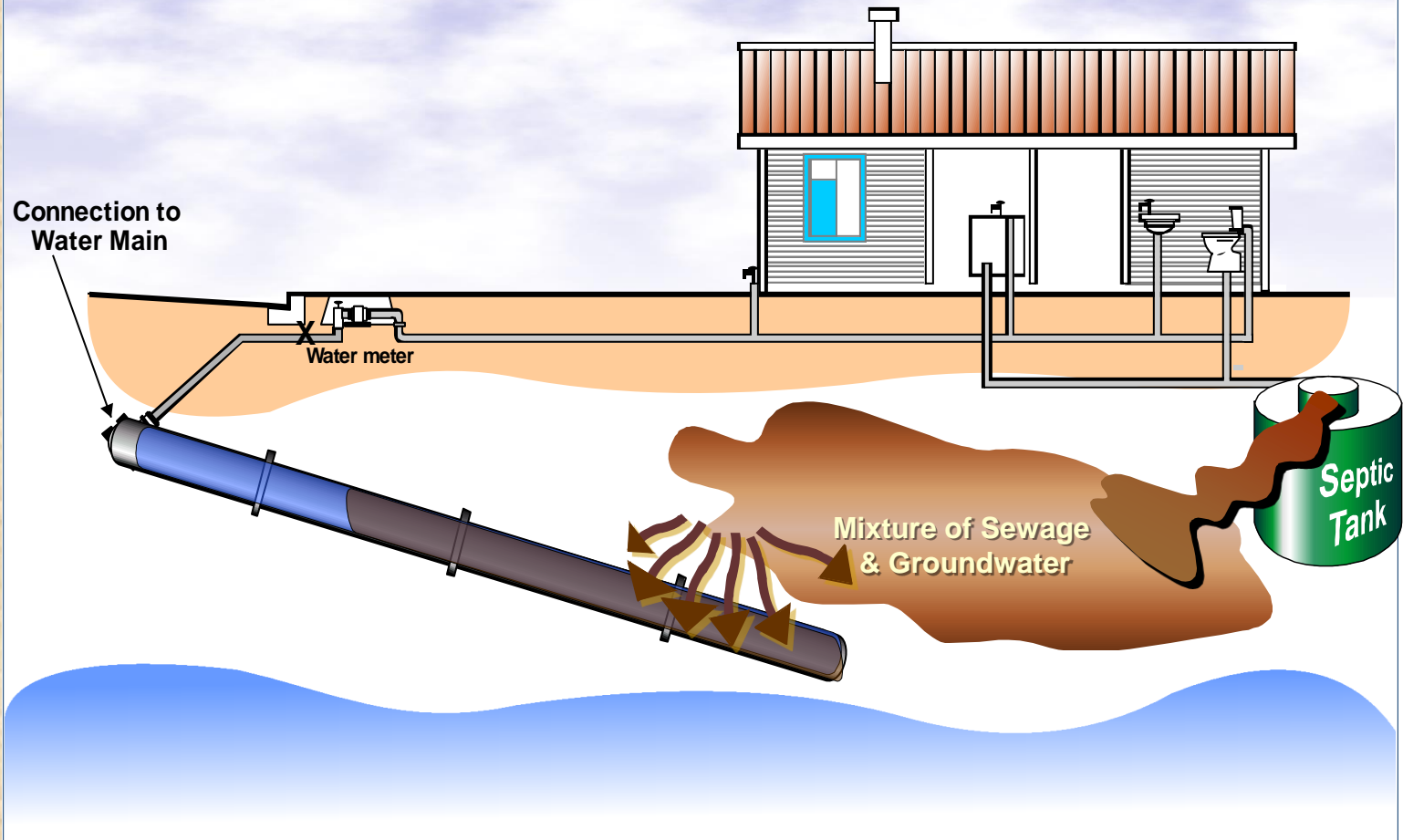
Pressurised Water Reticulation System

No ingress of sewage/groundwater into the potable supply system while pipeline is pressurised

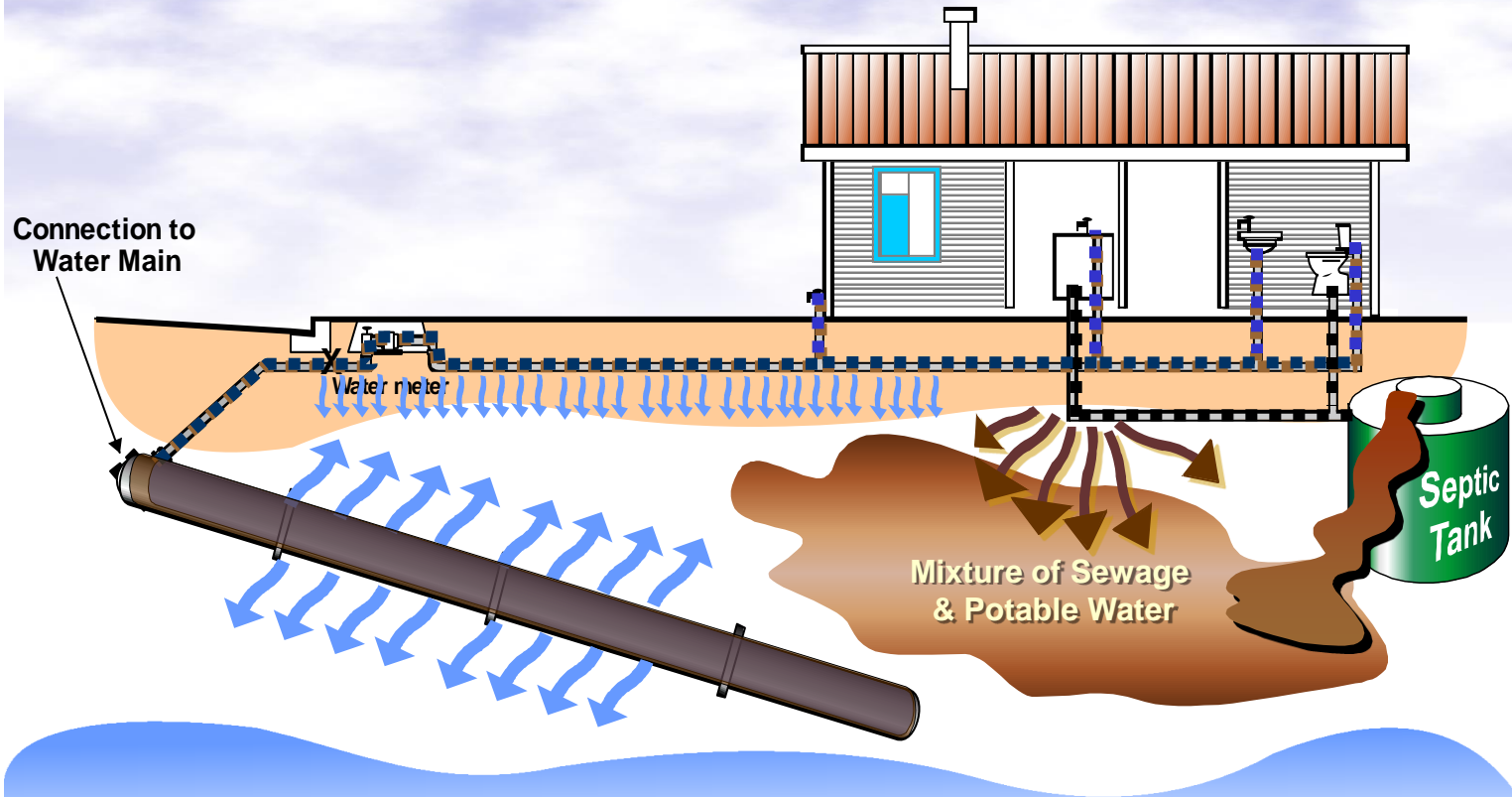
Constant contamination of groundwater from sewage and/or leakage



Water Reticulation System : No pressure



Water Reticulation System : Re-pressurised



7 die, 200 in hospital after drinking pipe water in city

Seepage From Sewage Line Contaminated Water; Tension In Area

TIMES NEWS NETWORK

Hyderabad: Seven people died and over 200 were hospitalised after drinking contaminated water at Bholakpur in Musheerabad on Tuesday. The contamination happened due to seepage of sewage water into the drinking water pipeline. Tragedy struck after several complaints to Hyderabad Metropolitan Water Supply and Sewerage Board (HMWS&SB) in the last few months went unheeded.

Tension prevailed at Bholakpur with three people dying on Tuesday morning and several others being forced to be shifted to nearby hospitals after they complained of severe diarrhoea.

Furious residents broke a pipeline and attacked water board officials and netas who trooped in for a 'dekkho,' forcing police to resort to a mild lathicharge to control the situation.

Trouble started on Tuesday with the death of four-year-old Aman, a resident of Siddiquinagar, around 8 am. A little later, a resident of Tareeqnagar Mohammed Osman (65), died due to diarrhoea. At about 10 am, another girl Taiyaba Tarun, 14, of Indiranagar succumbed. Earlier on Monday, an seven-year-old boy, Feroz of Indiranagar had died. Though officials refused to confirm, locals said two persons—Sohm, 48, of Indiranagar, and Mohd Iqbal, 50, of Rajeevnagar—died due to the same reason on Monday. Another woman, Kausalya Bai, of the same area died late on Tuesday. Residents

say that tap water in virtually all areas had got contaminated and residents regularly complained of diarrhoea and gastroenteritis. At least one person in every household in areas like Indiranagar, Siddiquinagar, Mohdnagar, Gulshanagar, Rajeevnagar, Berban Galli and Tajeernagar has been hospitalised.

Those attacked by angry residents included Water Board manager David Raj who fled the scene. Windshield of Secunderabad Lok Sabha MP Anjan Kumar Yadav's car was broken by the irate public. Musheerabad MLA T Manemma, who landed in her constituency had to beat a hasty retreat after police advised her not to visit the area. Health minister Galla Aruna and others visited the patients at Gandhi and other hospitals avoiding Bholakpur. BJP leader K Laxman, TDP leader Lal Jan Basha, PRP leaders Sravan Kumar, K Srinivas Yadav and Charminar MLA Mohd Pasha Quadri also faced the wrath of the public.

Local residents say they have been complaining about the foul smelling water since August last. "I represented to the Musheerabad MLA about change in colour of water and the stench in August 2008. After that, I met David Raj, manager of the area, thrice and gave petitions. But till date, there has been no corrective action," Taufiq Ahmed, a scrap dealer of Bholakpur, told TOI. Mohd Sharief, a mechanic, said both water and sewer pipelines run parallel to each



BURSTING WITH ANGER: A man breaks a water sump with a boulder as Bholakpur residents protest the death of seven people due to contamination of drinking water, in the city on Tuesday

other. "As the pipelines were laid about 40 years ago, they suffered damages leading to contamination," Sharief, whose wife has been admitted to Sowmya hospital due to diarrhoea, said.

HMWS&SB executive director K Harsha Vardhan claimed that the water contamination was due to tanneries located in the area. "Several residents dug up pits near their water taps and wash untanned leather in the pits. After water supply stops, the polluted water gets into the pipelines causing water-borne diseases," Harsha Vardhan said.

GHMC special officer S P Singh

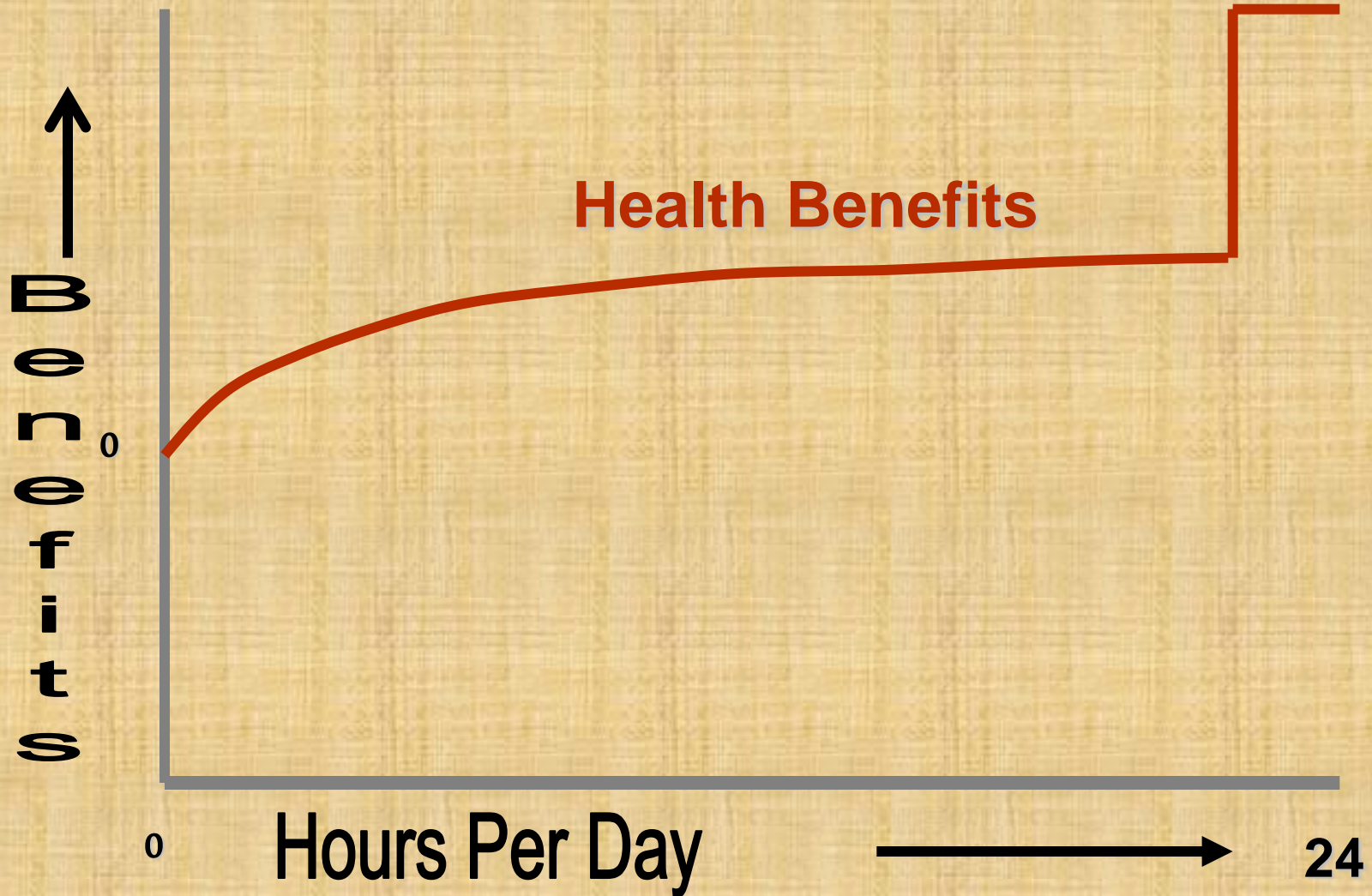
has ordered an inquiry into the incident and called for a report within three days. Cabinet minister M Mukhesh Goud announced an ex-gratia of Rs 2 lakh to the families of the deceased. He said 10 medical camps were set up in Bholakpur area and special medical teams were deployed to check outbreak of diarrhoea.

"Safe drinking water will be supplied to the area by tankers till the pipeline works are completed. Pipeline works expected to cost Rs 42 lakh will be taken up on nomination basis and completed in 15 days," he added.

▶ Related reports, P2

Ramamoorthy P

Benefits vs. Hours/Day



Impact on urban poor

Urban poor suffers the most
under intermittent supply
regime

- Health costs
- Loss of wages
- Social problems



Asset Deterioration

Problems caused by an intermittent water supply:

- distribution system subjected to unnecessary stress
- Shortening of infra life

Citizens' dissatisfaction



- Problems caused by an intermittent water supply:
- household economic improvement restricted
- customer inconvenience/high coping costs

Total Cost of Water =

(To the Consumer)

- Price per liter +
- **Coping Costs**
 - Storage costs plus
 - Pumping costs (pump + POWER) plus
 - Water Treatment costs plus
 - Labor costs plus
 - Medical Treatment costs

- **Coping costs are significantly large;**
- **Poor pay lot more in relation to their income.**

Is the goal of continuous water supply for all, feasible and ever achievable in our towns?

Towns/Cities that have recently achieved Continuous Water Supply

- Bangkok, Thailand
- Phnom Penh, Cambodia
- Jakarta, Indonesia
- Colombo, Sri Lanka
- Chengdu, China
- Shanghai, China
- Male, Maldives
- Kuala Lumpur, Malaysia
- Tashkent, Uzbekistan
- Vientiane, Laos
- Manila, Philippines
- Ho Chi Minh, Vietnam
- Kampala, Uganda
- Dhulikhel, Nepal

IS THERE ENOUGH WATER ?

YES!

No city in India has continuous water ...

Cities	LPCD	Hrs. of Water supply
Goa	341	8
Mumbai	240	5
Delhi	220	4
Agra	220	4
Hubli-Dharwad	124	3
Ajmer-Pushkar	140	1-1.5
Vijayawada	157	4
Hyderabad	162	2
Surat	195	2-3hrs
Nagpur	200	4
<i>France</i>	<i>156</i>	<i>24</i>
<i>UK</i>	<i>135</i>	<i>24</i>
<i>Kuala Lumpur</i>	<i>132</i>	<i>24</i>
<i>Colombo</i>	<i>119</i>	<i>24</i>
<i>Dakar, Senegal</i>	<i>90</i>	<i>24</i>
<i>Jakarta</i>	<i>80</i>	<i>24</i>

Hr of supply and LPCD

City	Lpcd	Hours of supply
Hyderabad	167	1-2 hr
Bhubaneshwar	280	4-6 hr
Bhopal	156	2 hr
Trivandrum	170	~ 24 hr
Ludhiyana	130	12 hr
Pondicherry	135	10 hr
Amritsar	90	11 hr
Rajkot	100	20 min
Belgaum (pilot)	90- 100	24 hr

International experience

- Singapore – 150 lpcd – 24/7
- Few African cities – 40-70 lpcd – 24/7 (less pressure)
- Malaysia cities – 130 lpcd – 24/7
- UK (Severn Trent region) – 130 lpcd – 24/7
- India – 2 hr supply – 24/7 leakages

ARE 24/7 WATER SUPPLIES FEASIBLE IN INDIAN CITIES?

YES!

If:

- non revenue water is reduced significantly (> 50%)
- customer consumption is managed (including wastage)

Waste of Water

Delhi wastes 45 per cent drinking water

By Bindu Shajan Perappadan

NEW DELHI, APRIL 27 — Constantly starved of adequate drinking water, Delhi records a waste of 45 per cent of its potable water due to pipeline leaks, stealing and transmission losses, claims a report brought out by a non-government organisation, Tapas.

While Delhi Jal Board argues that drinking water is lost through leaks in the water pipeline, stealing and transmission losses, it refuses to change the old pipelines despite orders. Tapas claims that this waste could be prevented if the pipes are changed and orders of the High Court followed.

"The DJB has an installed capacity to treat 650 million gallons of water, but can actually supply only 400 million gallons of treated water, while the rest of the requirement is met through ground water supply which is fast de-

pleting in the State. Delhi, as per records, requires 800 million gallons each day to meet its water needs and with the local capacity of 200 million and rapidly falling water table, the pressure on water is very high. And with no independent agency ever having audited the same, the DJB has escaped with whatever figures they have been supplying," said Vinod Kumar Jain, who filed a public interest litigation (PIL) in the Delhi High Court in 2000 on "Augmentation of Water Supply".

But the case against the DJB is water tight not just because of the waste but also because of the fact that despite having been shown the fault in the system, it does not seem keen to put the responsibility on itself. Provided by the DJB, Delhi's drinking water pipeline is about 9,000 km and of certain sections may be 50 years old. And in the past four years despite the constant pressure to change the pipe-

lines, the DJB has managed to change only about a little over 762 km of the water pipeline. Also, the DJB provides no small-localised sewages and wastewater treatment plants in the city.

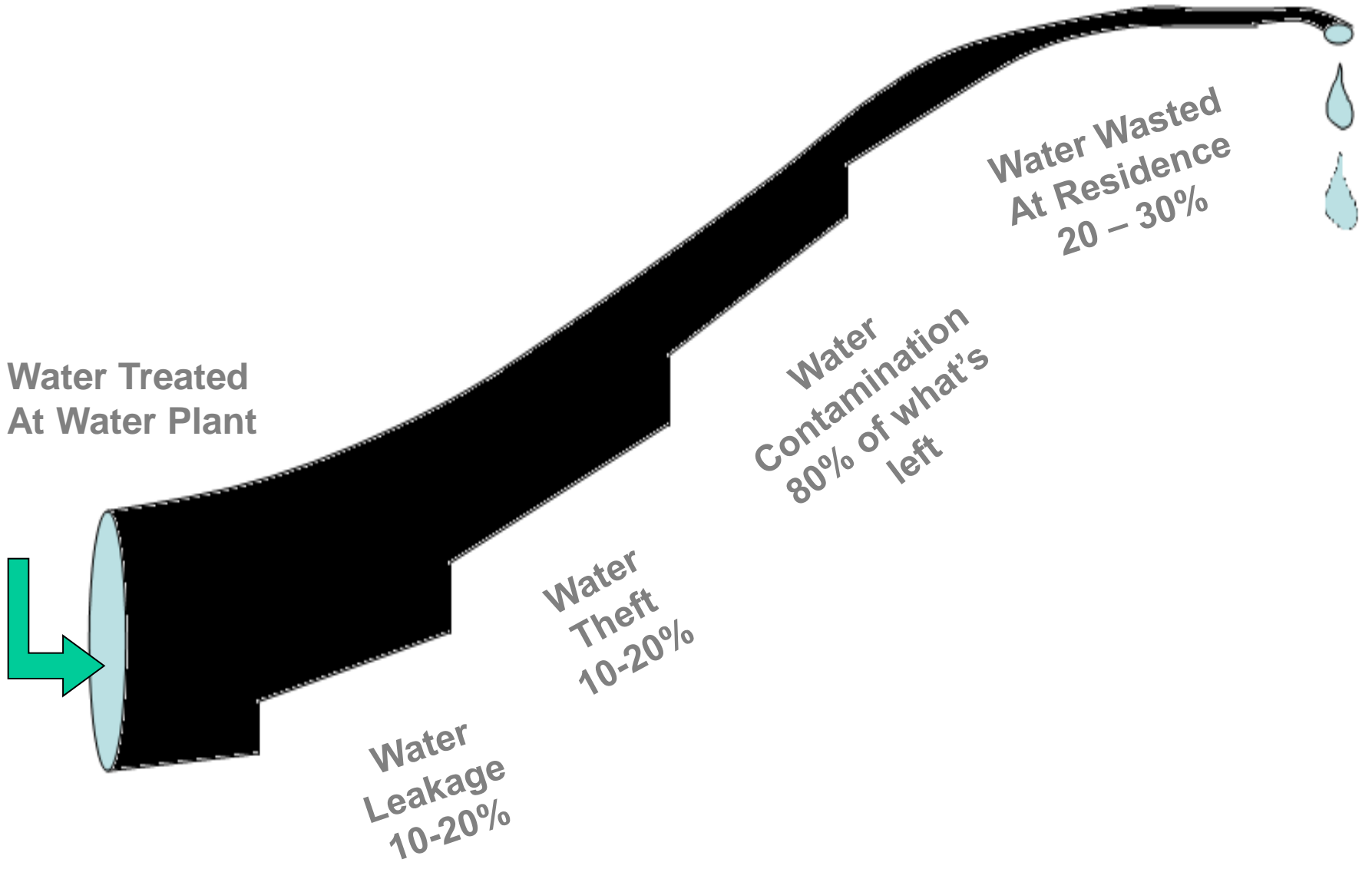
"That is exactly what we are saying, despite the requirement by the Courts, the Board has not changed the pipes, instead they are busy playing the blame game. What they do not tell the public is the fact that the leaks and stealing is dangerous in more ways than one. While water is wasted because these lines run parallel to sewages lines, contamination is also common," adds Mr. Jain.

For its part, the DJB claims to have set up a separate Leak Detection Cell and says that special stress was being given to replacement of old water pipelines. It also claimed that during the year about 208 km of old eroded water lines have been replaced in different parts of Delhi.

Lost Water =

Lost Revenue =

Lost Water



Water Treated
At Water Plant

Water
Leakage
10-20%

Water
Theft
10-20%

Water
Contamination
80% of what's
left

Water Wasted
At Residence
20 - 30%



Water Balance

1 Water Produced	2a Authorized Consumption	3a Billed & Authorized Consumption	4a Billed & Metered	5a Revenue Water	6a Collected	
			4b Billed & Un-Metered		6b Un- Collected	
		3b Un-Billed Authorized Consumption	4c Un-Billed & Metered		5b Non- Revenue Water NRW	6c Un-Billed
			4d Un-Billed & Un-Metered			
	2b Water Losses UFW	3c Apparent Losses	4e Theft			
			4f Customer Meter Errors			
			4g Data Errors			
		3d Real Losses	4h Storage Leakage			
			4i Transmission Main Leakage			
			4j Service Connection Leakage			

Supply side strategies

- Price signal
- Metering and volumetric billing
- Awareness

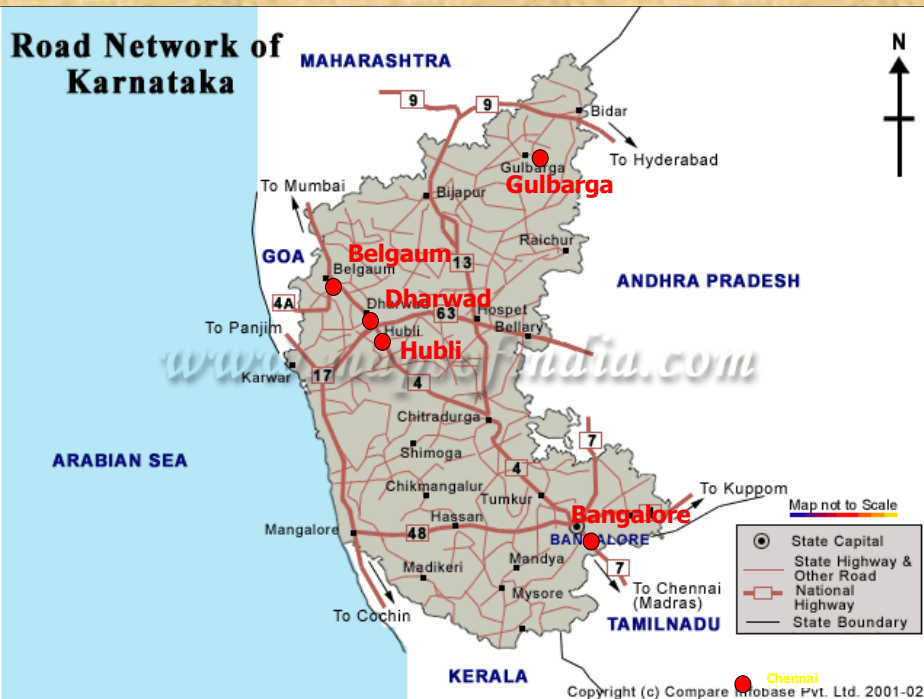
Karnataka – 24-7 Water

PPP (Management Contract)

❑ Management contract for 24x7 water supply in pilot zones in three towns (Hubli-Dharwad, Gulbarga and Belgaum) in Karnataka

- Project awarded in April 2005 to CGE, a french company
- The private operator is responsible for rehabilitation, O&M of the water supply system. The assets and staff continue to remain with the ULB.
- The private operator will improve the quality of service against a fee based contract.
- Tariff revision is the responsibility of the ULB and would be taken-up only after demonstration of service improvement.
- The pilot zones serve close to 20,000 households

Karnataka Project Objectives



- Demonstrate the faisibility of continuous and pressurised water supply in 5 demonstration zones
- Scale up project for the other Cities based on the lessons learnt from current project
- Initiate reforms in water and sanitation sector at the state and ULB level

Karnataka - Pre Project Situation

City	Bulk Supply in MLD	Service Level (LPCD)
Belgaum	57	123
Gulbarga	25	46
Hubli-Dharwad	111	123

Sl.No	Item description	Situation before
1	Hours of supply	2 to 6 hrs; once in 3 to 5 days
2	Volume of water supplied to demo zone in Mld	5.8
3	Average pressure in distribution system in m	0-5m; very un-equitable distribution
4	Number of public fountains + Hand pumps + cisterns + Bore well with power pump	41+41+32+55=169
5	Customer service	Not really existed



KUWASIP

Salient Features of The Contract

- **A Performance based Management Contract**
- **Management fee divided into fixed and performance fee – 60:40**
- **Performance fee only after achieving milestones for Performance Targets set in the Contract**
- **Capital expenditure limited to a maximum ceiling (agreed after three pre-bid meetings)**
- **If capital expenditure exceeded, Contractor to bear the additional expenditure; Bonus if saving is more than 25% of maximum ceiling**
- **Bonus if real loss deductions is below stipulated limit**
- **Bonus if increase in billed volume is above stipulated limit**
- **Penalized if minimum stipulated Performance Targets not achieved in time – non payment of Performance Remuneration**
- **Termination of Contract if achievement of Performance Targets beyond limits**

KUWASIP

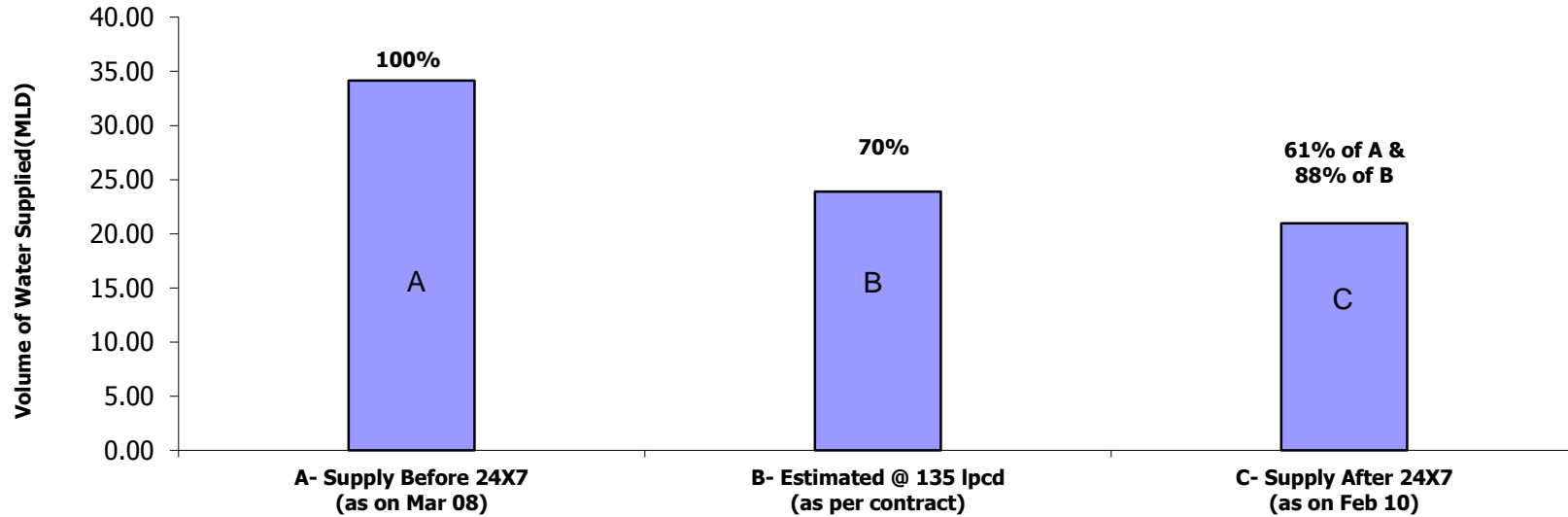
Performance Targets

- 1) Continuous pressurized water supply – Min. Pressure 6 Mtrs.**
- 2) Reduction in emergency stoppages – 4 emergency stoppages per year**
- 3) Metering 100% property connections and PF**
- 4) 100% Billing every month on volumetric basis**
- 5) Reduction of water losses – 20 Ltrs. / connection / day / meter by end of O&M Period**
- 6) System connection requests to be completed within 7 days**

KUWASIP

Adequacy of available water

Volume of water Supplied for 25,295 Connections



Details	A (as per contract)	B (Estimated)	C (After 24x7)
No of connections	16,399	25,056	25,056
Volume of water Required(MLD)	22.14	23.67792	19.23
Volume of water required (MLD) for 25,056 connections	33.8276627	23.67792	19.23
Percentage with respect to supply before 24x7		70%	57%

Per capita water supply:

- Before 24x7 : 149 lpcd
- Estimated : 135 lpcd
- After 24x7 : 100 lpcd

24/7 water project gets thumbs up

By ASHA KRISHNASWAMY
DH News Service

BANGALORE: Here is a bitter pill to swallow for the NGOs which have been vehemently protesting a private agency handling the operation and maintenance of water supply in four cities of North Karnataka.

The 24/7 water supply in the demonstration zones of Belgaum, Hubli-Dharwad has received a positive response from the consumers, according to officials. The corporations of these two cities have passed resolutions recommending to the urban development department to extend the service throughout the city. The Gulbarga city corporation is yet to take a decision.

Resolution

The Belgaum city corporation in its resolution passed in December, 2007 has stated that in 10 wards, on an experimental basis the 24/7 water supply has been introduced.

This World Bank assisted project has been com-

pleted satisfactorily. The implementation of the project is also satisfactory. The consumers have expressed their happiness over the service.

The citizens of other wards are demanding that they too should get water round-the-clock. Keeping the public good in view, the government should permit the project to be extended throughout the city, the resolution says.

Possibilities

The Hubli-Dharwad corporation too has passed a similar resolution. It has suggested to the Urban Development department to explore the possibilities of extending the service as well as funding of the project.

Veolia, a French company, has been entrusted with the task of O & M of the water supply in the demo zones of five cities. The task is to provide water supply to select 7,600 houses in Belgaum, 7,000 in Hubli, 5,000 in Dharwad and 3,000 houses in Gulbarga.

The supply is opera-

REVISED WATER TARIFF IN BELGAUM AND HUBLI-DHARWAD DEMO ZONES				
Category	Minimum tariff kilo lt	Maximum tariff kilo lt	Tariff per kilo lt in Rs	Minimum tariff/ connection
Domestic	0	8	6/-	Rs 48
	8	15	10/-	
	15	25	15	
	Above 25	-	20	
Non-domestic	0	15	20	Rs 160
	15	25	30	
	Above 25	-	40	
Commercial	0	15	40	Rs 320
	15	25	60	
	Above 25	-	80	



*In Gulbarga, the tariff will be Rs 2 lesser than the above cities for all categories.
*So far in Hubli-Dharwad a flat rate of Rs 90 is paid by those consume up to 8 kilo lts/month
*In Belgaum the flat rate is Rs 83 & in Gulbarga Rs 60

tionalised in Belgaum and Hubli demo zones, while it is nearing completion in Dharwad and Gulbarga. The project began in April 2005 and it covered nearly 10 per cent of the total population of the cities.

The company has to maintain the work it has executed for two years after

the completion. Belgaum Commissioner Megananavar says that the consumers are happy because they are getting water for 24 hours a day. The water leakage and wastage has drastically reduced. "The people now have assured water supply. So, the wastage has come down.

We want the service to be extended to the entire city. But who should be doing it and how the scheme should be financed are left to the government," he added.

He also said that the urban poor; those of who were depending on the public taps, will now have to pay nominal charges.

"The dedicated doorstep water supply has changed the mindset of the poor urban consumers. They are ready to pay. In the new system the water supply pressure is so high that it can reach III floor without the help of pumps. The replacement of old pipelines and valves have helped in plugging the water leakage by 30 per cent. The system is designed to supply 135 litres of water per day per individual," he added.

Ready to pay

Similar views were expressed by Dr Ajay Nagabushan, Commissioner, Hubli-Dharwad Corporation. The citizens' groups in the Corporation have found that the new system is working well. The consumers would not mind

paying for the service they are getting, he added.

Now it is paying time for the consumers. The revised water tariff, connection and meter charges have to be paid.

Exempted

The meter charge has been fixed at Rs 900, the connection charges are Rs 2,000. The BPL families are exempted from paying the meter charges.

But even the poor has to pay the meter charges and the payment can be made in installments. The new tariff came into effect in Hubli on February 1. Other cities will soon switch over to the new tariff, according to a KUIDFC official.

The government is yet to act upon the resolutions passed by the corporations to extend the 24/7 service. Sources said that the efficiency of the new system will be watched for next six months before fully accepting it.

Also, the consumers' reaction to the revised tariff would have to be watched before deciding on next course of action.

24-7 Water Supply – Malkapur

- **Malkapur (pop – 35,000) situated near Pune has implemented 24-7 pressurized water supply on a town wide basis.**
- **Supply was intermittent, unreliable, poor cost recovery prior to the initiative.**
- **MJP initiated dialogue with elected representatives, study tours conducted and secured their commitment for 24-7 water supply, metering, volumetric billing, pipe technology etc. (2007)**

24-7 Water Supply – Malkapur

- Distribution system designed using hydraulic modeling; GIS.**
- HDPE pipe network and MDPE house service connection, AMR meters, bulk meters of AMR type were used.**
- Elected representatives played an important role in promoting the initiative amongst community – excessive water usage was controlled by promoting float stop cocks for overhead tanks and volumetric billing. Discount was offered for water conservation.**
- Outcome - Pumping hours reduced from 20 hrs to 13 hrs, No valve men needed, energy saving, 100 % cost recovery, UFW is about 12%.**

- Citizen are receiving 24-7 water supply with pressure through out the town.
- Strong political support.

24x7 Pilot Project - Nagpur

- Feature
 - 15000 Connection including slum
 - 10 slum areas
 - Population 1.5 - 1.75 lakhs
- Contract
 - Study, Rehabilitate, Operate contract with Private operator.
 - Penalty /bonus for targets in UFW, Quality, Customer services and Continuity of supply



Pilot 24x7 Project :Baseline for Private Operator

KPI	Baseline KPI	Target KPI
UFW level	The NRW is assessed at 50%	UFW below 30% for proportionate bonus
Increase of volume billed compared to FY 2007-08	Volume billed for FY 2006-07 = 21,7 MLD on average. This value shall be used for the cost-benefit analysis of the rehabilitation plan. The baseline KPI for the assessment of bonus/penalties during O&M will be based on FY 2007-08 data.	Higher than baselines by 10% for bonus
Continuity of supply	2 to 24 hours depending on the area of supply	24/7 throughout the zone with minimum 2m pressure at customer tap
Water Quality	63% of samples tested had a residual chlorine level higher than 0,2 ppm	Residual chlorine higher than 0,2 ppm
Time for handling customer complaints	Not applicable	Within 3 days



Rehabilitation Plan for Pilot 24x7

- Replacement of 100% House service connection & Meters
- Replacement of old conservancy GI pipe
- Rehabilitation of Tertiary network
- Hydraulic modeling as per Master plan
- Installation of new billing system



Visible Project Benefits

- Water Supply Hours
 - Water supply hours was increased from 4.30 hours to 24 hours
- Water Consumption:
 - The water consumption was 440m³/day for a Bajiprabhu nagar with 4.30 hrs has increased to 24 hrs with 504m³/day of water consumption. With telescopic tariff and billing as per consumption will reduce.
- Pressure :
 - Before conversion the average pressure at consumer water taps was 2-5 meters and now it reaches to 10-12 m. It resulted in to energy saving for consumers as water reaches directly to overhead water tank.
- Quality:
 - The continuous pressurized network has avoided the contamination of water from leaking House service connections which were replaced under this project.



City Wide Scale up

PPP Approach

- The PPP approach aimed at BOT/Lease Concession for 25 years
- Private operator would undertake necessary investments for system upgradation and operates and maintains the system

Estimated Cost and Funding

- Total cost – Rs 387.86 crores
- JNNURM funding (50%) – Rs 193.94 crores
- Govt. of Maharashtra (20%) – 77.57 crores
- Private sector (30%) – Rs 116.35 crores

TOI - 10th July 2010

Earlier, they welcomed the project, now they just don't want it

Sachin Dravekar | MW

Two years ago, it was a dream-like situation for residents of Bajji Prabhu Nagar. Their locality, with 200-odd houses, had been chosen by the Nagpur Municipal Corporation (NMC) as a model for the ambitious round-the-clock water supply project. But two years down the line, the situation has changed completely. Those who favoured the project earlier, now want it scrapped. They say the project has not lived up to expectations. Instead, they are now demanding equal water supply to all localities of the city.

Former municipal commissioner Aseem Gupta had a meeting with our mandal regarding the project. He showed us old and rusty pipelines laid out by the civic body and assured to change them with high quality ones.

We thought the project was beneficial hence we supported it," says residents.

Radheshyam Samrit, a senior citizen and president of Bajji Prabhu Nagar, says Samrik Mandal, who had earlier appealed to the residents to support the project, is now wanting the NMC bosses to withdraw it. "Initially, for a few days we received round-the-clock water supply. Later, it was reduced to 12 hours and now, we get water for just 6-9 hours a day. Despite this mess, we are issued inflated bills which don't match our consumption, at all," says Samrit.

When NMC started implementing the project, it assured to

replace the water meters free of cost. However, that didn't happen. "The civic body is now charging Rs 10 per month as rent towards the new meter.

"My earlier meter was in very good condition. Ours is a three-member family (wife and daughter). We have a well and use the water for non-drinking purposes. Despite such low consumption, the private company issues unjustified bills," adds Samrit.

"Residents of Bajji Prabhu Nagar have passed a resolution appealing to the civic body to scrap the 24x7 water project from our area and to give priority to the areas that are hit by water scarcity," says Samrit.

Another resident N V Das says, "I liked the project two years ago. However, due to the high pressure, the pipes are getting damaged at the joints. This is not the only problem. We are not getting water round-the-clock as assured by the authorities. Since the pipeline remains empty for more than 12-16 hours, it spreads water-borne diseases."

House wife Sarita Mendhe says, "Promises made by the NMC were not fulfilled. Neither do we get round-the-clock water nor do we get bills according to consumption. Earlier, we thought that we would not have to store water anymore. But now, we have installed water purifiers as a precautionary measure. In the evening hours, there is no water supply at all."

Another citizen V Nagarajan says, "Because of the project, we were being charged Rs 8 per unit (soon it will be Rs 5 per unit). But in the nearby slums, where NMC has given house-to-house connections without meters, they are charging just Rs 30 to Rs 80 for unlimited water consumption. The project is a total failure. We have only got bills ranging from Rs 5,000 to Rs 20,000 per quarter. Earlier, we used to pay bills in the range of Rs 600 to Rs 2000," he added.

Meanwhile, Shashikant Hastak, executive director of Nagpur Environmental Services Limited, clarified that when the project was implemented in Bajji Prabhu Nagar, consumers got bills according to the old rates (Rs 3.5 per unit).



NOT ROSY ANY MORE: Residents of Bajji Prabhu Nagar say the project has not lived up to expectations

A LOW AFTER A HIGH

Hitvada City Line - 8th July 2010

Dharampeth residents protest against raised water bills, demand to cancel 24x7



Citizens participating in the morcha taken out on Wednesday against 24x7 water supply project of NMC.

■ Staff Reporter

FEELING the heat of water bills, the residents of Dharampeth locality took out a morcha under the banner of Jan Akrosh and pressed for scrapping of 24x7 water supply project. Jan Akrosh along with other like minded organisation has taken a lead in awakening citizens about future possibility of privatisation of water distribution in city. The morcha started from Ram Nagar Square and culminated in a public meet at Gokulpeth Zone office of Nagpur Municipal Corporation (NMC). Congress Party corporator Arun Gudadhe, Independent Corporator Parinay Fuke and that of Nationalist Congress Party (NCP) Pragati Patil, actively participated in the morcha.

The Jan Akrosh objection to project is that NMC's Ruling Party has not revealed the full implications of 24x7 water supply and hurriedly trying to implement the scheme all over city. The clause of 25-year agreement with French multi-

national, Veolia, is seen as precursor to privatisation of water distribution. The citizens in Dharampeth Zone have told not to pay water bills issued from April 1, 2009, till NMC resolving objections about the inflated bills. The release say NMC advertisement asking citizens to pay cost of 50 units of water consumption does not clearly say that in future corporation will not recover balance amount.

The Secretary of Jan Akrosh, Ravindra Kaskhedikar said that at many places in Dharampeth Zone, high pressure of water supply lead to breaking of pipes and residents footed repair cost of Rs. 1500. Later a memorandum was handed over to Dharampeth Zone Chairman Vivek Tarse.

Dr Anil Laddad, President of Jan Akrosh, Dr Ashok Lanjewar, President, Jan Manch, Adv Prabhakar Marpakwar, N L Sawarkar of Jan Samasya Nivaran Sangarsha Samiti, Rajendra Gangotri of Marartoli Telenkhedi Nagrik Sagarsha Samiti, Abdul Rashid of Shabar Vikas Manch,

Maximum water bill is Rs 1650: Sandip Joshi

SANDEEP Joshi, Chairman, NMC's Standing Committee, said the Jan Akrosh office bearers seems to be affected by dilemma and opposing 24x7 project without valid arguments. Countering their point about inflated bills, he said maximum water bills amounted to Rs. 1650. As to agreement with Veolia, it is for the improvement of operation and maintenance of water distribution system. Right now, billing is done for only 270 MLD while city gets 550 MLD of water supply. Further, the reforms in water supply is mandated under JNNURM and NMC has little say in the matter, he claimed. Joshi expressed surprise at participation of Pragati Patil, a NCP corporator, saying Maharashtra Minister and senior NCP leader Jayant Patil is spearheading drive to implement 24x7 water supply in Sangli town. Similarly, Parinay Fuke had put-up banners congratulating me on being chosen to head Standing Committee and appreciating 24x7 scheme and his about turn is quite surprising?!

Subhodh Uke of Dharampeth Nagrik Kruti Samiti, addressed the meet. Prominent personalities including Lakshmandas Chandak of Ambazari Parisar Nagrik Mandal, Prabhakar Khonde of Dharampeth Jeshtha Nagrik, Tatha Parisar Nagrik Mandal, Radheshyam Samrit of Bajirprabhu Nagar Nagrik Mandal, Ashok Bagalkote, Chandrashekar Ghuse, Sanjay Pal of Ram Nagar Nagrik Mandal, Neelima Harode and Gauri Sawarkar of Ambazari Ladies Club and representatives of Indian Medical Association, Shivaji Nagar Nagrik Mandal, Ramdaspath Nagrik Mandal and others.

CM sanctions NMC's proposal of water tariff revision

■ Staff Reporter

A major relief to water consumers facing severe problems due to steep hike in water tariff, the Chief Minister (CM) Chavan has sanctioned proposal of Nagpur Municipal Corporation (NMC) for revision of water charges.

Ruling Party leader Praveen Datke said that Chief Minister has sanc-

tioned proposal of NMC and notification is likely to be published in next couple of days. It may be mentioned that the civic body has proposed to reduce the water charges upto Rs 5 per unit from Rs 8 per unit for residential consumers upto 30 units. The charges for 31 to 80 units are Rs 8 per unit and above 81 units, the charges are Rs 15 per unit.

Datke said that Maharashtra

Government has put one slab and reduce first slab of 1 to 30 units by 1 to 22 units. This may be only change, he added and said that after publication of notification the things can be cleared.

The civic body has sent proposal for final nod to Urban Development Department of Maharashtra Government in April 2010.

It may be mentioned that citizens

and several social organisations had protested against the steep hike in water tariff. Rattled by angry protesters, NMC General Body had formed rate revision committee under the chairmanship of Praveen Datke to submit a report on the water tariff. The NMC has proposed reduction in water charges of Commercial and Industries. The NMC has deleted semi-residential category.

Hitvada City Line - 26th June 2010

NMC GB approves 24x7 water supply for entire city

■ Ruling Party leader Datke suggests implementation of the scheme from the areas facing water scarcity

CITY LINE - 26th June 2010

■ Staff Reporter

NOW, 24x7 Water Supply project will be implemented in the entire city on public private participation (PPP) model, starting from areas facing water scarcity, as general body of Nagpur Municipal Corporation (NMC) has given its consent for draft agreement to be signed with selected private company for 25 long years to implement the scheme. Barring three Corporators, no one protested against the proposal. NMC has implemented 24x7 Water Supply pilot project in Dharampeth Zone.

As per the draft, 24x7 scheme will be implemented at the cost of Rs 387 crore sanctioned by Union Government under Jawaharlal Nehru

National Urban Renewal Mission (JNNURM). The selected private company will implement the scheme by contributing 30 per cent share of NMC that is Rs 116 crore. With this, the company will maintain the entire water works of NMC- right from water treatment to distribution at door steps, for next 25 years.

Under the scheme, the existing water meters will be replaced followed by replacing of necessary old water network, removing all public taps, water connection to each and every household including those located in slum areas, reducing the water losses etc. The process to select a private company is almost nearing completion. On Friday, the agreement to be signed between

NMC, Nagpur Environmental Services Limited (NESL) (special purpose vehicle of NMC for water works), and selected private company, is given approval by general body. If everything goes right, the work will be started as soon as the company is selected followed by agreement, may be in the current year.

When the proposal was placed before general body, Congress Corporator Praful Gudadhe said, he is in favour of 24x7 Water Supply project, but not privatisation of water works. NMC should do the work on its own. If any private company is given the work for 25 long years, the people will have to face severe problems and its fine example is

Dharampeth Zone. Any private company has single motive to make profits from the work and so far PPP model has not succeeded anywhere in the country, he said.

Gudadhe said, the private company regulating pilot project of the scheme in Dharampeth Zone has failed to implement the scheme properly, leading to public backlash. He claimed that he was the only corporator who had protested the the water tariff hike proposal. Learning lesson from this, Ruling Party should take the people into consideration before implementing the scheme, he advised.

NCP Group Leader Vedprakash Arya and Corporator Parinay Fuke also protested the proposal. BJP

Corporator Chhaya Gade suggested not to sign agreement for long period with private contractor. Excluding them, no one protested against the proposal and Mayor Archana Dehankar declared it as passed.

Standing Committee Chairman Sandeep Joshi said, NMC office bearers including Ruling Party Leader Praveen Datke, Chairman of Dhantoli Zone Avinash Thakre, former Chairman of Dharampeth Zone Manjusha Bangale and NCP Corporator Pragati Patil organised a drive to solve problems of people from Dharampeth Zone. With the initiative of BJP City President and former Ruling Party Leader Anil Sole, workshops were organised

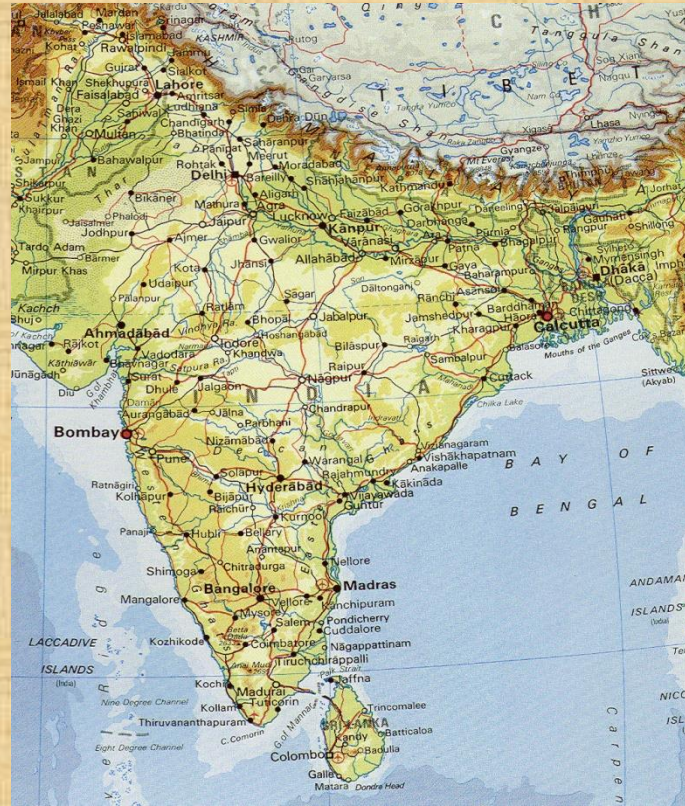
(Contd on page 2)

24-7 Water initiatives

- Hubli Dharward, Gulbarga etc
- Latur
- KMDA, Mysore, Nagpur
- Navi Mumbai
- Shivpuri, Khandwa
- In pipeline
 - Udipi
 - Greater Hyderabad
 - Madhurai, Salem
 - Coimbatore
 - Chandanagar

Continuous water supply initiatives in India

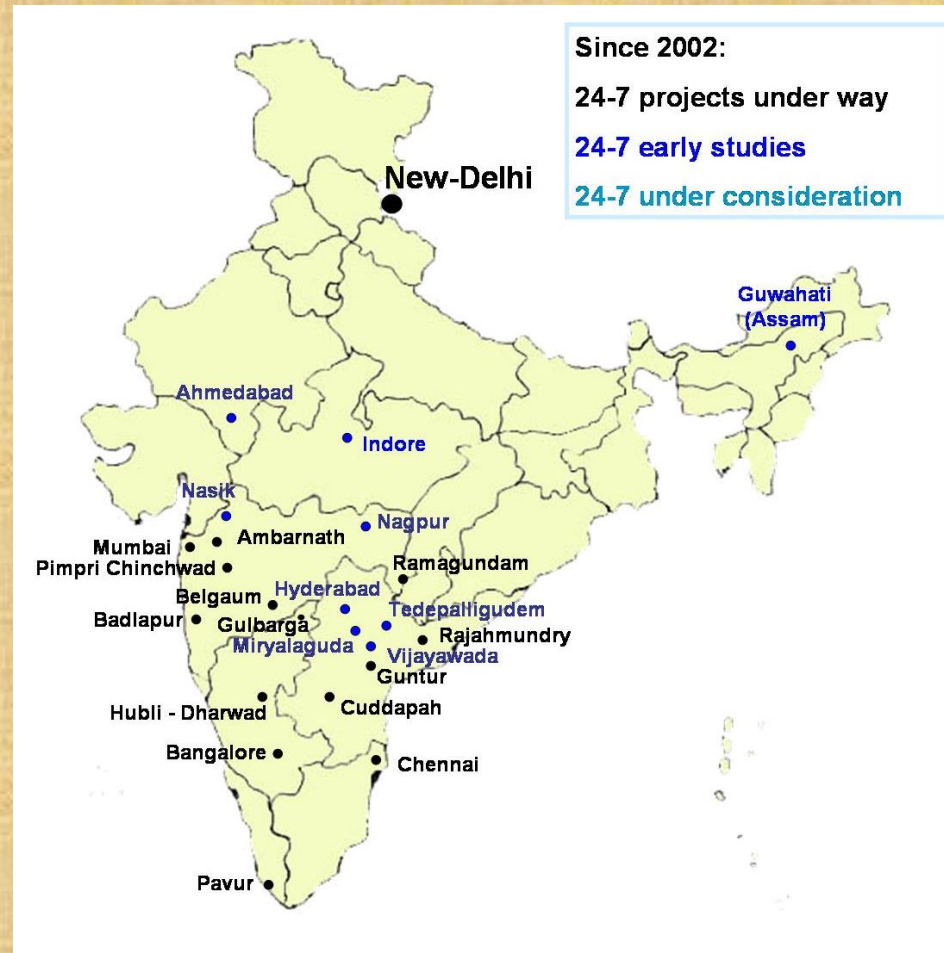
2002/3



None

Continuous water supply initiatives in India

2008



~60

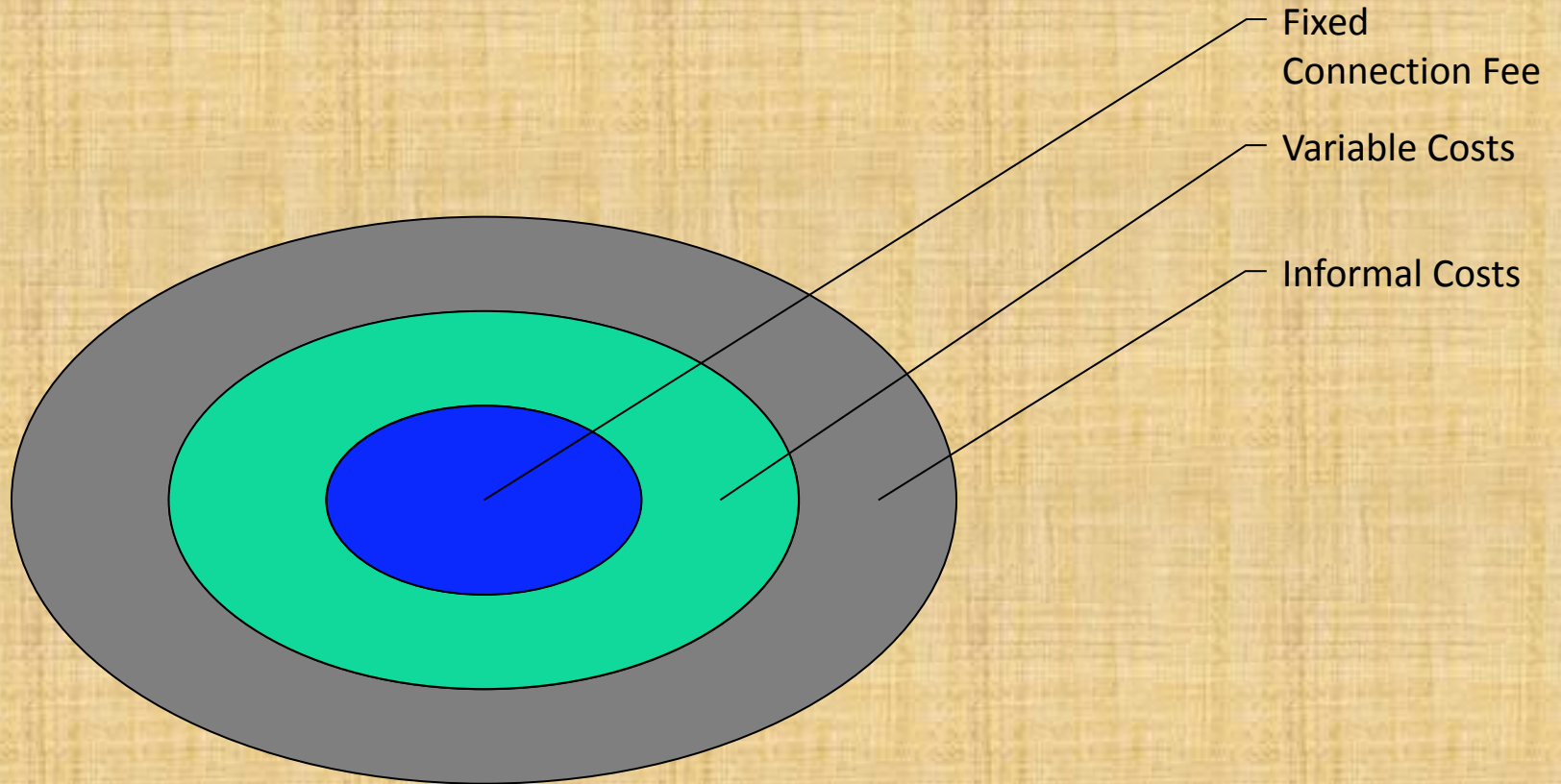
Coverage

Coverage – Water Supply

- Network coverage is high
- Significant gap between number of households and connections on record ; resulting in low coverage
- Last mile connectivity is a major concern
- Entry barriers for the poor to gain access
 - High cost of connection
 - Procedural barrier
 - Policy barrier

Tariffs in India are kept low, in the name of the poor. But poor are not formally connected to the system

CONNECTION COSTS



CONNECTION CHARGES

Fixed Costs

- Security Deposit
- Connection Fee

Variable Costs

- Pipe extension
- Road digging, material ,labour

Informal Costs

- Speed money
- Documentation costs
- Trips to Municipal Corporation etc

CONNECTION COSTS

Fixed Costs

- Scrutiny Fee: Rs 5000 including meter, supervision and labour charges
- Security Fee – Rs 2000

Variable Costs

- Paid as a lumpsum to contractor
- Road cutting, material etc etc

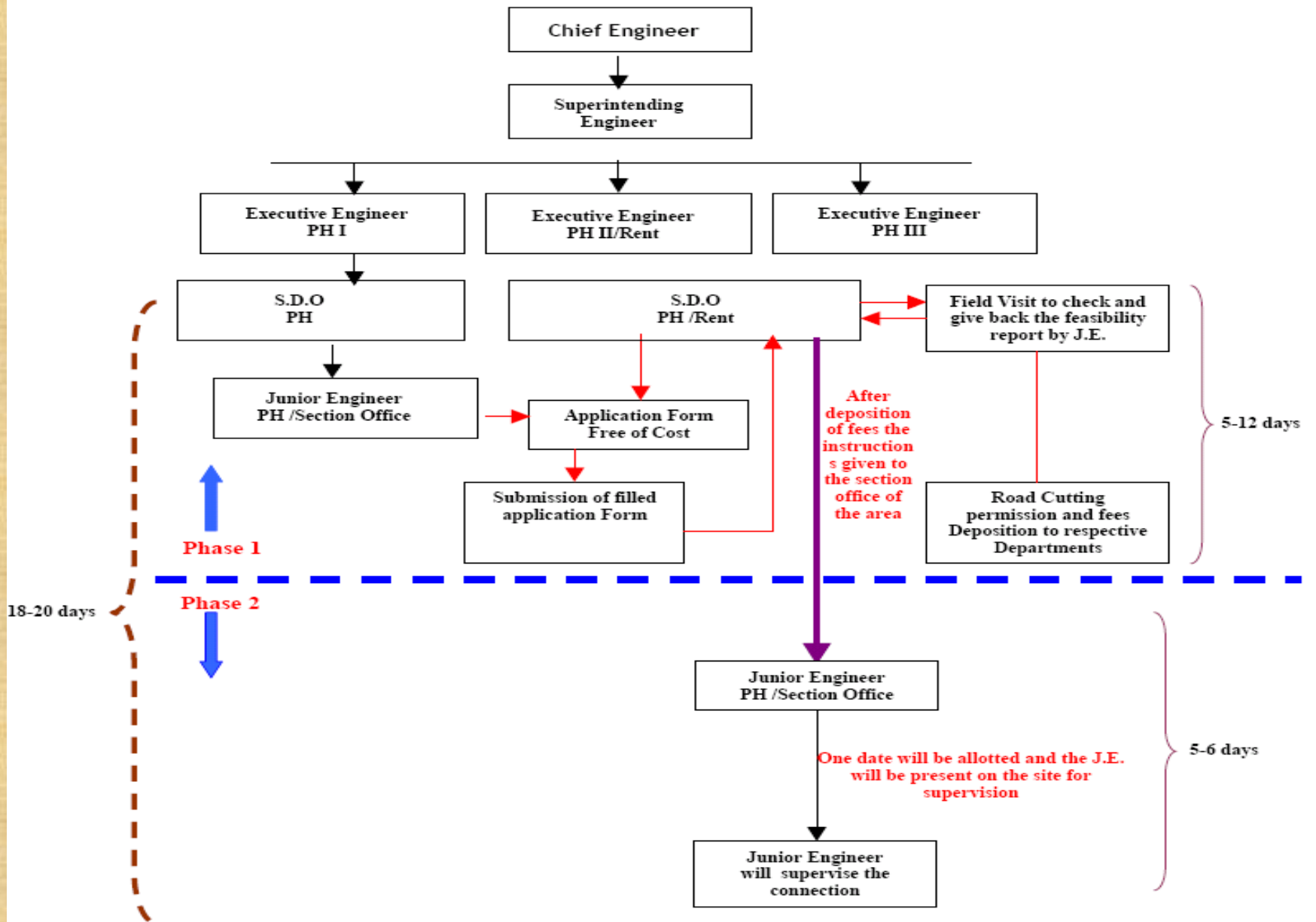
TOTAL : 8000 to 10000

No connections to poor in the last one year;

Poor are served only by PSPs

Purpose of Fee

- Recover capital costs
- Adjust dues in case of default
- Supervision charges



Towards Clean Drinking Water for All



VIJAYAWADA
The city on fast-track

Towards Clean Drinking Water for All

- ✓ Simplified procedures for tap connections
- ✓ Additional 40,000 individual connections under Rs. 1200 per connection scheme (for household with tax assessments below Rs.300)
- ✓ 25% discount on connection charges for all categories, if paid full during the silver jubilee week



Vijayawada Municipal Corporation

Dial 103 / www.ourvmc.org

521

22/06/06

Indian Express

S Sankar

Good response to 'Water tap mela'

EXPRESS NEWS SERVICE

Vijayawada, June 21: The Vijayawada Municipal Corporation's (VMC) 'water tap mela' has evoked good response and as many as 2,650 new applications have been submitted for tap connections as a result of the campaign.



The campaign was launched as part of the silver jubilee celebrations of the VMC and was coordinated by the corporators in their respective areas. During the campaign, the connections are being given on payment of only Rs 1225 as against the normal fee of Rs 2525. "A large number of applications have come and the amounts have already been paid by the applicants. This is good augury," said municipal commissioner Natarajan, Gulzar. He said that for those who pay a property tax of less than Rs 3000 could apply for a tap connection till July 11.

The civic body would also take up division-wise distribution of saplings to the

citizens as part of a massive greening campaign. The full details of the campaign are being worked out.

Referring to yesterday's blast at the iron scrap dealers yard in Governorpet, he said that a drive would soon be launched to identify such unauthorised shops in residential localities. He also said that the municipal authorities would install horizontal girders in the feeder roads of Krishna Lanka and Ranigarithota to prevent parking of lorries and trucks in these roads.

నగరాభివృద్ధికి మరిన్ని కార్యక్రమాలు: కమిషనర్

కార్పొరేషన్, జూన్ 21 (న్యూస్టుడె). రబల్తో శ్లోచాలను పురస్కరించుకుని నగరంలో మరిన్ని అభివృద్ధి కార్యక్రమాలు నిర్వహిస్తున్నట్లు మున్సిపల్ కమిషనర్ నటరాజన్ గుర్తుకొచ్చారు. బుధవారం ఆయన విలేజ్ దుల సమావేశంలో మాట్లాడుతూ ప్రస్తుతం నిర్వహించిన కళాయి మేళాకు మంచి స్పందన లభించిందన్నారు. దాదాపు 3 వేల కళాయి కనెక్షన్లు కొత్తగా వచ్చాయని చెప్పారు. రాయిశీలతో కూడిన కళాయి కనెక్షన్లు ఇచ్చే ప్రక్రియను కొనసాగించేందుకు తిరిగి అవకాశం లేదనీ, దీనికి ఎన్నికల నిబంధనలు అడ్డుగా ఉన్నాయన్నారు. రూ. 300 లోపు ఇంటి వస్తుపై రాయిశీతో కళాయిలు మంజూరు చేసే ప్రక్రియ మాత్రం జూలై 11 వరకు కొనసాగుతుందని చెప్పారు. మరో 8.7 నెలల్లో మరిన్ని కొత్త కళాయి కనెక్షన్లు ఇచ్చేందుకు తగిన చర్యలు తీసుకుంటామన్నారు. లోకాల్ట్ శానిటేషన్ పథకం కింద నగరంలోని పేదలకు కొత్తగా 4 వేల మరుగుదొడ్లు నిర్మిస్తున్నట్లు చెప్పారు. మరో 10 వేల మరుగుదొడ్లు కూడా మంజూరైనట్లు చెప్పారు. ఈ పథకం కింద లభించిన మరుగుదొడ్లు గుర్తిస్తామని, అవసరమైన సొమ్మును రెండు దఫాలుగా విడుదల చేస్తామని తెలిపారు. నగరంలో గుర్తించిన 6 ముఖ్యమైన ప్రాంతాల్లో పే అండ్ యూత్ వర్క్ షిప్ మరుగుదొడ్ల నిర్మాణం చేపట్టనున్నట్లు చెప్పారు. నగరంలోని మూడుసార్కి పరిధిలో ప్రత్యేకంగా కొంటర్ల ఆరంభం 2 లక్షల మొక్కలను పంపిణీ చేయనున్నట్లు కమిషనర్ వివరించారు. నగరంలో ప్రత్యేక పారిశుధ్య కార్యక్రమాల నిర్వహణకు

తగిన చర్యలు తీసుకుంటున్నట్లు కూడా చెప్పారు. వీటికి అవసరమైన పనిముట్లు సిద్ధంగా ఉన్నట్లు తెలిపారు. రబల్తో శ్లోచాల సందర్భంగా 'నగరగీయం' రూపకల్పనకు మరో వారంలో జాబ్ అవసరమైన చర్యలు తీసుకుంటున్నట్లు చెప్పారు. దాతల సాయంతో నగరంలో చేపట్టేందుకు వీలున్న వివిధ పనులకు సంబంధించిన వివరాల పుస్తకాన్ని త్వరలో విడుదల చేస్తామని తెలిపారు. నల్గొండలో ప్రాంతంలో వైద్యులు విప్లవవిధంగా ఏర్పాటు చేసిన బోధ్యలను తొలగించి 'ఒక చోట ఏర్పాటుచేసుకునేలా' చర్యలు తీసుకుంటామని చెప్పారు. బాధ్య, రెస్టారెంట్లకు ఎన్.ఓ. సిలు ఇచ్చే విషయంలో ప్రాథమిక పరిశీలన కొనసాగి, సి.ఎ.సి.ఎ.ఓ. హెల్త్, అదనపు కమిషనర్తో త్రవ్వకం కమిటీ ఏర్పాటు చేసినట్లు తెలిపారు. నగరంలో ఉన్న 45 భారీ ఫ్లూలను అభివృద్ధి చేసేందుకు నగరవాసులు ముందుకు వస్తే వారికి సహకరిస్తామన్నారు. వీధిదీపాల ప్రైవేటీకరణ అమలుకు సంబంధించి అంతా సిద్ధంగా ఉన్నా, ప్రభుత్వం నుంచి అనుమతి రావాల్సి ఉందన్నారు. వెహికల్ డిపో అఫ్ట్ సోల్డింగ్ ప్రక్రియకు సంబంధించిన ప్రతిపాదనను కౌన్సిల్ ముందుకు తెస్తున్నట్లు ఆయన తెలిపారు. రెండు సూతన పాఠశాలల భవనం తుల నిర్మాణాన్ని పూర్తిచేసి ప్రారంభించి సిద్ధం చేసినట్లు చెప్పారు. కృష్ణలంక ప్రాంతంలో భారీ వాహనాలను అడ్డుకునేందుకు బారికేడ్లు ఏర్పాటు చేస్తామన్నారు. గవర్నర్ పేటలో బాంబు పేలుడు జరిగిన ప్రాంతంలోని వ్యాపారుల లైసెన్సులను రద్దు చేసినట్లు కమిషనర్ వివరించారు.

Bhagirathi Nal-Jal Yojana, Chhattisgarh

- The scheme would be implemented in all ULBs of Chhattisgarh
- Free of cost water supply connection to poor households residing in slum
- Camps/Melas to be organized
 - Collect application form
 - Immediate sanction of connection
- Consumers/beneficiaries will pay Rs. 60 as monthly charge
- ULBs to apply for reimbursement of expenditure incurred for providing connection to the nodal agency at state level
- Distribution pipeline, digging work, ferrule, tap, etc., with fittings along with the applicable water connection charges and security deposits in the ULB could be included in the scheme and can be put up for reimbursement.
- *Rs. 3,000 (appox.) would be reimbursed by the nodal agency for each water supply connection.*
- Approximately 2.5 lakhs water connections would be given across the state

Coverage - land tenure issues

- BPL card holders
- Slum residents - notified
- Non residents - notified slum
- Pavement dwellers/Migrant population?
 - fairly large number, poorest of the poor.

- Andhra Pradesh - Every BPL family is entitled for an individual connection. Applicable for notified areas only. Cost of connection - Rs 200 per connection. Tariff - at par with others citizens. (Benefited over 1.5 lakh pop)
- Chattisgarh - Every BPL family irrespective of their location is entitled to have individual tap connection (estimated to benefit 2.5 lakh pop)
- Nagpur city - universal access; applicable to notified and non notified areas.

Simplification of procedure for issuing connections

- Single window system - HMWSSB
 - Clearly defined process, timeframe
- Green brigade

Sanitation



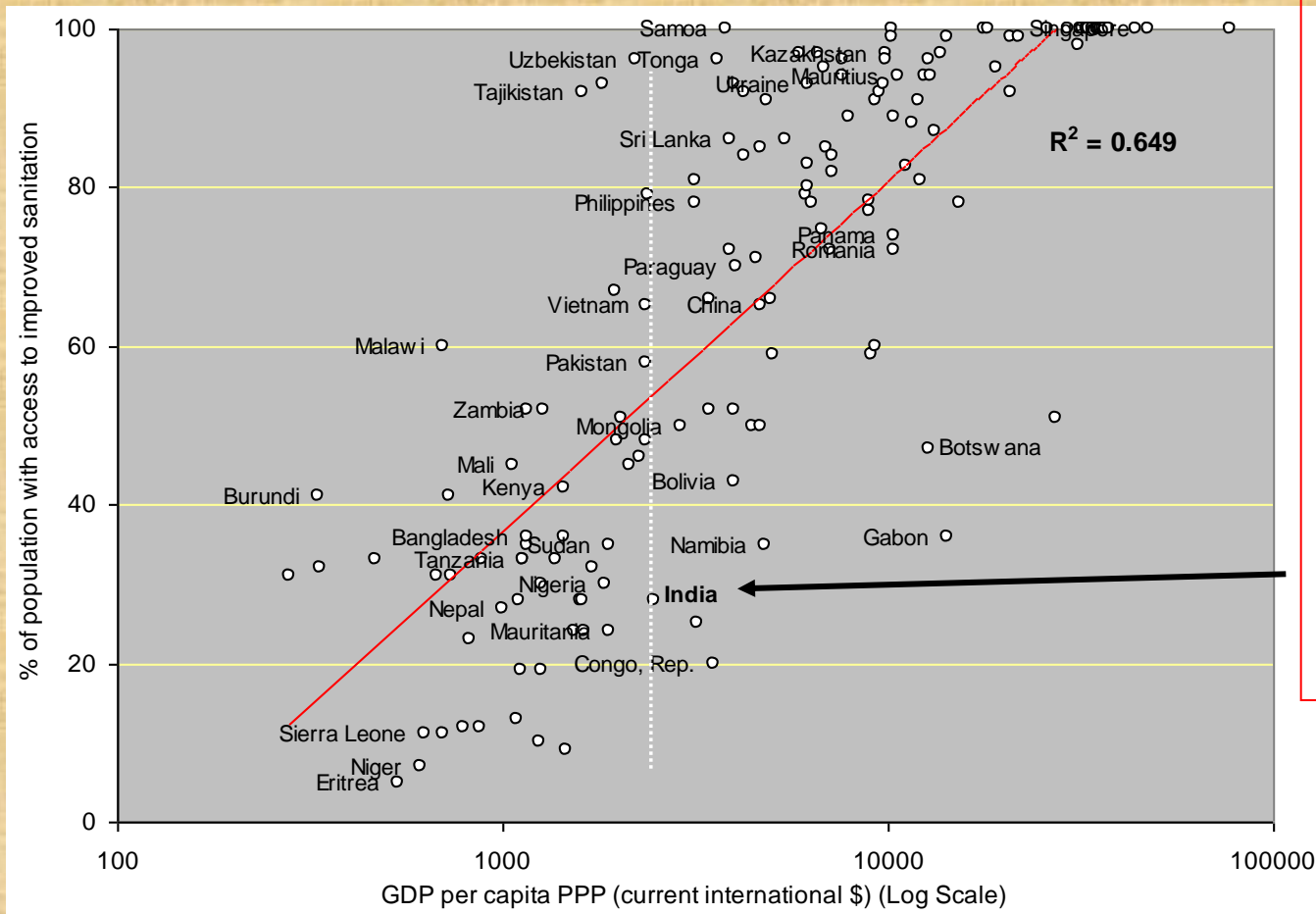
- The day everyone of us gets a toilet to use, I shall know that our country reached the pinnacle of progress....

Jawaharlal Nehru

India's Relative Performance

Scatter-plot of % of population with access to improved sanitation and GDP per capita PPP (current international \$)

[



India's progress is lower than some of the other countries with similar or lower per capital GDP

Alandur

- Pop – 2 lakhs
- Chairperson lead initiative
- Peoples' participation
- PPP – STP (BOT)
- Services to the poor
- Cost reflective tariffs
- Successful and replicable

Community options

Pune Sanitation Drive

- Community toilets in low income areas
- More than 10,000 seats
- Capex by PMC
- O & M – community – Rs 15-20 /family /month



Toilets

- Pune
- Tiruchy
- Sangli







Indication Boards

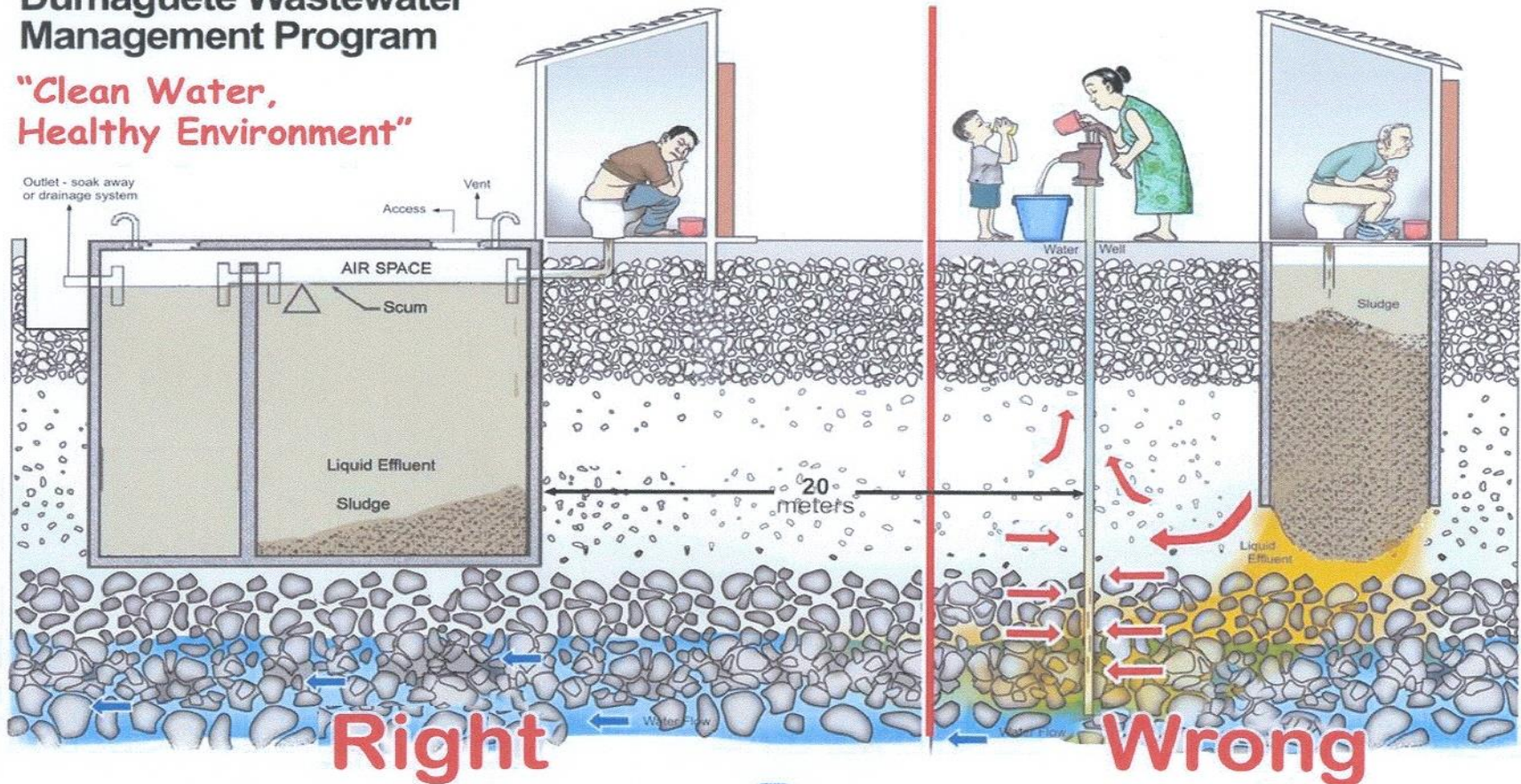


PPP in septage control

The Correct Septic Tank

Dumaguete Wastewater Management Program

"Clean Water, Healthy Environment"



If in doubt call the
SAFE septic
FREE
helpline
4443 4535

Call this helpline if...

- smelly water is ponding below your trenches
- excessive smells are emanating from your tank or trenches
- your tank is constantly overflowing sewage
- your tanks solids levels have not been checked for more than three years
- your tank has not been pumped out for more than 5 years

www.shoalhaven.net.au/~pumpouts



Shoalhaven Water: 4429 3343
 Safe Septic Helpline: 4443 4535



MORE TIPS FOR A HEALTHY SEPTIC SYSTEM

Avoid the use of bleaches, whiteners, nappy soakers, highly alkaline detergents (the ones with the blue/green beads) - instead use bio degradable septic safe disinfectants & detergents.
 Never pour oil or grease down the drains.
 Do not plant trees or shrubs near the absorption trenches - sunshine is needed on trenches not shade or tree roots.
 Mow the grass regularly for maximum transpiration.
 Antibiotics will kill off the micro-organisms.
 Avoid excessive water use, call our hotline for advice on disposal of grey water.
 Don't let solids build up and clog your trenches. Have your system checked every 3 years by a professional. Call our help line for a free tank inspection.
 Don't wait for your system to fail. CALL OUR FREE HELP LINE

is your septic
 system **SAFE** ?



Problems with septic tanks have been brought to Councils attention. If your septic is not functioning correctly it can cause serious health risks to you or your family. Please use this free brochure to check the health of your septic system.

Don't

- ✗ Don't put bleaches, disinfectants, whiteners, nappy soakers and spot removers into the septic tank via the sink, washing machine or toilet.
- ✗ Don't allow any foreign materials such as nappies, sanitary napkins, condoms and other hygiene products to enter the system.
- ✗ Don't use more than the recommended amounts of detergents.
- ✗ Don't put fats and oils down the drain and keep food waste out of your system.
- ✗ Don't install or use a garbage grinder or spa bath if your system is not designed for it.

Reducing Water Usage

Reducing water usage will lessen the likelihood of problems such as overloading with your septic system. Overloading may result in wastewater backing up into your house, contamination of your yard with improperly treated effluent, and effluent from your system contaminating ground water or a nearby river, creek or dam.

Conservative water use around the house will reduce the amount of wastewater which is produced and needs to be treated.

Your septic system is also unable to cope with large volumes of water such as several showers or loads of washing over a short period of time. You should try to avoid these 'shock loads' by ensuring water use is spread more evenly throughout the day and week.

Warning Signs

You can look out for a few warning signs that signal to you that there are troubles with your septic tank. Ensure that these problems are attended to immediately to protect your health and the environment.

Look out for the following warning signs:

- 🕒 Water that drains too slowly.
- 🕒 Drain pipes that gurgle or make noises when air bubbles are forced back through the system.
- 🕒 Sewage smells, this indicates a serious problem.
- 🕒 Water backing up into your sink which may indicate that your septic system is already failing.
- 🕒 Wastewater surfacing over the land application area.

Trouble Shooting Guide

If there are odours check the following areas:

- ◆ Greasetrap (if installed), is it full or blocked?
- ◆ Absorption field, is it wet or soggy?
- ◆ Has there been recent heavy rain?

Odour problems from a vent on the septic system can be a result of slow or inadequate breakdown of solids. Call a technician to service the system.

Help Protect Your Health and the Environment

Poorly maintained composting toilets can be a serious source of pollution and may present health risks, cause odours and attract vermin and insects.

By looking after your composting toilet you can do your part in helping to protect the environment and

If you would like more information please contact:

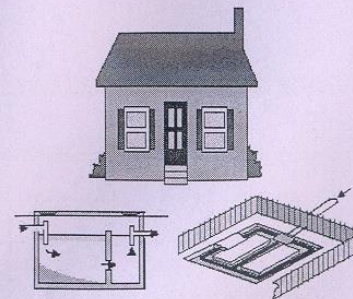
The Development and Environmental Services Group

**Sewage Management Unit
Telephone: 4429 3114**

council@shoalhaven.nsw.gov.au • www.shoalhaven.nsw.gov.au



Your Septic System



Information Brochure

Waste recycling

- PPP in collection and recycling
 - At a neighborhood level - Bangalore /Hyderabad
 - City level - Bangalore /Nagpur /Hyderabad/Surat /

Accelerating Water Supply Agenda

Lesson 1

- Continuous water supply results in public health improvement

3 Myths about Water Supply

1. 24/7 Water is an Unnecessary luxury!
2. It costs too much and the Poor can't afford it.
3. 24/7 Service requires too much water!

Lesson 2

- Institutional reforms

Separation of roles

- Policy
- Service delivery
- Regulation

Lesson 3

- Demand / appetite for 24-7
 - Political leadership
 - Community
 - Staff

Lesson 4

- Investment in distribution improvement should precede source augmentation
- Leaking bucket syndrome

Lesson 5

- PPPs are viable in urban water and sanitation sectors
 - Performance based management contracts to begin with
- Goal of PPP is for service delivery improvement and not for laying infrastructure

Lesson 6

- *Organizational capacities – very important*

Lesson 7

- Communications and consultations are important components of reforms – before and during implementation
- IEC is different from strategic communication
- Often neglected or taken up to deal with crisis
- Internal communication and external communication

Misinformation



- Metering is bad, tariffs will go up
- Privatization
- Job loss
- Will benefit the rich at the exclusion of poor
- Social good
- Will benefit one zone at the cost of other areas

You'll get water soon, 24x7: Sheila

● Pragati Maidan must be shifted to an outlying area. This is a top priority

● Slums will be replaced by tenements. For this DDA must work in tandem with our Govt

● I want a police force for women. This will give our young women a lot of confidence

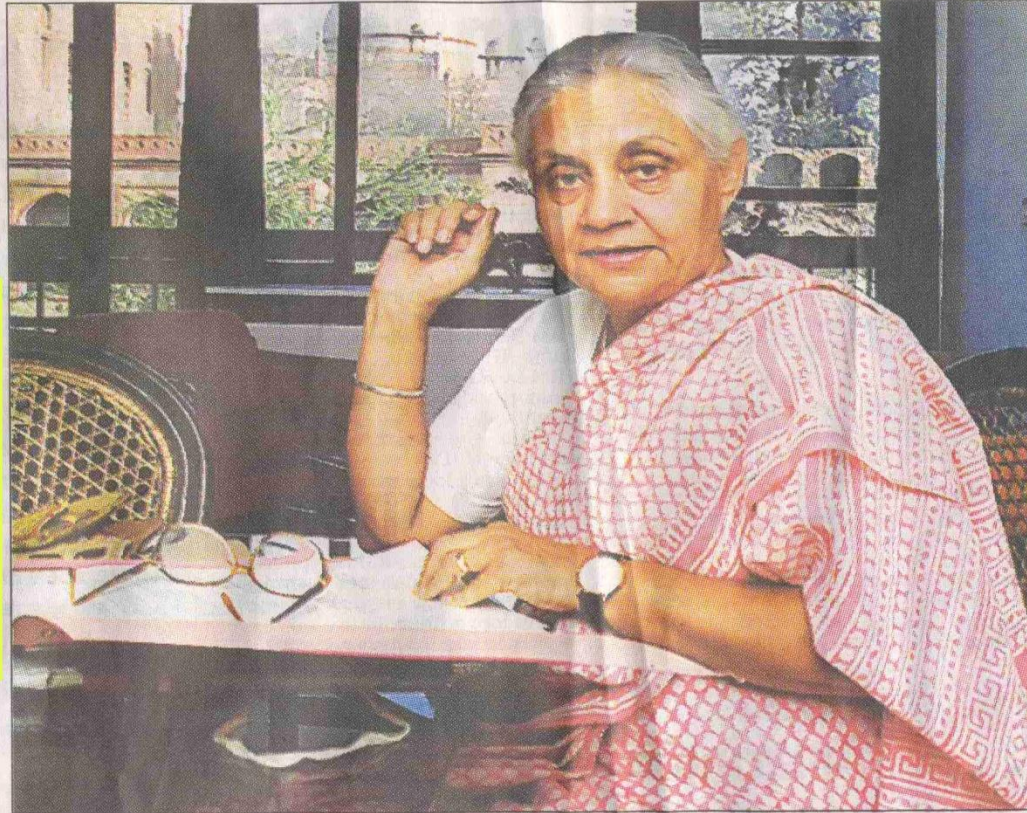
By Himanshi Dhawan
TIMES NEWS NETWORK

Water round the clock. Sounds like science fiction to Delhiites. But CM Sheila Dikshit says it'll happen — and soon. Power won't be a problem in two years' time, while traffic would move smoothly over elevated roads and flyovers. Welcome to the brave, new Delhi. In the words of Sheila Dikshit:

What is your vision of a modern city? Does Delhi match up, without water in its taps and power in its homes? These are basic prerequisites, aren't they? Delhi has to be an international city. But it hasn't reached there yet. The basic infrastructure should be accessible and visible to all. The power situation will settle in two years' time. Water remains a problem — not so much its availability as its mismanagement. We are working on providing water 24x7. At present, 200 litres of water is available per capita. That is about the best in the world, provided its distribution is rationalised, also its usage.

World-class cities don't have slums. In Delhi, slums are proliferating...

Our biggest challenge is migration. And I think migration is there because of the affluence of the city. But housing, for which DDA is responsible, has been one of our biggest failings, especially for the lower section. There has been very lopsided planning that has ignored the marginalised. Slums have proliferated, as well as another category called the unauthorised colony. The land mafia has sold the land and there are some very posh and very poor



Neeraj Paul

colonies that are unauthorised. Unless we can solve the housing issue, we cannot expect to become an international city. Unfortunately, Delhi government has no role in DDA's decisions — DDA reports to the Lieutenant-Governor.

Now that Congress rules both at the Centre and in Delhi, these

glitches should get sorted out.

Yes. The central and state governments have to plan together. One thing is very clear Delhi cannot have the same kind of statehood as other states. It is the country's capital. VVIPs live here, as also diplomats. Their security is of utmost importance. But having

said that, there can be greater coordination. There is no coordination. The L-G holds meetings of departments without the minister even knowing about it. He is running a parallel government.

Do you want the police under you?

They (the Centre) can keep the

police and security, but I need a police force for the common man and for my own law and order. For instance, I have been trying very hard to build a police force for women. It'll give young women a sense of security if women constables are seen moving around.

What's your view on the NCR? It seems a hazy concept.

The NCR means Haryana, UP, Rajasthan, MP and Delhi. You have to deal with five different state governments. The only body that can do that is the central government. We must have a common economic zone. You can buy a car in Gurgaon and not be tempted to buy one in Punjab because the taxes there are lower. If Europe can have a common economic zone, I don't see why we cannot.

There are huge traffic jams in the city. Right in front of your house, for instance, traffic doesn't move whenever there is a trade fair...

You have touched a raw nerve of mine. Pragati Maidan, for instance, should be shifted out. It should be given about 100 acres of land on the boundaries of the city. It will be good for the economy of that area. All big exhibition grounds the world over are not in the centre of town. It clogs the traffic, there is noise pollution. And the Metro, too, is coming up here. It has to be shifted out.

How crucial are flyovers in creating the free flow of traffic? What are you planning?

We must have elevated roads that segregate traffic. IL&FS is conducting a study whether it will be around Delhi or criss-crossing it. Ten years down the line, you will need the Metro and the elevated ring road. I'm planning for the future.

24x7 water supply
plan anti-poor: NGO

24X7 water dream drying up

What exactly the government plans to do with water supply and distribution remains unclear even though the official word is no privatisation. Times City begins an investigative series that examines the gap between officialse and reality. We start by looking at the fine print in the governments plans to provide 24X7 water supply.

NGO alleges fudging in water deal

'Water managers' permanent beneficiaries of 24x7 project

Rs 12-lakh Packages, Malleable Performance Standard. Management Consultants Ensured Of Good Run

डाँड बचाओ, वन बचाओ,
 बचाओ, देश बचाओ

जल ही जीवन है!

आपका जल ही क्यों ?


दिल्ली जल बोर्ड को विदेशी कम्पनियों के हाथों बेचने की साजिश को नाकाम करने के लिये दिल्ली जल मल कर्मचारी संघ (BMS) आखिरी दम तक संघर्ष करेगा तथा इस काली साजिश को नाकाम करके रहेंगे।

जल बचाओ आन्दोलन

दिनांक 12 मार्च 2005 को प्रातः 10 बजे से सांय 2 बजे तक महात्मा गांधी जी की समाधि राजघाट पर दिल्ली जल मल कर्मचारी संघ (BMS) के बैनर तले दिल्ली जल बोर्ड के कर्मचारियों व अधिकारियों द्वारा विदेशी कम्पनियों से जल बचाओ आन्दोलन के लिये सामुहिक उपवास व धरना।

निवेदन:
 अपने संघर्ष में शामिल होकर जल बोर्ड बचायें

जल बोर्ड को विदेशी कम्पनियों के हाथों क्यों बेचा जाये?



“Delhi Jal Board ko videshi company ke haatho bechne ki saazish ko nakam karo! Akhri saas tak sangharsh”

TOI - 10th July 2010

Earlier, they welcomed the project, now they just don't want it

Sachin Dravekar | MW

Two years ago, it was a dream-like situation for residents of Bajji Prabhu Nagar. Their locality, with 200-odd houses, had been chosen by the Nagpur Municipal Corporation (NMC) as a model for the ambitious round-the-clock water supply project. But two years down the line, the situation has changed completely. Those who favoured the project earlier, now want it scrapped. They say the project has not lived up to expectations. Instead, they are now demanding equal water supply to all localities of the city.

Former municipal commissioner Aseem Gupta had a meeting with our mandal regarding the project. He showed us old and rusty pipelines laid out by the civic body and assured to change them with high quality ones.

We thought the project was beneficial hence we supported it," say residents.

Radheshyam Samrit, a senior citizen and president of Bajji Prabhu Nagar, says, "Nagrik Mandal, who had earlier appealed to the residents to support the project, is now wanting the NMC bosses to withdraw it. Initially, for a few days we received round-the-clock water supply. Later, it was reduced to 12 hours and now, we get water for just 6-9 hours a day. Despite this mess, we are issued inflated bills which don't match our consumption, at all," says Samrit.

When NMC started implementing the project, it assured to

replace the water meters free of cost. However, that didn't happen. "The civic body is now charging Rs 10 per month as rent towards the new meter.

"My earlier meter was in very good condition. Ours is a three-member family (wife and daughter). We have a well and use the water for non-drinking purposes. Despite such low consumption, the private company issues unjustified bills," adds Samrit.

"Residents of Bajji Prabhu Nagar have passed a resolution appealing to the civic body to scrap the 24x7 water project from our area and to give priority to the areas that are hit by water scarcity," says Samrit.

Another resident N V Das says, "I liked the project two years ago. However, due to the high pressure, the pipes are getting damaged at the joints. This is not the only problem. We are not getting water round-the-clock as assured by the authorities. Since the pipeline remains empty for more than 12-16 hours, it spreads water-borne diseases."

House wife Sarita Mendhe says, "Promises made by the NMC were not fulfilled. Neither do we get round-the-clock water nor do we get bills according to consumption. Earlier, we thought that we would not have to store water anymore. But now, we have installed water purifiers as a precautionary measure. In the evening hours, there is no water supply at all."

Another citizen V Nagarajan says, "Because of the project, we were being charged Rs 8 per unit (soon it will be Rs 5 per unit). But in the nearby slums, where NMC has given house-to-house connections without meters, they are charging just Rs 30 to Rs 80 for unlimited water consumption. The project is a total failure. We have only got bills ranging from Rs 5,000 to Rs 20,000 per quarter. Earlier, we used to pay bills in the range of Rs 600 to Rs 2000," he added.

Meanwhile, Shashikant Hastak, executive director of Nagpur Environmental Services Limited, clarified that when the project was implemented in Bajji Prabhu Nagar, consumers got bills according to the old rates (Rs 3.5 per unit).



NOT ROSY ANY MORE: Residents of Bajji Prabhu Nagar say the project has not lived up to expectations

A LOW AFTER A HIGH

Hitvada City Line - 8th July 2010

Dharampeth residents protest against raised water bills, demand to cancel 24x7



Citizens participating in the morcha taken out on Wednesday against 24x7 water supply project of NMC.

Staff Reporter

FEELING the heat of water bills, the residents of Dharampeth locality took out a morcha under the banner of Jan Akrosh and pressed for scrapping of 24x7 water supply project. Jan Akrosh along with other like minded organisation has taken a lead in awakening citizens about future possibility of privatisation of water distribution in city. The morcha started from Ram Nagar Square and culminated in a public meet at Gokulpeth Zone office of Nagpur Municipal Corporation (NMC). Congress Party corporator Arun Gudadhe, Independent Corporator Parinay Fuke and that of Nationalist Congress Party (NCP) Pragati Patil, actively participated in the morcha.

The Jan Akrosh objection to project is that NMC's Ruling Party has not revealed the full implications of 24x7 water supply and hurriedly trying to implement the scheme all over city. The clause of 25-year agreement with French multi-

national, Veolia, is seen as precursor to privatisation of water distribution. The citizens in Dharampeth Zone have told not to pay water bills issued from April 1, 2009, till NMC resolving objections about the inflated bills. The release say NMC advertisement asking citizens to pay cost of 50 units of water consumption does not clearly say that in future corporation will not recover balance amount.

The Secretary of Jan Akrosh, Ravindra Kaskhedikar said that at many places in Dharampeth Zone, high pressure of water supply lead to breaking of pipes and residents footed repair cost of Rs. 1500. Later a memorandum was handed over to Dharampeth Zone Chairman Vivek Tarse.

Dr Anil Laddad, President of Jan Akrosh, Dr Ashok Lanjewar, President, Jan Manch, Adv Prabhakar Marpakwar, N L Sawarkar of Jan Samasya Nivaran Sangarsha Samiti, Rajendra Gangotri of Marartoli Telenkhedi Nagrik Sagarsha Samiti, Abdul Rashid of Shabar Vikas Manch,

Maximum water bill is Rs 1650: Sandip Joshi

SANDEEP Joshi, Chairman, NMC's Standing Committee, said the Jan Akrosh office bearers seems to be affected by dilemma and opposing 24x7 project without valid arguments. Countering their point about inflated bills, he said maximum water bills amounted to Rs. 1650. As to agreement with Veolia, it is for the improvement of operation and maintenance of water distribution system. Right now, billing is done for only 270 MLD while city gets 550 MLD of water supply. Further, the reforms in water supply is mandated under JNNURM and NMC has little say in the matter, he claimed. Joshi expressed surprise at participation of Pragati Patil, a NCP corporator, saying Maharashtra Minister and senior NCP leader Jayant Patil is spearheading drive to implement 24x7 water supply in Sangli town. Similarly, Parinay Fuke had put-up banners congratulating me on being chosen to head Standing Committee and appreciating 24x7 scheme and his about turn is quite surprising?!

Subhodh Uke of Dharampeth Nagrik Kruti Samiti, addressed the meet. Prominent personalities including Lakshmandas Chandak of Ambazari Parisar Nagrik Mandal, Prabhakar Khonde of Dharampeth Jeshtha Nagrik, Tatha Parisar Nagrik Mandal, Radheshyam Samrit of Bajirprabhu Nagar Nagrik Mandal, Ashok Bagalkote, Chandrashekar Ghuse, Sanjay Pal of Ram Nagar Nagrik Mandal, Neelima Harode and Gauri Sawarkar of Ambazari Ladies Club and representatives of Indian Medical Association, Shivaji Nagar Nagrik Mandal, Ramdaspath Nagrik Mandal and others.

CM sanctions NMC's proposal of water tariff revision

Staff Reporter

A major relief to water consumers facing severe problems due to steep hike in water tariff, the Chief Minister (CM) Chavan has sanctioned proposal of Nagpur Municipal Corporation (NMC) for revision of water charges.

Ruling Party leader Praveen Datke said that Maharashtra

Government has put one slab and reduce first slab of 1 to 30 units by 1 to 22 units. This may be only change, he added and said that after publication of notification the things can be cleared.

The civic body has sent proposal for final nod to Urban Development Department of Maharashtra Government in April 2010.

It may be mentioned that citizens

and several social organisations had protested against the steep hike in water tariff. Rattled by angry protesters, NMC General Body had formed rate revision committee under the chairmanship of Praveen Datke to submit a report on the water tariff. The NMC has proposed reduction in water charges of Commercial and Industries. The NMC has deleted semi-residential category.

TOI - 10th July 2010

Jan Akrosh against rapid 24x7, welcomes Rs 5 per unit tariff



UP IN ARMS: Jan Akrosh recently took out a rally to oppose NMC's 24x7 water supply project

Sachin Dravekar | TNN

Consumer organization Jan Akrosh has welcomed the decision of the Nagpur Municipal Corporation to reduce the water charges to Rs 5 per unit from Rs 8 upto 30 units for residential consumers. Only a couple of days ago, the organization along with several other people's representatives had taken out a morcha demanding the scrapping of the 24x7 water supply project due to increased water bills.

"The Rs 8 per unit charge for 31 to 80 and Rs 15 per unit for above 81 units could give major relief to consumers, especially from Dharampeth zone area," said Ravindra Kaskhedikar, secretary of Jan Akrosh. "However, as per proposal sent by the then

municipal commissioner Aseem Gupta, if state government has put a slab and the reduced the first slab of Rs 5 per unit upto only 22 units (22,000 litres), then Jan Akrosh will continue raising voice against it."

"We are not against giving people water supply round the clock. Our objection is that the BJP-ruled NMC and administration have not revealed the implications of 24x7 water supply project faced by Dharampeth zone residents and are in a hurry to implement the scheme in the entire city giving long term contract of 25 years to a private company," he said.

Jan Akrosh has already told consumers from Dharampeth zone not to pay water bills issued from April 1 till the date NMC resolves objections about inflated bills.

Hitvada - Cityline - 13th July 2010

'24x7 Water Supply Project claims a life'

■ Staff Reporter

THE office-bearers of Jansamasya Nivaran Sangharsh Samiti have alleged that 24x7 Water Supply Project has claimed life of a person from Marartoli, Ramnagar.

In a press release issued here, General Secretary of the Organisation N L Sawarkar said, the deceased SZ Neware ran a small shop in Marartoli, Ramnagar. He received water bill of Rs 17,972 from Veolia Company. Apparently shocked to see such a massive bill amount, Neware lodged a complaint and also approached the organisation. Memorandums were submitted to Executive Engineer Shashikant Hastak, and office bearers in this regard. He again received bill of Rs 22,330 including Rs 17,972 as pre-

vious dues and water bills of Rs 4,358 for a period from January to March, 2010.

According to Samiti, Neware was frustrated, took ill and was bedridden. He passed away on July 9. Taking serious note of the issue, the Samiti along with like minded organisations will launch intense agitation, he warned.

Sawarkar further said, Chief Minister Ashok Chavan has given approval to the proposal of NMC General Body to reduce the water tariff. It could be possible due to agitation's and protests of people and social organisations. But the first slab should be from 1 unit to 30 unit and water tariff of Rs 5 per unit for reducing the burden of people, he demanded.

NCP thanks State Government:

President of Nagpur City (District) Nationalist Congress Party Ajay Patil has thanked State Government for giving its consent for reduction in water tariff.

Patil and NCP City Unit in a letter sent to Chief Minister Ashok Chavan and Deputy Chief Minister Chaggan Bhujbal has expressed gratitude for reducing tariff burden. He alleged that BJP led NVA was taking anti-people decisions in Nagpur Municipal Corporation (NMC). NCP Corporators and party also agitated against the decision.

The agitation's of Jan Aakrosh and Janmanch added to the pressure and BJP had to bow down and was forced to reduce the water tariff. The State Government has given approval to reduce water tariff from Rs 8 per unit to Rs 5 per unit.

Lesson 8

- Service delivery to the poor should be an integral component of reforms programme particularly PPP
- Connection cost is a big barrier to the poor and should be removed.
- Delinking land tenure and water and sanitation service



Accelerating Sanitation Agenda

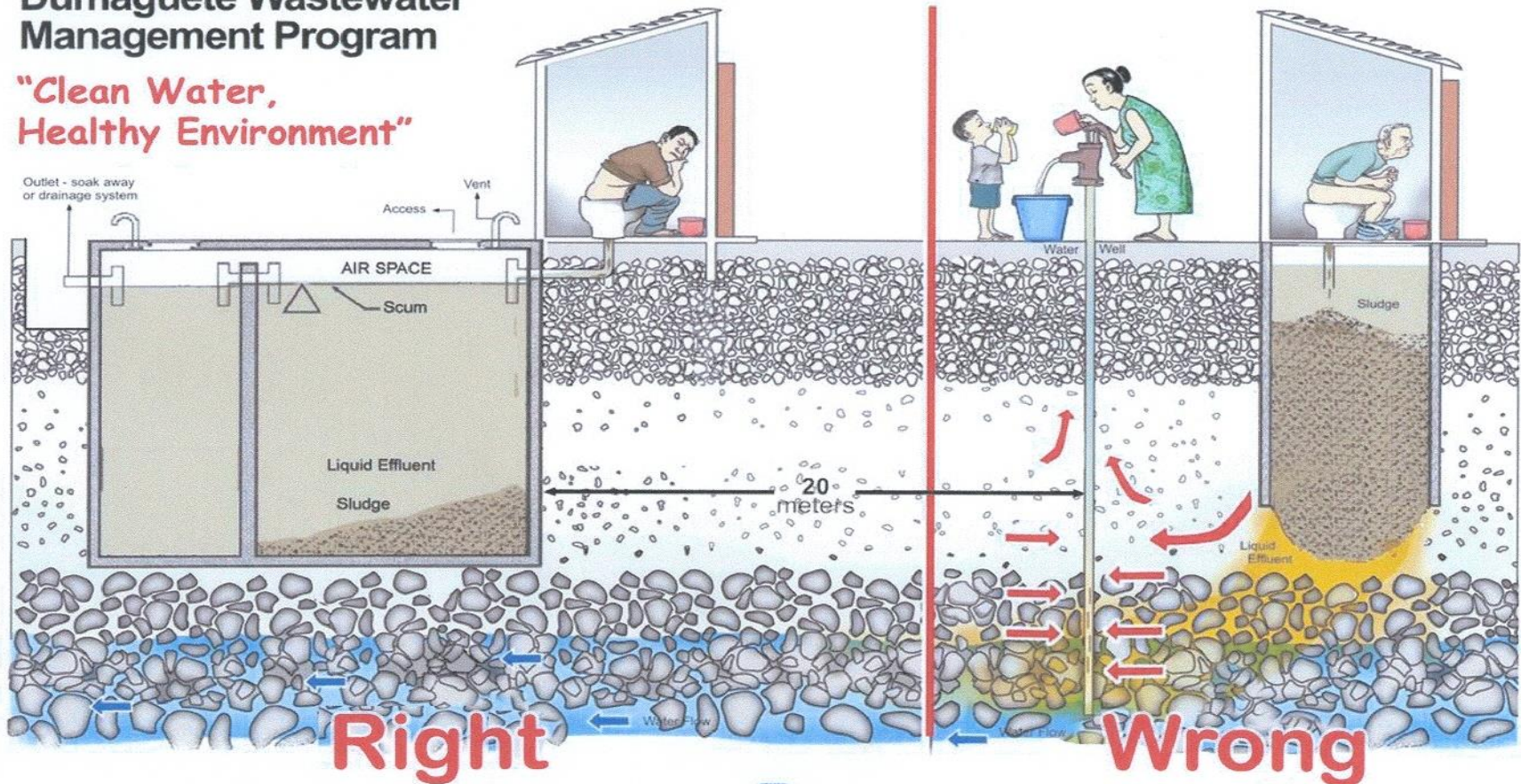
Lessons - 1

- Sewerage (reticulated) system is expensive; and it is not the only way to achieve public health outcomes
 - City of Brussel and Milan (Famous European cities) till recently discharged untreated effluents to water bodies.
 - Sewerage – subsidy for the rich to excrete in convenience ...Sunita Narayan, CSE.

The Correct Septic Tank

Dumaguete Wastewater Management Program

"Clean Water, Healthy Environment"



Lesson 2

- Development controls /regulations are essential
 - Septic tank management
 - Septage disposal

Lesson 3

- Community Partnership models work better



Lesson 4

- Creating demand for improved sanitation takes time..
 - Communicating benefits of ORS took more than 50 years..
 - Need for a good communication Campaign
 - Strong political leadership (two good practices)

Lesson 5

- PPP in Urban Sanitation is feasible and viable
 - Alandur, Pune, Bangalore

Lesson 6

- Sanitation improvement program requires Capacity building among municipal officials, NGOs, CSO etc.

India Advantage

- Fastest growing telecom market
- 2 m new telcom subscribers /yr
- 3 m graduates, 7 lacs PG, 1500 PhDs/y
- > 100 of Fortune 500 companies have setup R&D centres in India
- Glob Eco Survey – India is the sixth fastest growing country in terms of construction
- Forex reserves \$ 105 b
- India's Insat – among the worlds largest domestic satellite comm system

No city with continuous water supply

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