



UNDERSTANDING THE IMPACT OF FREE WATER POLICY IN DELHI

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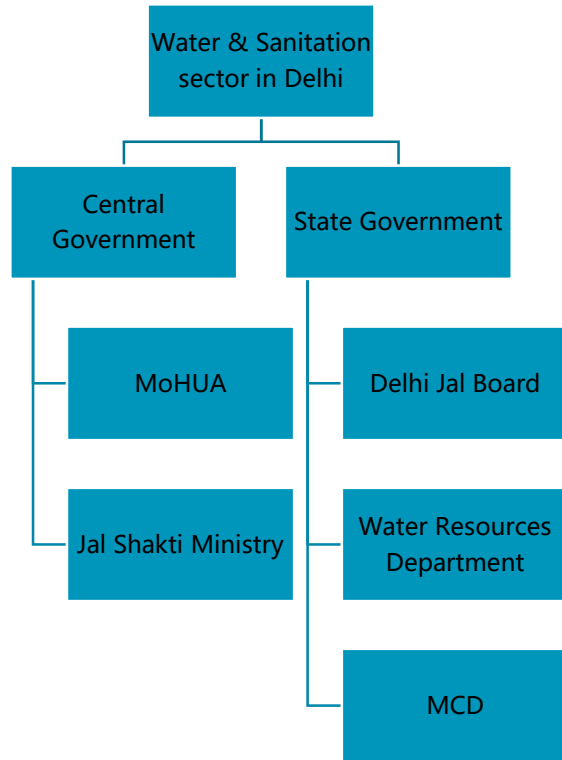
CWAS CENTER
FOR WATER AND
SANITATION

CRDF CEPT RESEARCH
AND DEVELOPMENT
FOUNDATION

CEPT
UNIVERSITY

Context of Delhi

The City State of Delhi is located on the banks of Yamuna. Delhi is a unique city as there are many levels of jurisdiction. Right from the Central government, State NCT government, DDA to Municipal corporations different authorities govern Delhi.



For the Water and Sanitation sector the responsibilities are with a parastatal agency called Delhi Jal Board.



33.4 lakhs



167.8 lakhs



17.7 %



937 MGD per day



Free Water Policy

20000 litres

DJB will provide 20kl water/household/month

667 litres

Free water/household/day

>20000 litres

Full tariffs to paid as per given slot

No 10% hike

DJB act amended to abolish an annual hike in tariffs

Mandatory Water Meter

DJB will only give free water if meters are working

No Sewer Charge

DJB won't charge the sewer charge if the usage is below 20kl

No C1-A category

Commercial shops less than 100sq.ft. & not using water for commercial purpose will be exempted

Background

In 2013 AAP published a white paper announcing this policy and included it in their manifesto.

- To provide Water as a Right.
- To provide Free Lifeline water i.e. 20KL necessary for dignified living according to WHO. Provide Universal access of water to all citizens without any bias and providing water free so it can be availed by all.
- Increasing population and decreasing groundwater levels meant that people in Delhi did not get sufficient water .
- Due to corruption and mismanagement there were huge losses of water and money and this policy aims to reduce that.

Need For Study

- Provide basic water services to all citizens at no cost
- Disparity in water supply in different areas
- Insufficient and inconsistent water supply across Delhi
- Reduce reliance on Groundwater extraction
- Reduce Water thefts and reliance on water tankers
- Encourage water metering for further efficiency and transparency

Source: Aam Aadmi Party. (2015, January 27). <https://aamaadmiparty.org/delhi-government-2/highlights-of-works/>. Retrieved June 12, 2020, from www.aamaadmiparty.org:

Business Standard. (2018, June 13). *Business Standard*. Retrieved May 31, 2020, from www.business-standard.com: https://www.business-standard.com/article/news-ani/delhi-water-is-full-of-arsenic-fluoride-report-118061301053_1.html

Basu, S. (2015, September 17). *DownToEarth*. Retrieved May 31, 2020, from www.downtoearth.org.in: <https://www.downtoearth.org.in/news/why-700-litres-free->

Research Outline

AIM This research intends to study and understand the impact of the Free water policy in Delhi

OBJECTIVES The objectives of this research work are divided into three parts

SLBs

To study the impact on :

- Water supply & coverage
- Conveyance & Efficiency
- Extent of metering
- Extent of NRW
- Quality

FINANCE

To study the impact on :

- Revenue generation
- Capital costs
- Debts & Deficit
- Funds & Grants
- Financial viability

SOURCE

To study the impact on :

- Demand & Supply
- Changes in usage
- Source sustainability
- Water procurement
- Inter-state conflicts

METHODOLOGY

The methodology of this research work are divided into two parts

RESEARCH QUESTIONS

As this is a research work, the topic will be studied and analysed through a set of defined questions covering various aspects of the research area.

DOCUMENTS

For this research work the documents to be referred are Govt. websites, press articles, govt. reports, DJB & Delhi Govt. budgets.

Case Study – South Africa

Free Basic Water Policy

25 litres

Free water/person/day

6000 litres

Free water/household/month

10 litres/minute

Minimum flow rate to be maintained

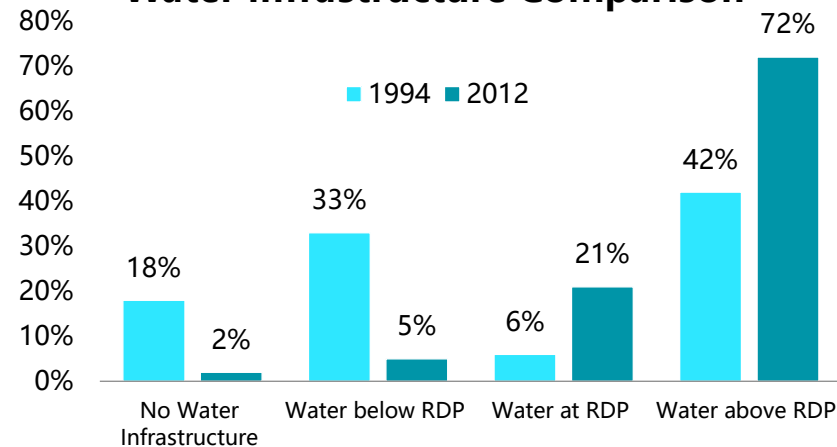
200 meters

Maximum distance of source from a household

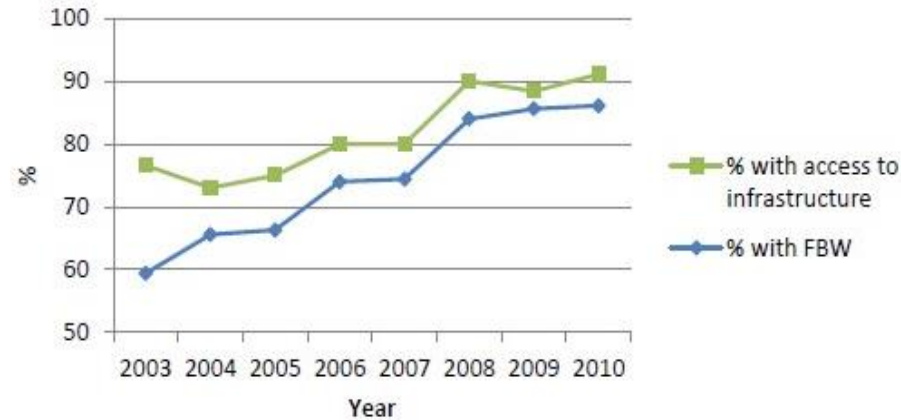
7 days

In a year permitted without supply

Water Infrastructure Comparison



Percentage of Population with Free Basic Water



- The **gap** between Infrastructure access and FBW in 2010 has been reduced to just **5%**.
- As of **2012**, the Free Basic Water has reached **86% of Households** in South Africa

75% population was served FBW
(69% population was poor)

Total 169 municipalities in SA
(164 provide FBW)

7 million people had no access to FBW

(2.2 Million people lived in areas without any infrastructure)

(4.7 Million people did not avail the scheme or the local body did not provide the scheme)

Policy Impact

Impact of free basic water scheme was studied for the municipalities of **Rustenburg, eThekweni and Polokwane**. Some of the Pros and cons are enlisted here.



Pros

- **Increase in basic services.**
- **Water metering** has increased at household and community level.
- The **average household consumption** has decreased at certain places.



Cons

- **Desired water qty is not sufficient.**
- **Not all households** situated in the outskirts are included.
- **Steep second block tariffs.**
- **High amount of arrears.**
- Many **municipalities** are dependent on government funds to operate.

- As a result of water act 1997 and FBW 2001, upliftment of the vulnerable population is seen and basic water infrastructure was made available to all.

Source: Muller, Mike. "Free basic water - a sustainable instrument for a sustainable future in South Africa." *Environment and Urbanization* 20(1): 67–87 (2008): 23. July 2020. <http://eau.sagepub.com/content/20/1/67>

Farrar, Lauren. *The Free Basic Water Policy of South Africa - An Evaluation of its Implementation*. Masters Thesis. University of Cape Town. Cape Town: University of Cape Town, 2014. Document.

Paulina Calfucoy, Jeramia Cibulka, Joseph Davison, Thomas Hinds, Minhye Park. *Improving Free Basic Water Provision in South Africa*. Workshop in International Public Affairs. University of Wisconsin-Madison. Madison: Robert M. La Follette School of Public Affairs, 2009. 06 July 2020.

Galvin, Mary. "Leaving Boxes Behind: Civil Society and water and sanitation struggles in." (n.d.): 20. 06 July 2020.

Comparison

South Africa

Quantity of Water

6000 litres of water per Tariff structure is allocated to each household in South Africa of that are :-

- Rising Block Tariff with Zero first block
- Rising Block Tariff with Zero first block but if water is used above the set quantity then payment of total water quantity used is to be done
- Indigent Policy with targeted approach

Implementing Agency

The respective municipalities are responsible for implementing the scheme in their areas.

Areas Funding

The jurisdiction of municipalities in South Africa consists of rural villages along with the urban areas like towns and cities. The scheme is funded by the cross subsidization in which high water users pay more and that extra income is used for the subsidy of free water.

Provision of Services

- The Central Government also provides a large fund Equitable Share Fund to provide the municipal services to the poor

In the rural areas the water is supplied by Standposts or in some areas it is supplied by drums.

Various municipalities according to the availability of their resources have increased the quantity from 6000 to 9000 and 12000 litres.

Revisions

Metering

Metering is provided at homes, on community taps and standposts. Various changes in the tariff blocks are also done

Delhi

Quantity of Water

2000 litres of water per Tariff structure is allocated to each household free of cost.

- Rising Block Tariff with Zero first block but if water is used above the set quantity then payment of total water quantity used is to be done

Implementing Agency

Delhi Jal Board which is a parastatal agency, is responsible for the implementation of the scheme.

Areas Funding

The jurisdiction of DJB consists of National Capital Territory of Delhi which has mostly Urban population. The scheme is funded by the cross subsidization in which high water users pay more and that extra income is used for the subsidy of free water.

Provision of Services

- The State Government transfers the fund which is utilized to balance the zero bills of 20kl scheme

Revisions

No change in the quantity has been made but there was a revision in the tariff blocks

Metering

As the water is supplied only through pipelines the metering is compulsory at every household



Effect on Service Levels

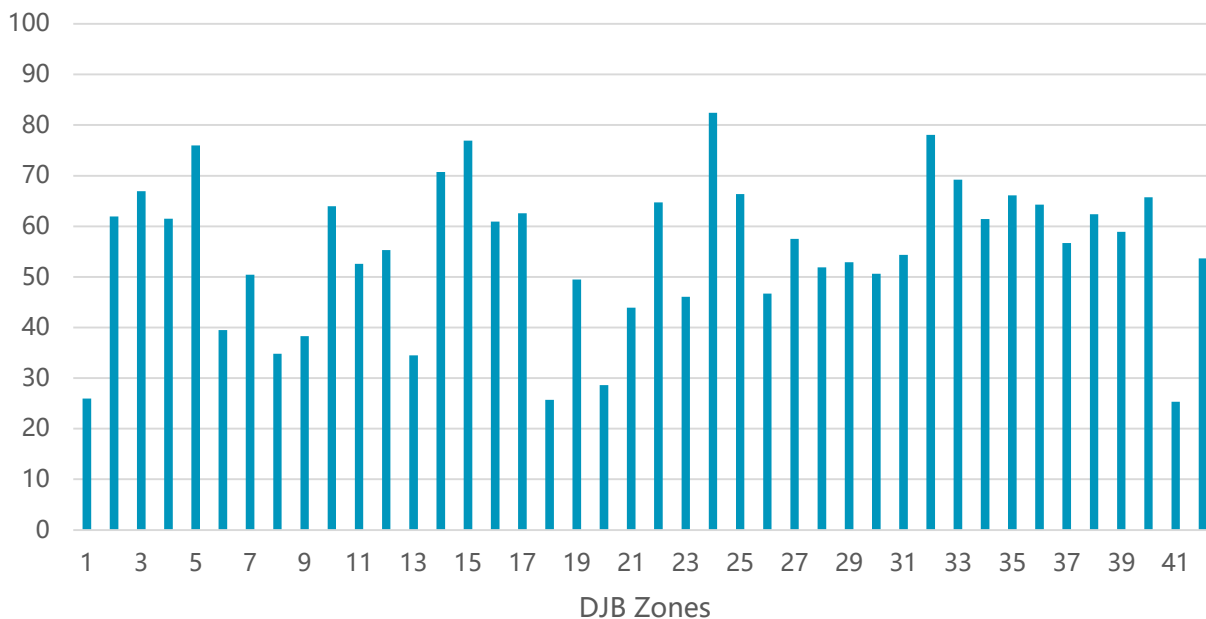
1. The policy offered free water only to those who had a metered connection. What effect did this have on the extent of metering in the city?
2. What effect was observed on NRW?
3. Free water will be given only via pipeline which does not cover 100% HHs. What will happen to the rest of the population and how will they get lifeline water free?
4. The policy gave free water up to 20000 litres and if the quantity exceeds then the tariffs will be charged for the full usage. Did it impact the usage and what change was observed?

Increase in Extent of Metering

The policy offered free water only to those who had a metered connection. What effect did this have on the extent of metering in the city?

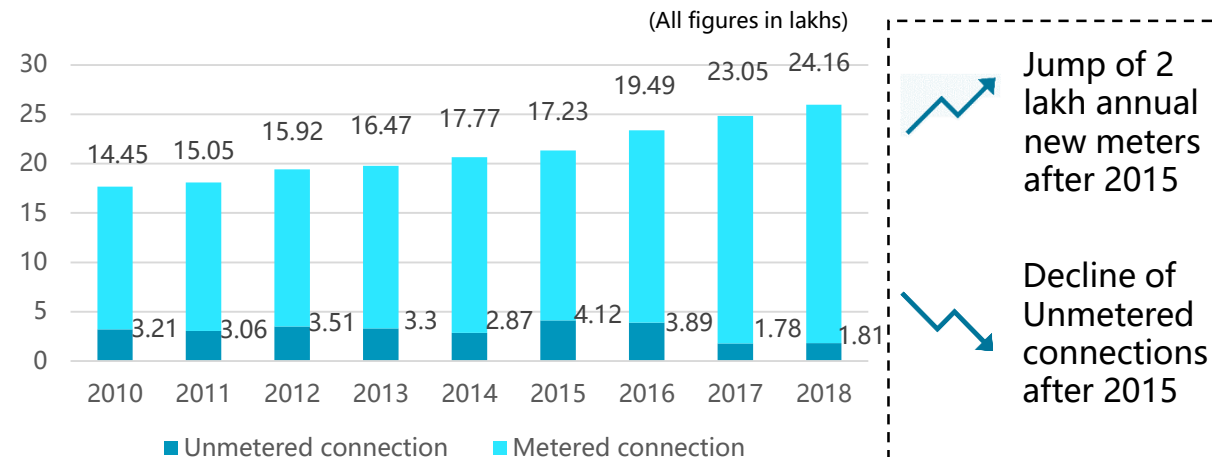
The policy clearly states that free water will be only provided to households which have a working meter installed, this in turn will give a rise to the extent of metering in the city.

Zonewise scheme users (%)



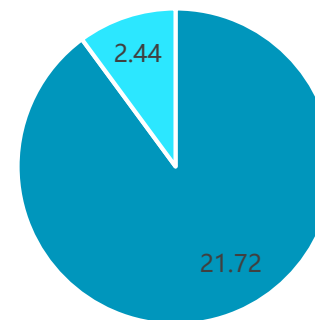
- According to a report by the **Yamuna Monitoring Committee** the **Free water** is availed by on an average **57.1%** of the residents, which is directly proportional to the **Active Metered connections**.

Metered vs Unmetered



Connections

(All figures in lakhs)



■ Active ■ Non Active

Metered	Unmetered	Bulk WCS	Total
2416478	181412	5131	2603021

Domestic	Industrial/Commercial	Bulk	Total
2172204	79491	3500	2255191
96.3%	3.6%	0.1%	100%

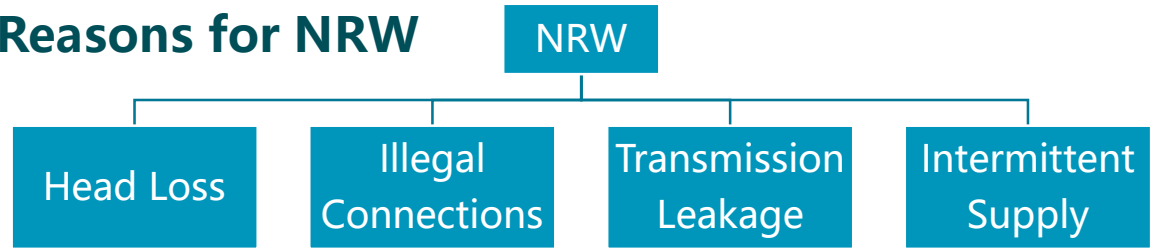
- From the Sanctioned **24 lakh meters** only **21.72 lakh domestic meters** are **active and billed**.

Decrease in NRW observed

What effect was observed on NRW?

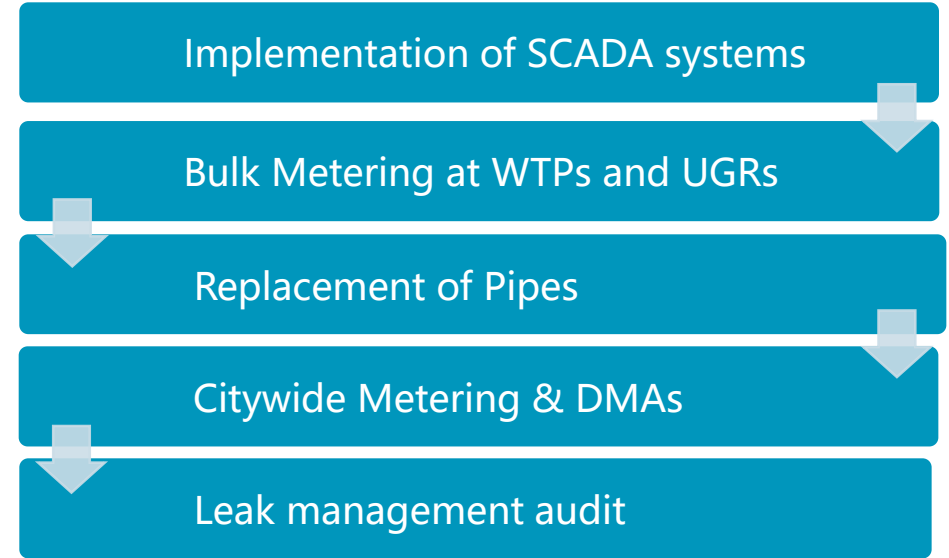
NRW – The Non Revenue Water is the water supplied but not accounted and doesn't reach the consumers and gets lost during transmission.

Reasons for NRW



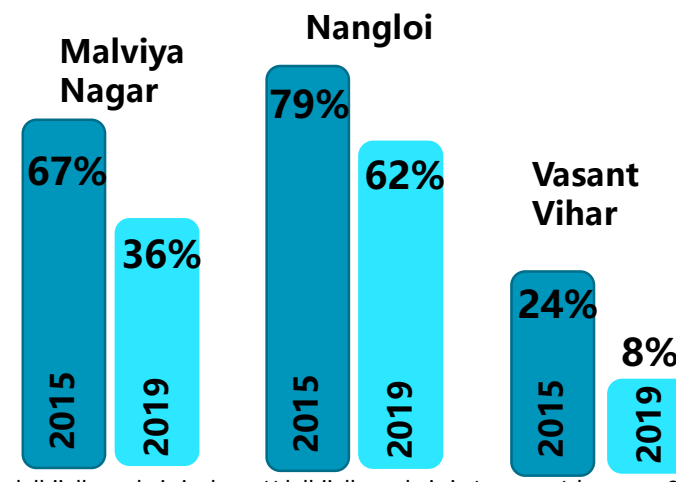
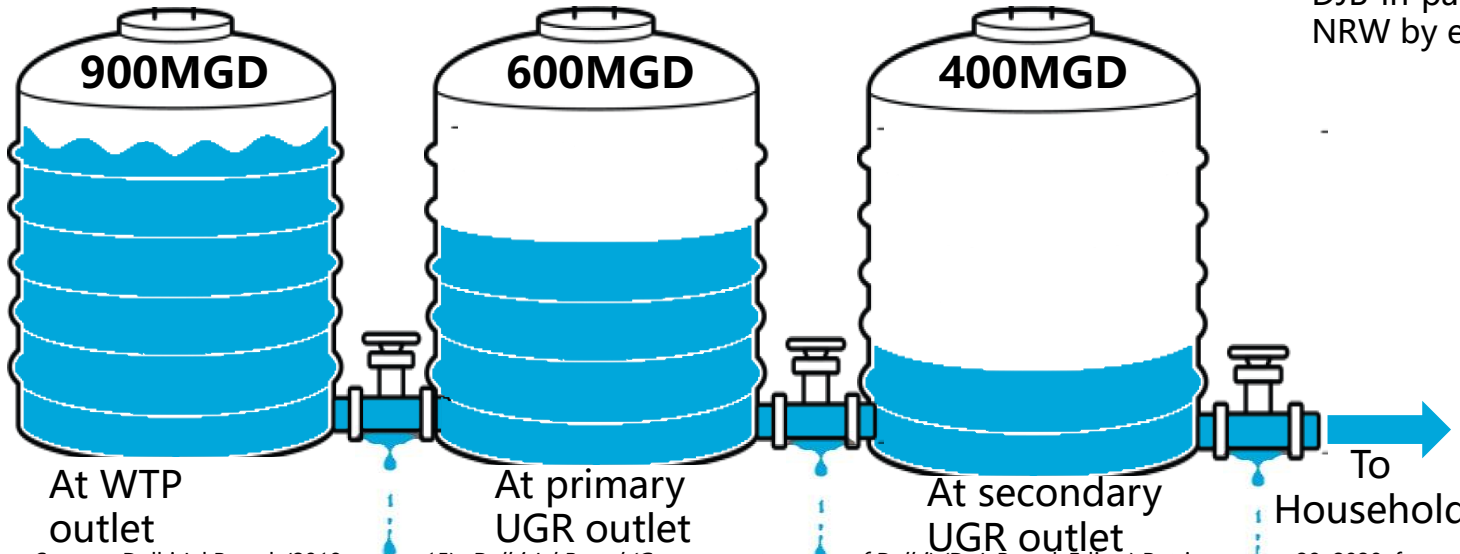
Delhi used to have a high rate of **NRW** losses at **50-60%** which has reduced to **38-47%**. According to a Delhi Government survey, of the **900MGD** water produced about **500MGD** is not accounted.

Measures adopted by DJB



Pilot Project

DJB in partnership with the JICA has done pilot projects in 3 areas to reduce NRW by establishing DMAs.

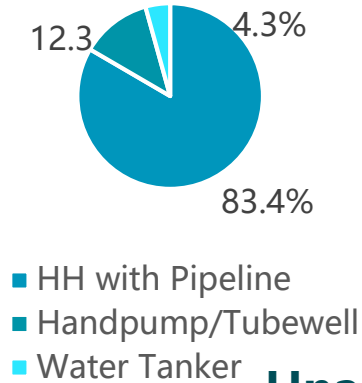


- DMA consists of
- 1500 – 2000 connections
 - 96 completed
 - Total 1010 to be established

Source: Delhi Jal Board, (2018, March 15). *Delhi Jal Board (Government of Delhi)*. (D. J. Board, Editor) Retrieved 29, 2020, from [www.delhijalboard.nic.in](http://delhijalboard.nic.in): <http://delhijalboard.nic.in/content/about-us-3>

Equitable or Not ?

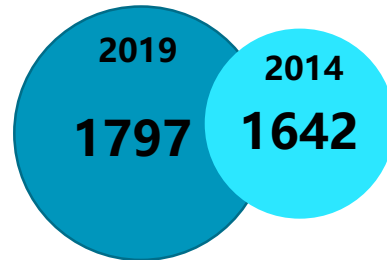
Free water will be given only via pipeline which does not cover 100% HHs. What will happen to the rest of the population and how will they get lifeline water free?



As the Free water will only be given to households having active meter in their pipeline connection the rest of the **16.6% households will not be included in the free water scheme. Unauthorised colonies and Jhuggi Jhopris** comprise of the remaining 16.6%

Unauthorized Colonies

Total U/C colonies in Delhi

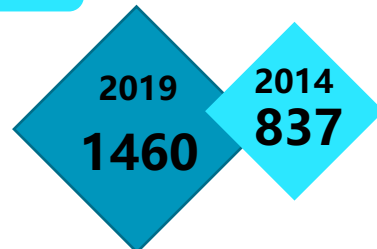


2019 1597

Pipes laid in U/C colonies

2014 965

Water supply in U/C colonies



- DJB has increased water supply from **50% to 80%**.
- **1669 km** of new Pipelines has been added.
- **137 colonies** have pipelines but supply has not started.

Deprived sections problems

The Unauthorised colonies and Jhuggi Jhopris where the water supply is not by regular pipelines face a lot of problems for procuring water.



Economic Burden



Tanker Mafia



Illegal Borewells



Illegal connections



Waiting in lines




Water Quarrel

Source: Source: Aam Aadmi Party. (2015, January 27). <https://aamaadmiparty.org/delhi-government-2/highlights-of-works/>. Retrieved June 12, 2020, from www.aamaadmiparty.org: <https://aamaadmiparty.org/>


Delhi Jal Board. (2018, March 15). *Delhi Jal Board (Government of NCT of Delhi)*. (D. J. Board, Editor) Retrieved May 29, 2020, from www.delhijalboard.nic.in: <http://delhijalboard.nic.in/content/about-us-3>

Equitable or Not ?

Free water will be given only via pipeline which does not cover 100% HHs. What will happen to the rest of the population and how will they get lifeline water free?



Pipeline network is possible only in 364 Jhuggi Jhopris



Pipeline network is not feasible in 36 u/c and there is no NOC for pipelines in 95 unauthorised colonies

- These areas will never get to avail Free 20KL water.
- Most vulnerable group of citizens left out from scheme.
- Poor people of JJ cluster cannot afford private water supply.
- Forced to look for other private or illegal means for water supply.

The areas without pipeline supply rely on the following sources for fulfilling their daily needs

Water ATMs

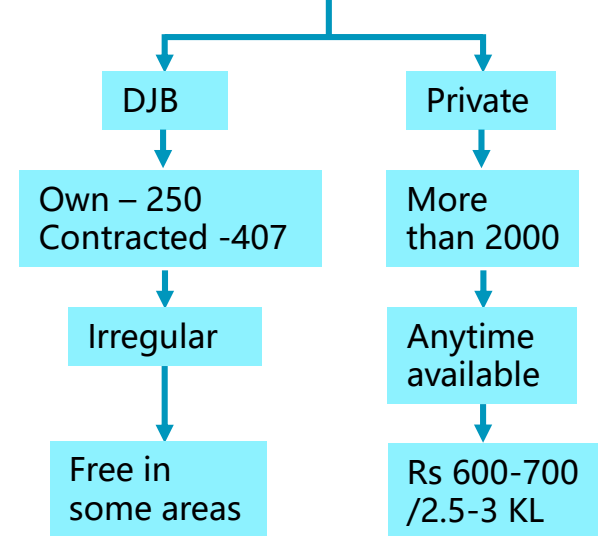
- To compensate the lack of water supply the DJB has established Water ATMs with private help.
- These ATMs are provided generally in JJ cluster.
- These ATMs provide clean pure drinking water at very low prices from **30 paise to 5 Rs.**
- There are various types of ATMs in Delhi :-

Pi- lo ATM Metro Stations
56 ATMs
Rs Rs2/250ml and 5/litre

Sarvajal ATM At JJ & U/C
50 ATMs
Rs 0.30/litre

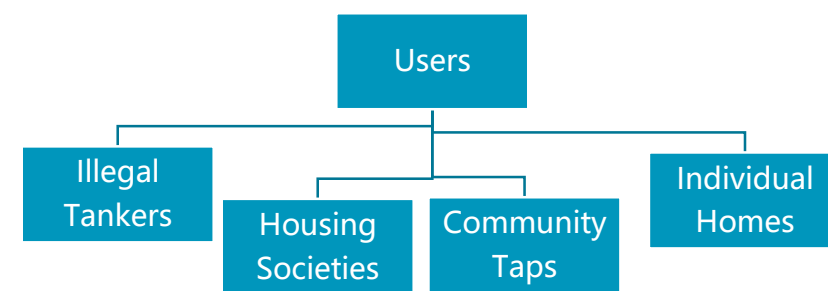
Jana Jal ATM New Delhi
28 ATMs
Rs 5/litre

Water Tankers



- There are more than **18349 delivery points** in Summer season.

Bore wells



- There are **19661 illegal bore wells** in Delhi.
- Recently **DJB has sealed 7248 illegal bore wells** in a drive.
- CPCB has introduced several fines for illegal groundwater use.
Rs 10000 for Domestic households
Rs 50000 for Commercial complex, institutions
Rs 100000 for Industries

Source: Source: Aam Aadmi Party. (2015, January 27). <https://aamaadmi.org/delhi-government-2/highlights-of-works/>. Retrieved June 12, 2020, from www.aamaadmi.org: <https://aamaadmi.org/>

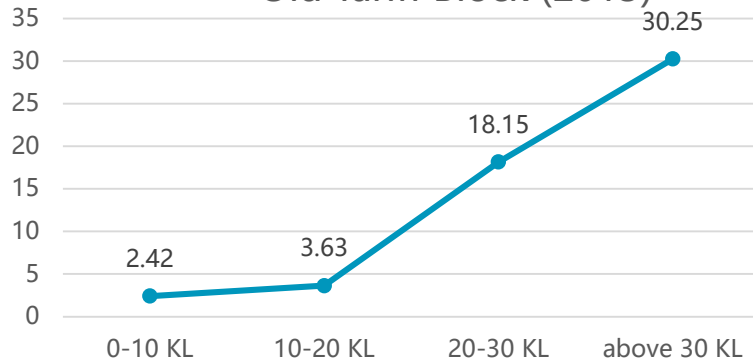
Delhi Jal Board. (2018, March 15). *Delhi Jal Board (Government of NCT of Delhi)*. (D. J. Board, Editor) Retrieved May 29, 2020, from www.delhijalboard.nic.in: <http://delhijalboard.nic.in/content/about-us-3>

New Tariffs reduces Consumption

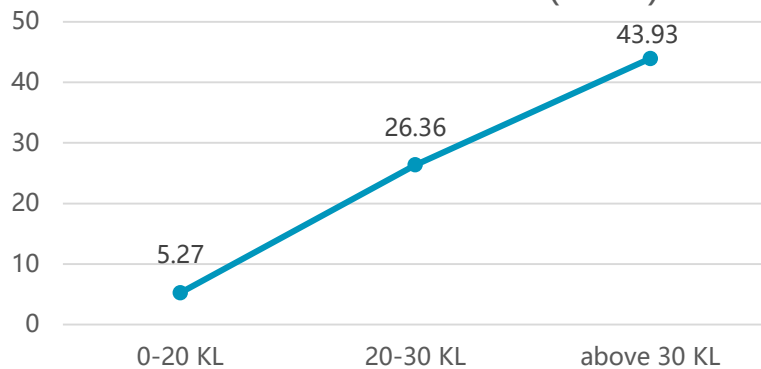
The policy gave free water up to 20000 litres and if the quantity exceeds then the tariffs will be charged for the full usage. Did it impact the usage and what change was observed?

Trends of Tariff Blocks

Old Tariff Block (2013)



New Tariff Block (2018)



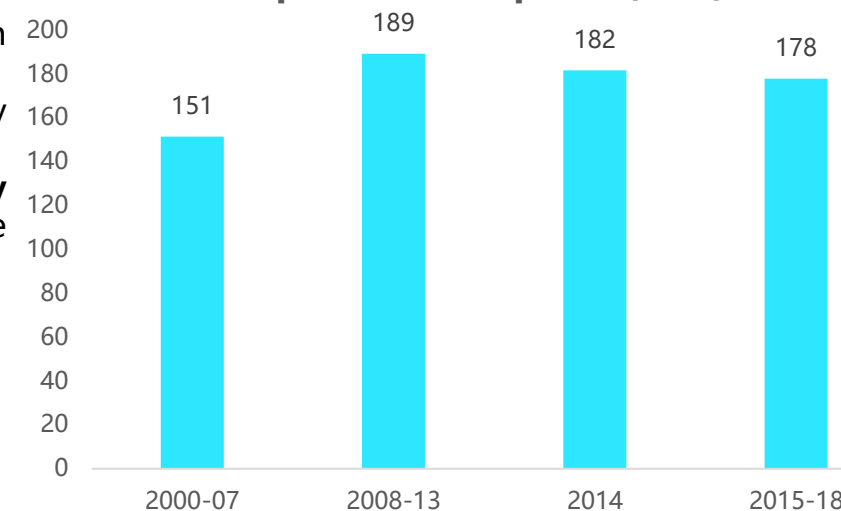
Gradual increase in Older Tariffs

Steep increase in Older Tariffs

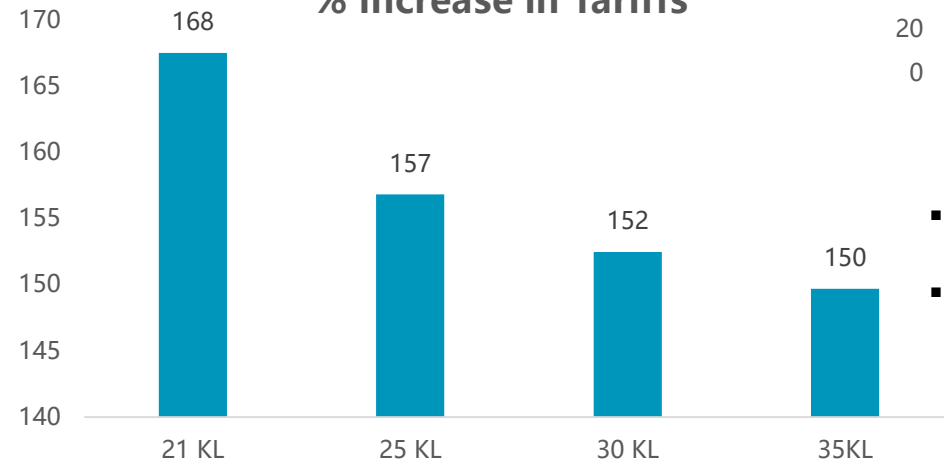
- DJB uses a bimonthly system of billing. They use **Rising Block Tariffs with zero first block**.
- If the usage **exceeds 20KL** than the payment for the full usage is to be done.

- **The 21KL** has a **sharp rise of 168%** which subsequently reduces.
- **As most people will be in (20-30 KL) block** they will be at a disadvantage.
- The tariffs are **against** the rule **“Use more – Pay More”** as above 30 KL block has the lowest increase in tariffs.

Per Capita Consumption (LPD)



% Increase in Tariffs



- There was **unchecked increase till 2008-13** as Consumption rose to **189 LPD**.
- After 2014, with the **implementation of the 20 KL** scheme the Consumption has **stabilised** and even has **started to decrease marginally**.

Source: The Times of India. (2019, August 28). *The Times of India*. Retrieved May 29, 2020, from [www.timesofindia.indiatimes.com: https://timesofindia.indiatimes.com/city/delhi/aap-govts-free-water-scheme-being-misused-by-several-housing-societies-ngt-panel/articleshow/70877231.cms](https://timesofindia.indiatimes.com/city/delhi/aap-govts-free-water-scheme-being-misused-by-several-housing-societies-ngt-panel/articleshow/70877231.cms)

Source Sustainability



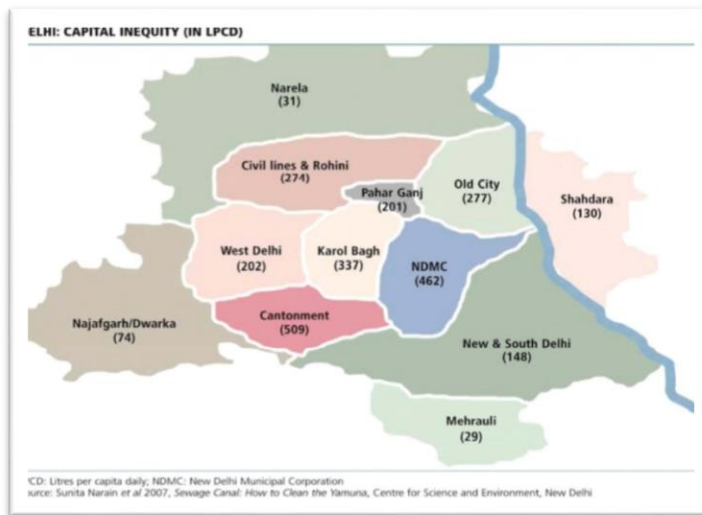
1. A few reports claim that residents are using up to 20KL and covering up the rest of their need by pumping extra water from bore wells. What are the impacts on the overexploitation of the groundwater?
2. With the increasing population, there is a constant increase in demand for water. In such circumstances how will the government assure the free water in future ?
3. As Delhi is a water-scarce area, what is the effect on water sharing agreements and Conflicts with neighbouring states?

Depletion of Groundwater

A few reports claim that residents are using up to 20KL and covering up the rest of their need by pumping extra water from bore wells. What are the impacts on the overexploitation of the groundwater?

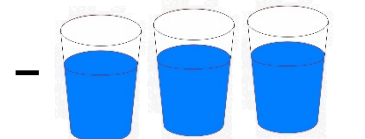
Reasons for exploitation

- Some areas **do not receive full quota of 20 KL** and use groundwater to fulfil their needs.
- Some housing societies after exhausting their quota of Free Water, start using groundwater through illegal bore wells.
- Illegal Tanker operators** use groundwater to fill up Tankers

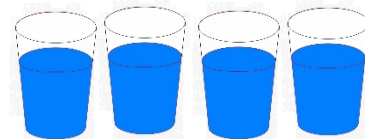


Extent of exploitation

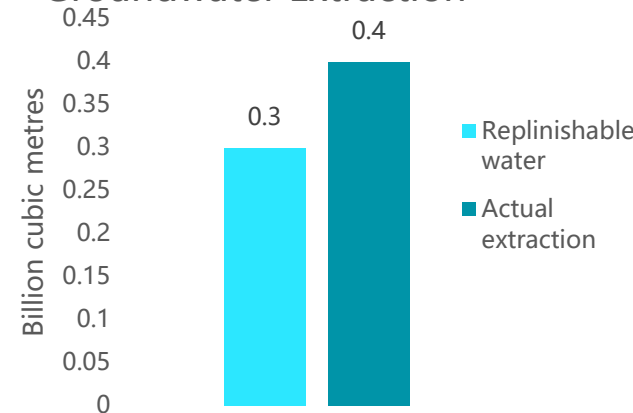
Replenished – 100 litres



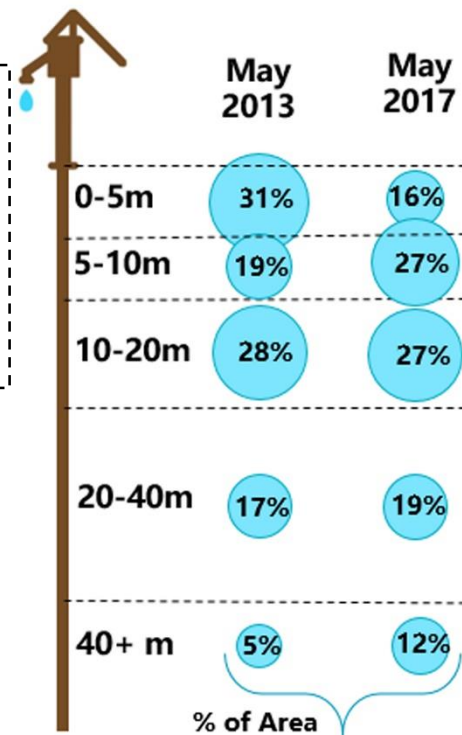
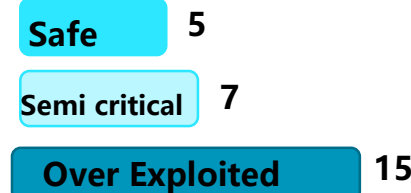
Extracted – 127 litres



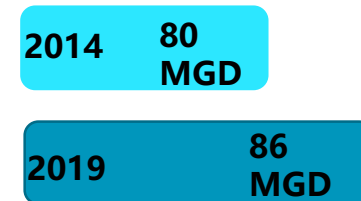
Groundwater Extraction



Groundwater has been divided into 27 blocks

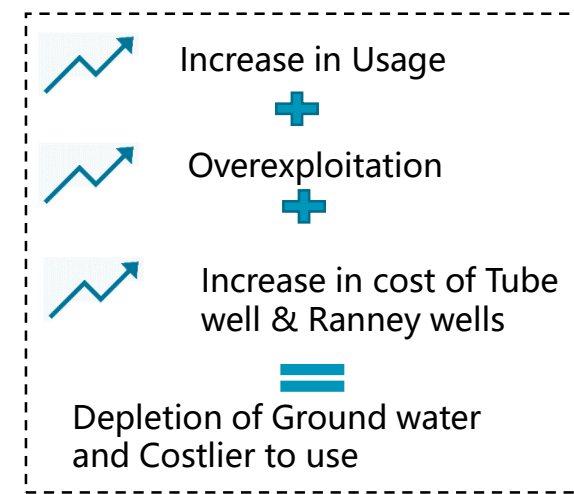
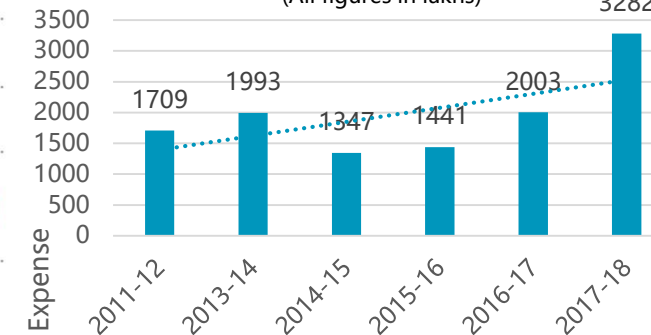


% share of GW in total supply



Increase in cost

Ranney & Tubewells (All figures in lakhs)



Source: Narayanmoorthy, A. (2014, January 1). *Business Line*. Retrieved May 31, 2020, from [www.thehindubusinessline.com](https://www.thehindubusinessline.com/opinion/Is-free-water-supply-bad-economics/article20707179.ece)

Business Standard. (2018, June 13). *Business Standard*. Retrieved May 31, 2020, from [www.business-standard.com](https://www.business-standard.com/article/news-ani/delhi-water-is-full-of-arsenic-fluoride-report-118061301053_1.html)

Impact of Increasing Demand

With the increasing population, there is a constant increase in demand for water. In such circumstances how will the government assure the free water in future?

2021 Demand projection will rise to 1380 MGD.

Plugging the Gap

2 new WTP to be set up. 50 MGD at Dwarka and 150 MGD at Chandrawal.

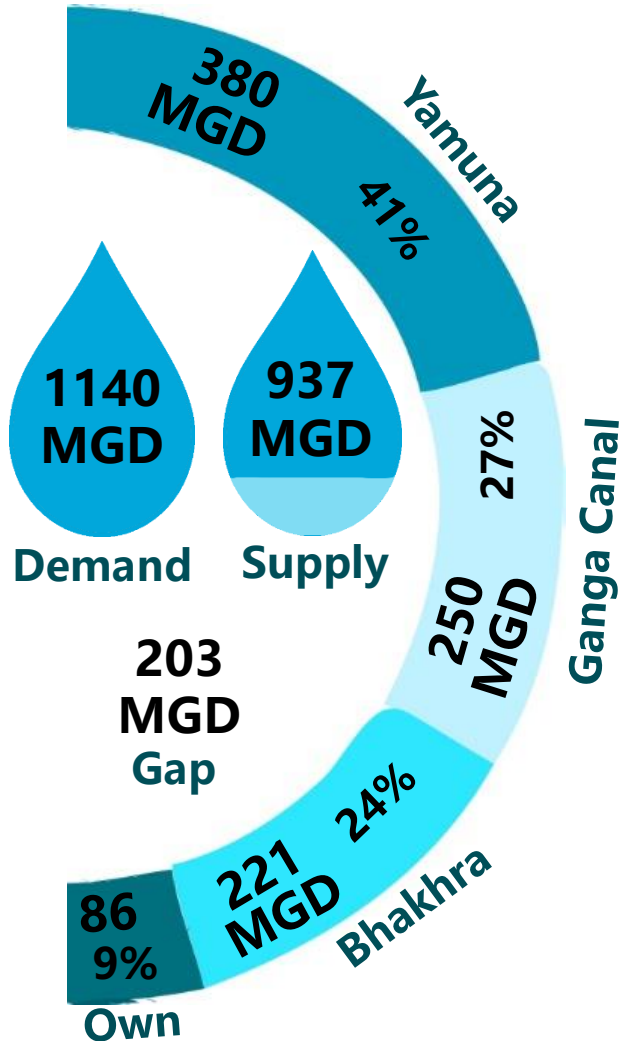
1000 acre Underground reservoir to be constructed at Palla (Delhi-Haryana border) to store Yamuna Monsoon water. 70 Ranney wells to be installed to extract 10MGD.

Revival of 200 water bodies to restore groundwater levels across the city.

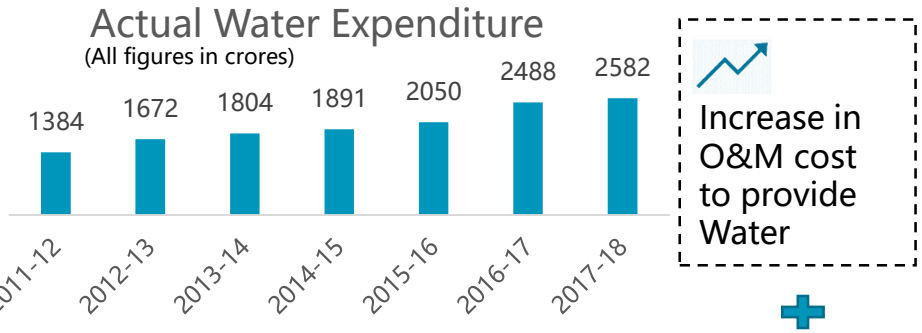
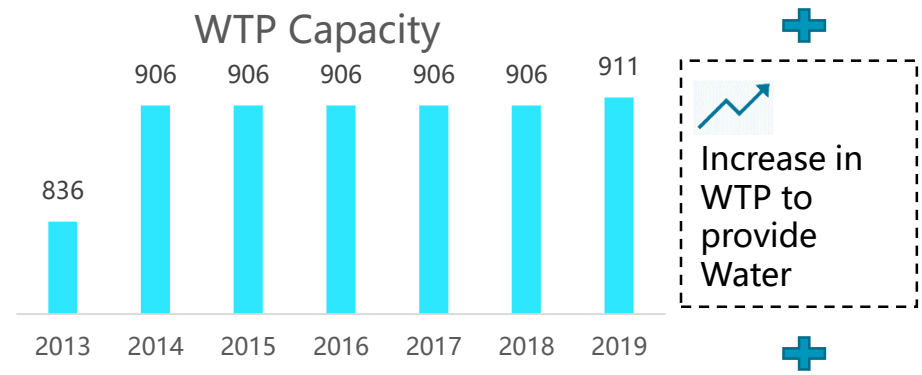
Concrete lining in Ganga canal will reduce losses and save an additional 150 MGD.

Based on NeWater Singapore, 70 MGD treated wastewater to be mixed with river water for an 11 km stretch to cleanse it naturally and increase the water quantity.

Increase extent of Rain water harvesting.



Increase in customers as result of Free Water Scheme



Puts additional burden on already stressed Finance and Water source = Limited Surface & Stressed Groundwater sources

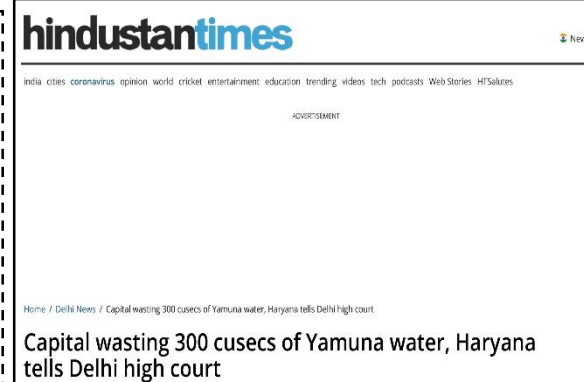
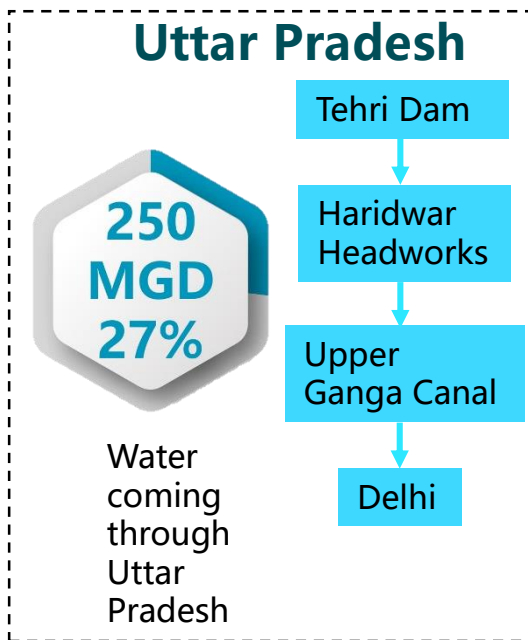
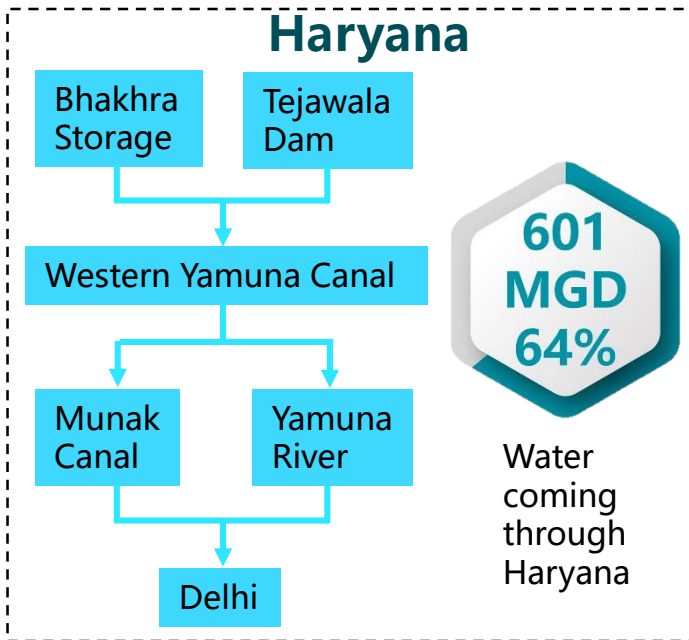
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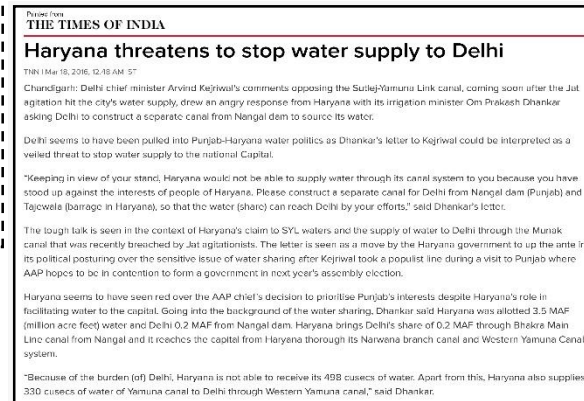
Impact of Water sharing between States

As Delhi is a water-scarce area, what will be the policy's impact on the existing sources? What is the effect on water sharing agreements with neighbouring states?

Water Dispute with Haryana



Haryana claims that Delhi is **wasting 300 cusecs** of water in leakage and pilferage. Instead of asking more water it should plug the leakages first.



Delhi claims that Haryana is not honoring the **1981 agreement** and is providing only **330 cusecs** against the agreed amount of **498 cusecs per day**

Haryana Riots 2016 – A Warning



- **Jat community** protests for reservation turned violent.
- Protestors **damaged a part of the Munak canal**.
- **Supply to Delhi was disturbed** and there was water scarcity for a few days.
- Just **240MGD** was produced instead of an installed capacity of **820MGD**.

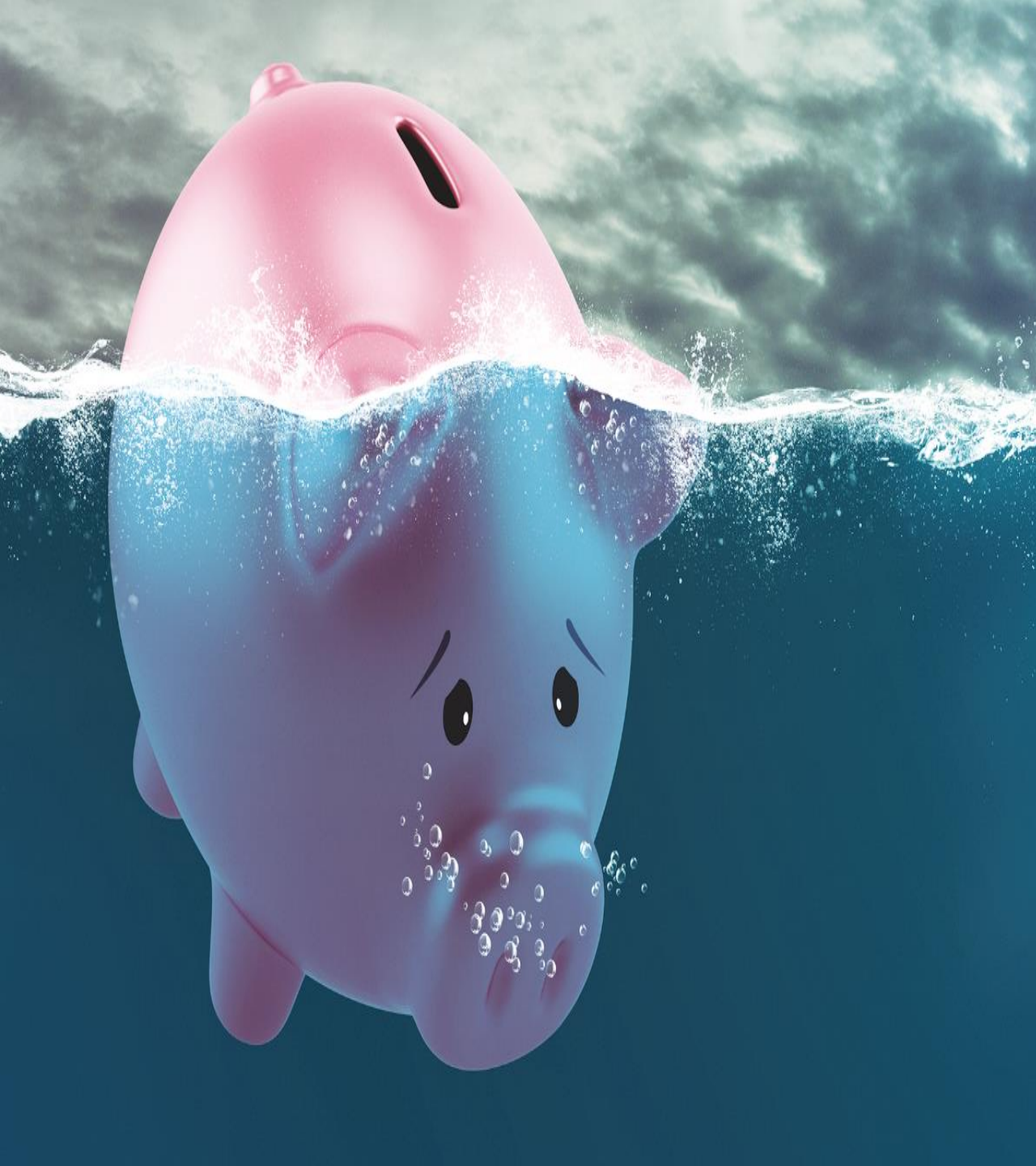


Impact

- As **64% water** comes through **Munak Canal**, it is the **most important source** for Delhi.
- The **2016 riots serve as a warning** that if the source is compromised then Delhi will be left with acute shortage of water.
- Also disputes are there on this main source.
- So the **provision of Free Water scheme may be risky and not feasible if the status quo of Munak canal changes**.

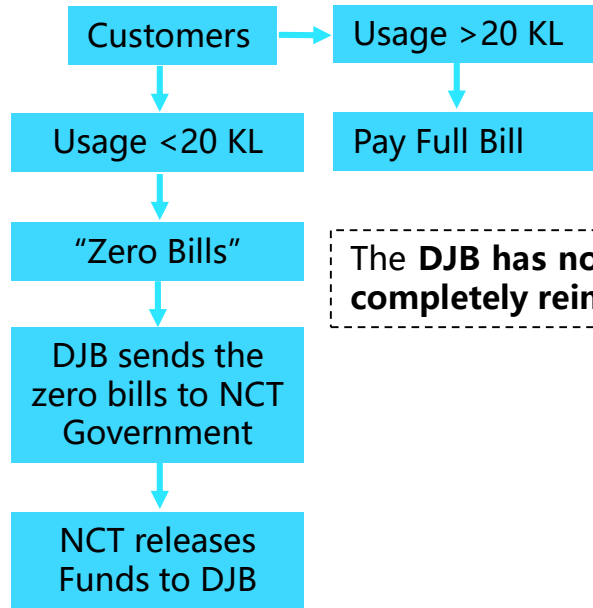
Finance

1. What other impacts were seen on the revenue generated by DJB? Will it gain profit or incur a loss? If it will incur loss then how will the DJB fill the gap?
2. The Delhi govt announced an arrear waiver scheme in 2018. What were the reasons, benefits and losses due to this?



Funding Free Water and Legacy Loans

DJB Fund Arrangement



▪ The Delhi Government keeps aside a **fund** for the **20 KL subsidy** in their budget.

The **DJB has no impact** of the subsidy given as it is **completely reimbursed** by the Delhi Government.

▪ With inclusion of **New Delhi, group housing societies** and expansion of DJB pipeline services, the **Subsidy amount is increasing** every year.

Impact of Legacy Loans

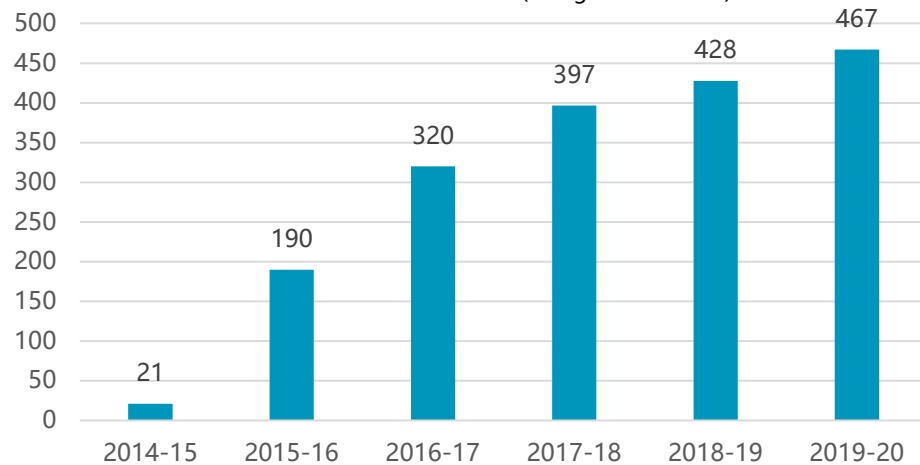
(All figures in lakhs)

Financial Health								
Sr. No.	Year	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
1	Total Income	191,196	215,528	200,447	196,119	239,216	243,894	250,240
2	Actual Expenditure	138,364	167,211	180,411	189,121	204,978	248,775	258,207
3	Interest on Loan	221,052	234,422	246,874	285,844	297,372	305,941	312,091
4	Depreciation	22,373	22,473	22,473	46,463	46,463	49,643	24,861
5	Total Expenditure	381,788	424,106	463,394	523,404	582,235	652,851	604,615
6	Gross Deficit (1-5)	-190,592	-208,578	-262,947	-327,285	-343,020	-408,956	-354,375
7	Interest on Loan due but not paid	221,013	221,868	246,840	285,844	297,372	305,940	312,091
8	Depreciation	22,373	22,473	22,473	46,463	46,463	49,643	24,861
9	Net Surplus/Deficit (7+8+9)	52,794	35,763	6,365	5,022	815	-53,373	-17,423

The Budget final tables shows **DJB is in deficit**. This is due to the **large interest amassed** on Loans taken by the DJB during its formation year.

Subsidy for 20 KL water scheme

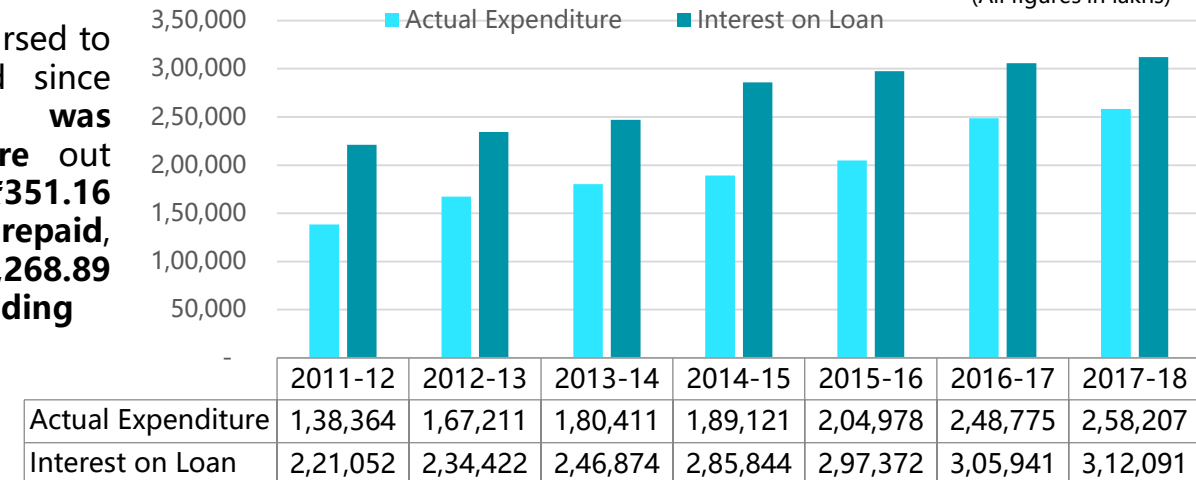
(All figures in crores)



Total loans disbursed to Delhi Jal Board since **1998-99** was **₹26,620.04 crore** out of which **only ₹351.16 crore** was repaid, leaving **₹26,268.89 crore** as **outstanding**

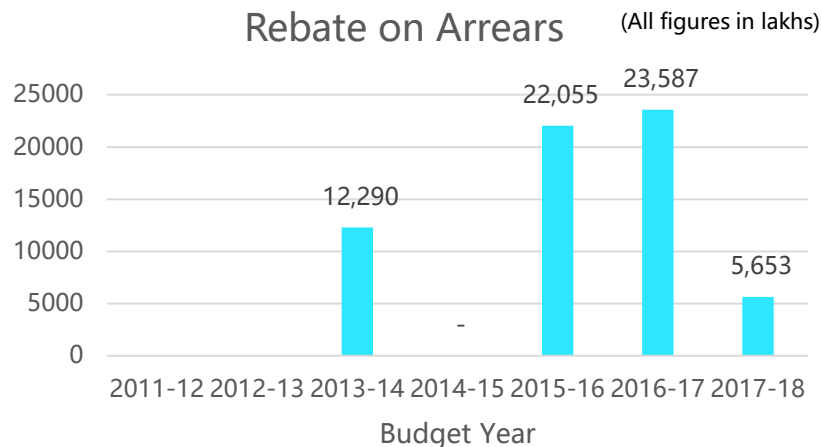
Loan vs Expenditure

(All figures in lakhs)



Not able to meet OpEx

LPSC and Arrears

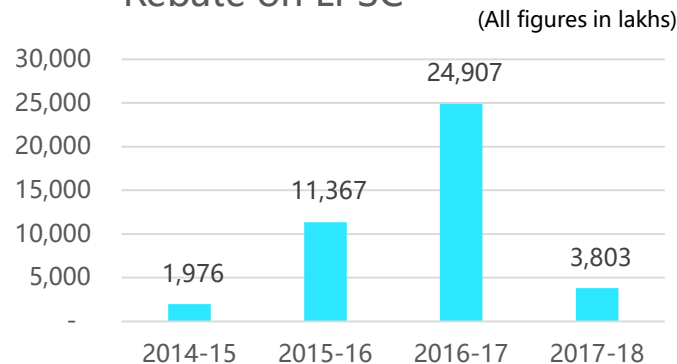


- Arrears are the dues owed to the DJB.
- If the principle is paid within a **stipulated time** the **DJB offers rebate**.
- In Last Arrear round **DJB got back 600 crores**.

- The **households in Delhi are classified from A to H**.
- A and B will get 25%, C will get 50%, D will get 75% and E,F,G,H will get 100% rebate.**

- The Late Payment Surcharge (LPSC) is the income which is generated after a person fails to pay the amount and is given a further penalty fine.
- Under the scheme all the households from **A-H will get a 100% rebate if they meet the required criteria.**

Rebate on LPSC

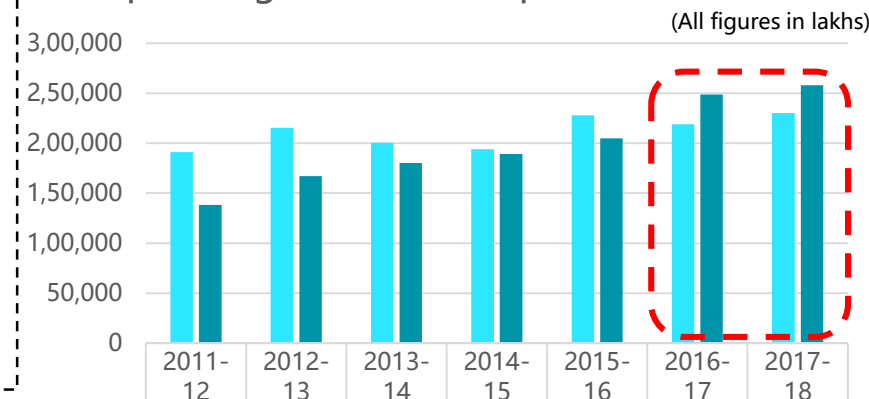


- The **Rebate on Arrears and LPSC helps in clearing some backlog** as people are encouraged to pay tariffs.
- These arrears and LPSC in turn also **cause stress to the total income generated by the DJB.**

Operating Income and Expenditure

Operating Ratio							
Year	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Operating Ratio	0.72	0.78	0.90	0.97	0.90	1.14	1.12

Operating Income vs Expense



Rise in ratio
Ratio is above 1 for last two years
DJB is not able to meet its operating expense with current sources.

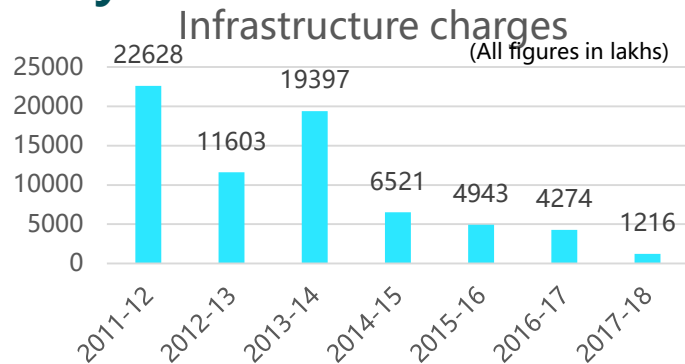
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Revenue Collection	1,91,196	2,15,528	2,00,447	1,94,143	2,27,848	2,18,988	2,30,240
Actual Expenditure	1,38,364	1,67,211	1,80,411	1,89,121	2,04,978	2,48,775	2,58,207

- The higher expense is due to **high Establishment costs** for last 2 years.
- There has been an increase of over **40000 lakhs** with the implementation of **7th Pay Commission**.

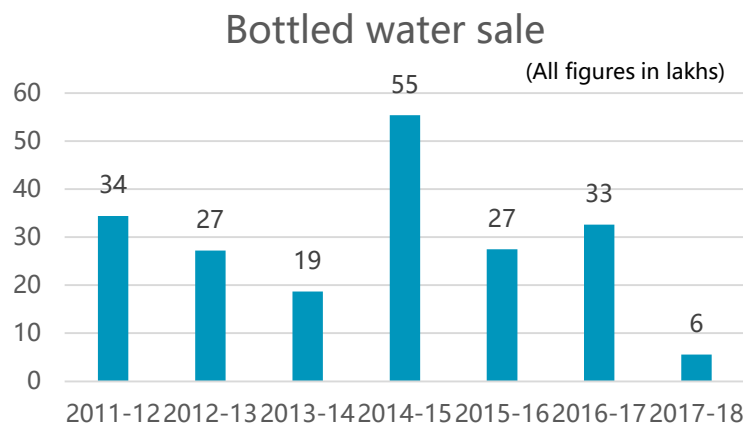
- There is **deficit even after excluding Loans, Depreciation, LPSC and arrears.**
- Govt.** is giving **assistance to DJB to cover this OpEx**
- Dues are settled and not carried forward to next year.**

Reasons for Gap in OpEx

Why is Income not Increasing ?

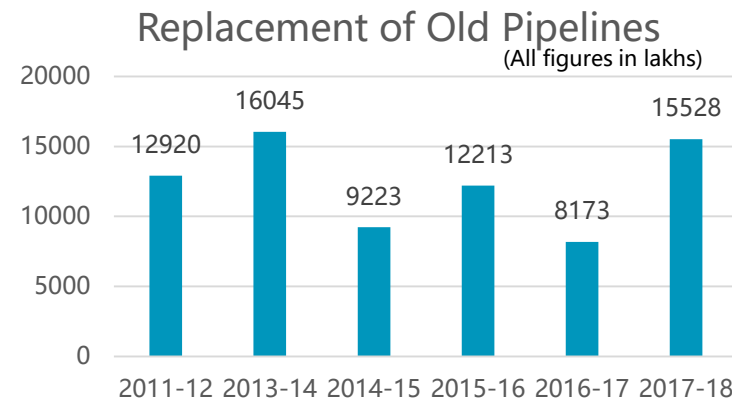


Sharp decrease due to reduction of Sewer, Water supply and Illegal connection charges

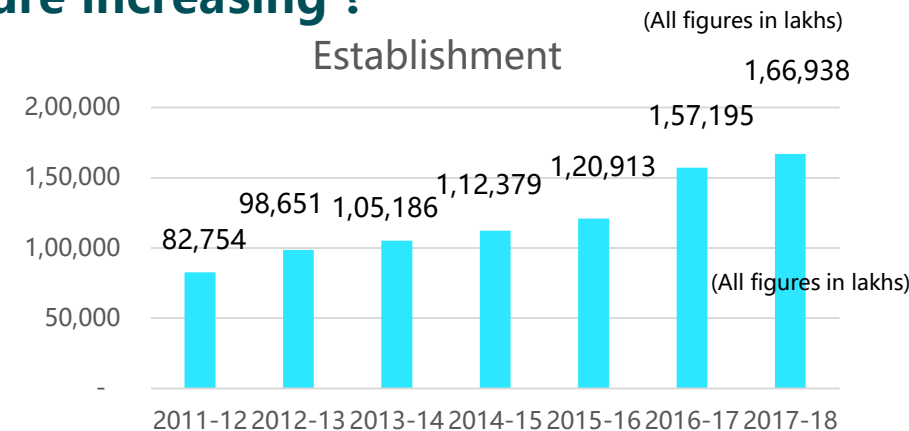


The yearly 10% hike has been stopped and tariffs are constant since many years.

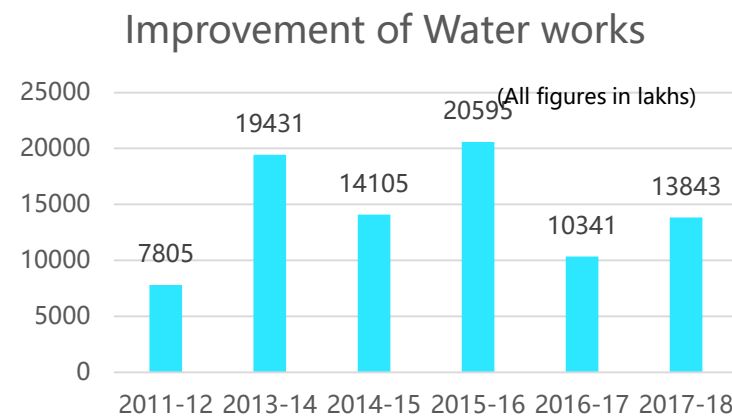
Why is Expenditure increasing ?



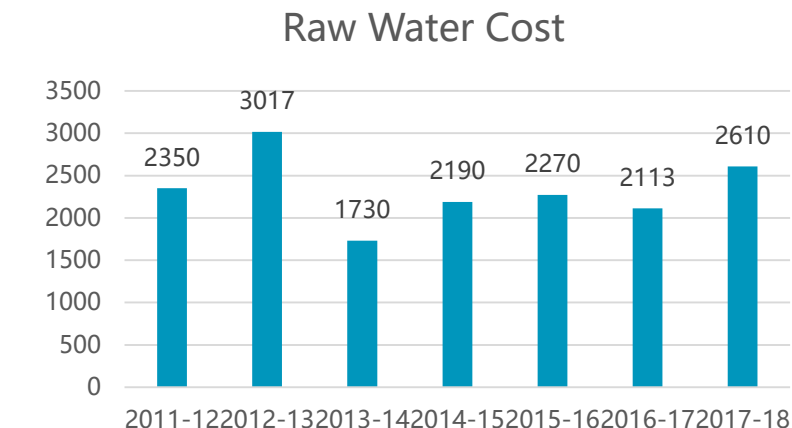
DJB is increasing the number of old pipelines replaced which increases the cost.



The provision of services in Resettlement colonies, Unauthorised colonies and JJ clusters also increase the expense.



To fulfil the water demand the capacity of waterworks are being increased which increases the cost.



The procurement of Raw water from different sources to meet the demand also requires huge capital and it affects the spending of the DJB.

Conclusions

Impact on SLBs

- 1 Noticeable increase in extent of metering and NRW is also decreasing significantly despite increasing coverage and customers
- 2 Large amount of customers able to benefit from "Zero bills" (57%) however equity emerging as an issue due to infrastructure issues in certain areas. Those that need this policy the most cannot avail it.

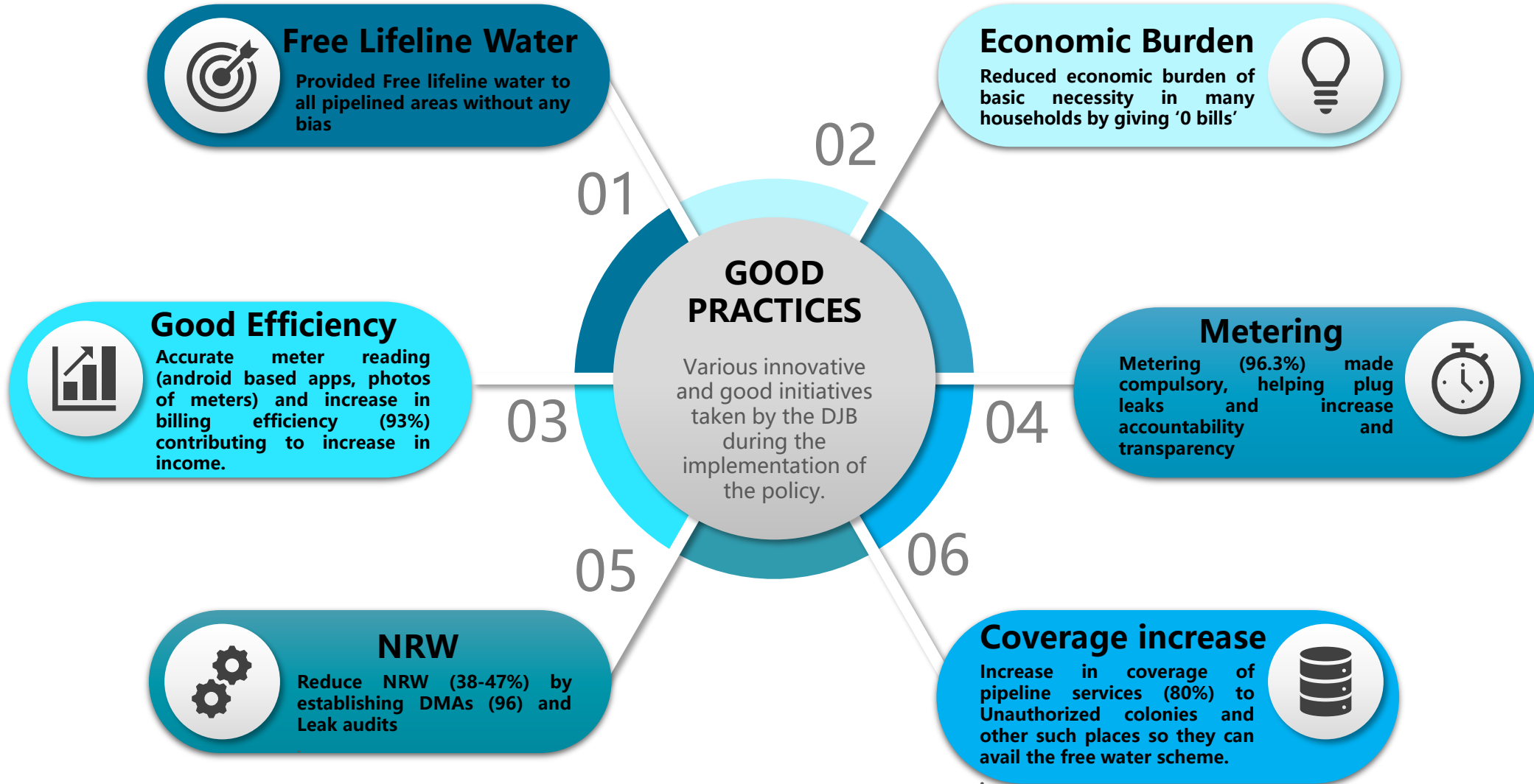
Impact on source sustainability

- 3 New tariff structure seems to be successful as households are trying to limit *municipal water* consumption below 20KL limit. Per capita demand has stabilized and also marginally decreased.
- 4 However, this is putting stress on GW extraction
- 5 Will be difficult to assure the scheme in future as there is a huge gap in supply and demand esp. with interstate water disputes

Impact on Finance

- 6 DJB's fund deficit is being highlighted - this is due to legacy loans
- 7 However, DJB not able to cover OpEx also and needs regular non-plan assistance. State govt is clubbing compensation for free water with this annual assistance.
- 8 Reduced income due to some aspects of this policy (reduced infrastructure charges, no tariff hike, arrear scheme) but also due to unsustainable expansion

Good Practices



Recommendations & Suggestions

Slopped Tariff

Provision of gradual slopped tariffs by adding extra 1 or 2 blocks with gradual rise in tariffs for the 20-30 KL part. This will ease the burden on the lower income group and reduce accumulation of 'Arrears'.

6

Reduce Rebates

Reduce the rebates on arrears and LPSC given regularly to the citizens so as to increase the income generation of the DJB.

5

Equitable Policy

If they really want to serve the vulnerable group then provide allotted Free Water by Tankers, provide coupons for Prepaid Tube well services to draw water, provide free water by delivering drums of decided free water to Unauthorized colonies, Jhuggi Jhopris, Urban villages and other such areas.

1

Regulation of Groundwater

Regulation of public and private bore wells to reduce water thefts and illegal extraction and discourage overuse.

4

Equitable Policy

If they really want to serve the vulnerable group then provide allotted Free Water by Tankers, provide coupons for Prepaid Tube well services to draw water, provide free water by delivering drums of decided free water to Unauthorized colonies, Jhuggi Jhopris, Urban villages and other such areas.

2

Legal Action

Strict action to be taken against the illegal tanker mafia using illegal bore wells and even DJB bore wells to extract Groundwater to supply water to bridge the demand gap. Strict action should be taken against DJB official found colluding with the water mafia.

3

Conservation

To reduce reliance on stressed water sources and reduce the cost of raw water, by increasing use of treated water, strict and mass implementation of Rain Water harvesting scheme.

Learnings for Other Cities from Delhi

Complete Network

- Complete the pipeline network and cover all the areas.
- Then install meters in all households which help to identify leakage and gaps.
- This reduces the NRW and so the water is not wasted and the efficiency also increases.

Bills and Tariffs

- The billing efficiency should be as near to 100% as possible.
- High billing efficiency also helps to increase the income generation.
- The tariff should be decided in such a way that the heavy users should be charged more and that extra income should be cross subsidized to make the water supply free for the poor people and lower income group.

Supply Mechanism

- Supply of Free water should not be restricted through a single channel.
- To reach all the sections of the society the supply should be through multiple agencies.
- Along with pipelines, free water should also be conveyed by jars, prepaid tube wells or water tankers.

Reducing Demand Gap

- Before the implementation of such a scheme the gap between demand and supply should be reduced.
- If there persists a gap between the demand and supply then the Government agency should try and provide water through other means.
- If the private players are providing , then their price should be regulated and their source of water should be regulated.

Water Conservation

- Implement water conservation programs along with providing free water.
- Implement schemes like Rainwater Harvesting and Reuse of treated water.
- This balances the usage and also provides the people an extra source or recharges the ground water table.

Target Group

- Instead of providing water to everybody, phase wise implementation of the scheme should be done.
- Indigent target approach should be done. After successfully providing water to them, the scheme should be made open to the next needy class.
- By this way the water will be cross subsidized better and all the citizens will have water equity.

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Thank you

<https://cwas.org.in>

About us

The Center for Water and Sanitation (C-WAS) at CEPT University carries out various activities – action research, training, advocacy to enable state and local governments to improve delivery of services.



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