

Overview of NURM projects vis-a-vis energy and resource efficiency in urban water management

Dr. Mahreen Matto

Water Programme, CSE

REGIONAL WORKSHOP

Energy and Resource Efficiency in Urban Water Management

27 September, 2013

Goa



Structure of the presentation

- Overview of the JnNURM Phase 1 projects in water sector
- The water scenario in the target states
- Problems and issues in water projects
- Measures taken towards sustainable water management

Target States



Thrust areas in water sector

- Water supply including setting up of desalination plants.
- Sewerage and sanitation
- Constructions and improvement of drains including stormwater drainage systems
- Preservation of water bodies

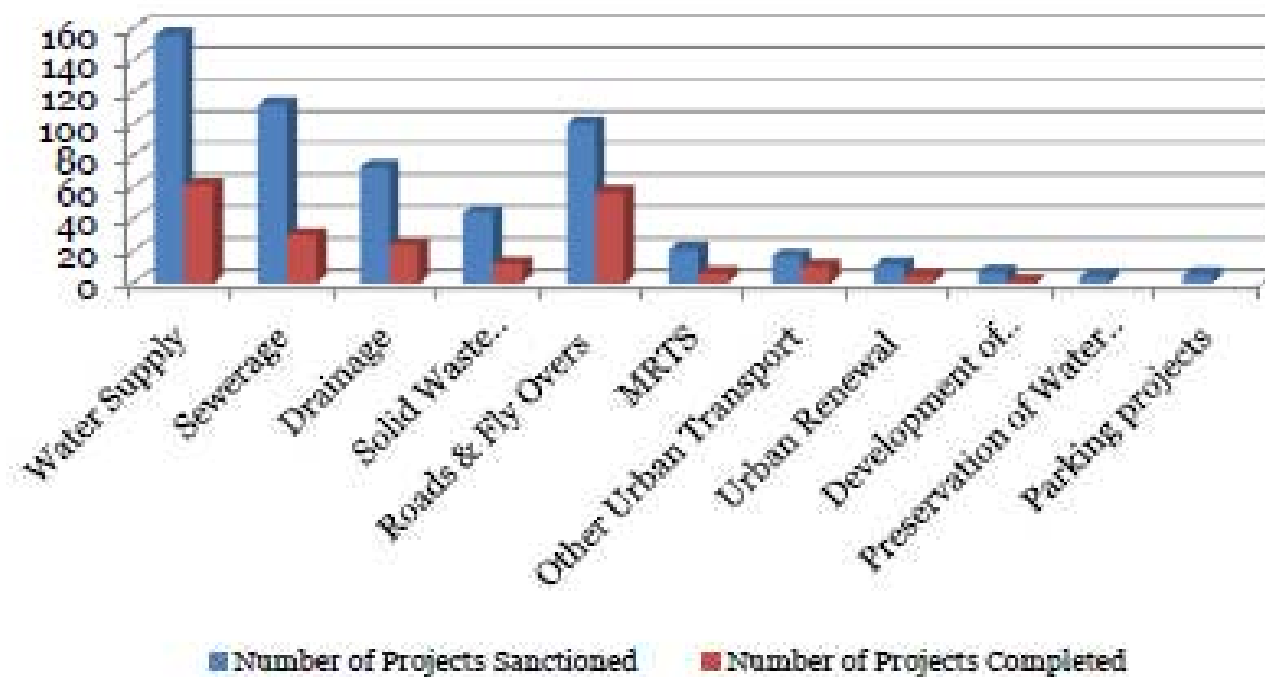
Sector wise details of sanctioned projects under UIG of JnNURM

S.No.	Sector	No of Projects	Number of projects completed	Approved Cost	Total ACA Committed	Total ACA Released
1	Drainage / Storm Water Drains	75	24	8,47,284.52	3,45,761.66	2,57,363.81
2	Roads / Flyovers / RoB	99	59	8,06,729.90	3,32,154.37	2,30,083.85
3	Water Supply	161	64	20,64,490.66	10,08,507.26	7,50,089.36
4	Sewerage	114	31	15,06,179.95	7,19,796.22	4,63,155.50
5	Urban Renewal	10	4	46,445.28	19,249.10	9,765.35
6	Mass Rapid Transport System	21	7	5,21,105.73	2,37,309.71	1,80,576.28
7	Other Urban Transport	16	10	77,417.70	36,334.95	26,531.01
8	Solid Waste Management	44	12	1,92,586.26	99,536.19	69,331.22
9	Development of Heritage Areas	7	1	22,542.60	14,412.03	6,797.28
10	Preservation of water bodies	4	-	11,670.54	6,861.20	5,667.27
11	Parking lots and spaces on PPP basis	5	-	86,042.43	33,728.19	10,336.01
		556	212	61,82,495.57	28,53,650.87	20,09,696.95

Total Sanctioned projects	Completed projects	Water sector project completed
556	212	119

56%

Sector wise projects sanctioned and projects completed



Percentage of the completed water projects

States	Total sanctioned projects	No of projects completed	Completed Water project
Madhya Pradesh	24	11	42%
Maharashtra	86	38	68%
Rajasthan	13	4	25%
Gujarat	77	51	55%

➤ The good news is that Maharashtra has shown the right commitment towards its citizens by plumbing for these projects and getting them sanctioned. The bad news is that execution is slow.

➤ On the other hand, states like Gujarat have executed far better, 50 of 77 projects, more than half while Andhra Pradesh has executed 23 of 52.

➤ Though even within that, data suggests that small cities like Nagpur in Maharashtra and Surat in Gujarat have best exploited the opportunity that presented itself.

Under JnNURM, in order to receive funds for the approved projects the state needs to implement reforms pertaining to governance and other mandatory reforms.

State level reforms

As of 2012 [Gujarat](#) led the tally for the state level reforms, being the only state to have achieved all 10 reforms required by the mission. Five states have achieved 9 out of 10 reforms: [Andhra Pradesh](#), [Maharashtra](#), [Madhya Pradesh](#), [Orissa](#) and [Uttar Pradesh](#).

City level reforms

As of 2012, [Visakhapatnam](#), [Surat](#) and [Pune](#) had the distinction of having accomplished all 8 city level reforms. [Chennai](#), Greater [Mumbai](#) and [Hyderabad](#) had achieved 7 out of 8 reforms.

Comparative table of completion of projects and reforms

Sl. No.	State Name	UIG		UIDSSMT		% of Completion in both UIG&UIDSSMT	Reforms (UIG)		
		No. of Projects Sanctioned	No. of Projects Completed	No. of Projects Sanctioned	No. of Projects Completed		Reforms Status in 31-Mar-2008	Reforms Status as on 31-Dec-12	Improvement in Reforms Achievemnt
11	Goa	2	-	3	-	-	14%	33%	18%
12	Gujarat	71	42	52	25	54%	51%	90%	38%
19	Madhya Pradesh	23	9	68	13	24%	29%	83%	54%
20	Maharashtra	80	27	95	18	26%	43%	83%	40%
21	Meghalaya	2	-	2	-	-	4%	67%	63%
22	Manipur	3	-	5	-	-	9%	46%	37%
23	Mizoram	4	-	2	-	-	9%	59%	50%
24	Nagaland	3	1	2	-	20%	13%	39%	26%
25	Orissa	5	1	18	3	17%	17%	74%	57%
26	Puduchery	2	-	1	-	-	9%	41%	32%
27	Punjab	6	1	17	1	9%	15%	55%	40%
28	Rajasthan	13	4	37	11	30%	25%	70%	45%

➤ Maharashtra and Gujarat governments have implemented more than [80%](#) reforms and hence have been able to secure funding from the Centre.

➤ Gujarat is leading in terms of completion of projects under JnNURM.

Shortcomings of JnNURM Phase 1

Although states like Gujarat and Maharashtra have been progressive in water sector

- Most projects focused on hardware
- Largely most of the projects have failed to achieve service level benchmark of full cost recovery
- Slow grant approval process has led to many projects being high and dry
- Lack of skilled human resource especially in the areas of project design and implementation is proving to be hindrance
- The monitoring and evaluation mechanisms from the governmental bodies are almost absent

News item on present water scenario in the target states

Over exploitation depletes water level in wells of Rajasthan

Sep 2, 2013

Out of 830 wells from across state, water level of 402 wells has gone down despite spending crores of rupees.

Despite constructing a number of systems to recharge the groundwater and spending crores of rupees, the water level in about half of the wells across the state has gone down.

The government had analysed 830 wells across the state for their level of water and found that the level of 402 wells has gone down. The report has once again highlighted the alarming level of groundwater in the state.

Supply up 250%, but Indore's water woes continue

TNN May 23, 2013

INDORE: Water supply of the city has increased by 250% in the last three years, claims Indore Municipal Corporation (IMC). However, there seems to be no end to the water woes of Indoreans. A large number of people are still deprived of tap water supply and are have to depend on water tankers.

Tap water used for drinking in 13% of homes in Mumbai: Study

TNN Aug 20, 2013

MUMBAI: BMC found that one out of every seven samples of drinking water in July was contaminated with E-coli bacterium. E-coli is responsible for stomach ailments such as severe diarrhoea.

The survey was conducted across eight cities. A press release said groundwater samples collected by Eureka Forbes Institute of Environment across the Mumbai-Thane belt had higher-than-permissible levels of totally dissolved solids, chlorides and nitrates.

Goa's rich and dying ecosystem

3 Apr 2013

Due to the ever-increasing population and its ever-increasing demands on natural resources have led to various threats on the productive ecosystem of wetlands as well. In Cacora, Mullem and Xeldem, because of the easy availability of canal water the sluice gates of the wetlands are not closed by bunding thus allowing the streams to flow out. This has resulted in the running water carving narrow channels on the bed of the wetlands.

A major part of Goa is covered by laterite aquifers which in turn are covered by tree and bush species such as Carey, Eugenia, Carissa and Zizyphus. These have the capacity to retain rainwater by creating an obstruction to flowing water during heavy precipitation and consequently the retained rainwater seeps into the crust in larger quantities. The augmentation of water held by these aquifers is increased significantly. None of the plant species mentioned above have any significant value as timber but are cut for firewood. The removal of the vegetation cover from the laterite crust makes it harder, less permeable to water seepage and reduces its capacity as an aquifer.

Measures taken towards sustainable water management

Water regulator ready to help in city rivers and lakes cause

TNN Jun 29, 2013

NAGPUR: Maharashtra Water Resources Regulatory Authority (MWRRA), for the first time, is planning to prepare action plan and policies for effective implementation of water bodies' conservation. As a part of its initiative, the regulator organized a workshop on rejuvenation of lakes and rivers of city in association with the Nagpur Municipal Corporation (NMC). The plan is to study the scenario at city levels and prepare an action plan along with spreading awareness among the bulk consumers about conservation and judicious use of water. Nagpur is the first city where such a workshop was organized. Earlier steps were taken for conservation of Powai lake in Mumbai.

25% budgetary funds for water crises: Prithviraj Chavan

TNN Jun 10, 2013

SATARA: The state government will allot 25% of its budget every year for the next three years for projects to solve water scarcity in Maharashtra, said chief minister Prithviraj Chavan in Satara on Sunday.

About Rs 30,000 crore will be earmarked in the budget and the state will seek a matching amount from the Centre. So, Rs 60,000 crore will be spent on projects and schemes meant for improving drinking water supply and irrigation.

Goa plans to reduce water wastage by 25% in 6 years

TNN Sep 11, 2013

PANAJI: As part of its plan to start 24x7 water supply in Goa by 2015, the government has drawn up an ambitious plan to reduce the state's non-revenue water (NRW) from a present 45% to 20% within a period of six years. Goa hopes to further reduce its NRW to 15% within the subsequent five years.

"Reduction of non-revenue water (NRW) and management is one of the mandatory requirements for achieving 24x7 water supply on sustainable basis," said A M Wachasundar, project director of Goa's 1,031-crore Japan international cooperation agency project.

Water supply to Saurashtra, Kutch hiked by 50%, says govt

TNN Apr 11, 2013

GANDHINAGAR: Gujarat government has decided to increase water supply through the Narmada canal-based pipelines, from 80-crorelitres to 120-crorelitres per day, in the wake of water scarcity in Saurashtra and Kutch.

Selaulim water gets clean chit on manganese

TNN Aug 28, 2013

Potable water supplied through the Selaulim water treatment plant is safe for consumption with the manganese content within permissible limits (0.05 mg/litre), states the Goa state pollution control board (GSPCB) water quality report.

The board also recommended the installation of an on line water monitoring system to keep a check on manganese and iron contents in both raw and treated water supplied.

Finally, it recommended that the existing treatment system be upgraded taking into consideration existing manganese levels as the same are easily lowered using common treatment methods.

Conclusion

- In view of the theme of the presentation there are no concerns on energy currently in the existing or ongoing schemes
- Holistic water management is still missing
 - No projects sanctioned in the combination on water and sewerage OR water conservation and efficiency
 - All projects are towards supplied side