

Financing Wastewater Management System to Meet the SDG 6.3- Issues in India

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Presented at

GWA Conference on Wastewater Management to Meet the SDG 6.3

At

Wharton School, University of Pennsylvania, Philadelphia

5 April, 2017

Population Shift in the Future

- **Estimated Population (2020): 1.35 B**
- **70 Million more people than 2010**
- **There will be an expected shift of Population from Rural to Urban, from poor to middle class.**
- **By 2020, urban population is expected to be 600 millions; and rural population be 700 millions.**
- **There will be an added burden of 200 million population to already crowded urban cities by 2020 than 2010**

Size of the Problem of Wastewater Management in India

- More than 100 cities have population more than 1 Million
- At Present only large cities have partial sewerage system with Inadequate Wastewater Management Plan
- In general, medium size cities do not have sewer systems; however, may have some treatment system. These cities mainly have individual septic tanks and open drains
- Cost of sewerage system is 3 to 4 times the cost of treatment system
- Total cost wastewater management system of urban areas of India will be very high
- This is not a local issue, but a national issue

Water Management Legislations In India

- **Water Prevention and Control of Pollution Act of 1974 (Created Central Pollution Control Board without any power with all power to State Pollution Control Boards for enforcement)**
- **Environment Protection Act of 1984**
- **Neither has financing Mechanism and plan for effective monitoring**
- **Ganga Action Plan (GAP) of 1986 (Covered about 1/3rd Population of India). Revised in 2016 in a different name**
- **Goal to keep the river Ganga Clean with objective to intercept, divert and treat wastewater from open drains**
- **Not successful: Not adequate financing arrangements (Only Central Government funded about \$600 M during the last 28 years)**
- **Failure due to poor financing and, lack of strong and effective institutions**

Financing Mechanisms in India

- Primary Sources of Financing in India for capital costs are:
- Central Government (GOI) Grants
- Asian Development Bank and the World Bank long term loans (there are also some draw backs)
- Financing mechanism through municipal bond is poor (**lack of strong municipal institution, financial capacity and management; Political interference and corruption**)
- There are potentials for Public Private Partnership (PPP), and Build, Own, Operate and Transfer (BOOT) (**Examples are Highways and Airports**)
- One example of completely privately financed and owned water plant is in Chennai
- Financing for O&M Costs:
- Financing using property tax
- Users fee (**Need vigorous educational, social and public awareness program**)
- In a study for the World Bank for the City of Kolkata, it was found that the public are willing to pay for the water and wastewater services, provided the service is good

A Privately Financed Desalination Plant in Chennai (237 MLD) Design, Built, Operate, Owned and Transfer - An Innovative Approach (Source: BBC News 29 July,01



Financing Issues in India

- Central Government plays the key role
- Weak State and Local Governments
- Lack of water metering, justifiable users' fee is difficult
- Without water metering, very little water conservation and production of more wastewater
- Lack of education and awareness of implications of wastewater. It is easier to convince people to pay for water than for wastewater
- Lack of good institutional structures
- Lack of willingness for the politicians to install meters and use users' fee for O&M without any subsidy.
- Politicians' interferences

Probable Solutions

- Need strong legislation with provisions for capital and O&M financing and monitoring
- Capital cost grants from Government of India are essential
- Long term loans from the World Bank and Asian Development banks are helpful
- Strengthen Municipal and local government Institutions and financial systems to generate enough dedicated revenue for O&M costs
- Metering of water should be made mandatory and develop firm requirements of users' fee for water and wastewater services
- Conduct awareness and educational workshops to educate public and politicians
- In general people of India among all groups of population are knowledgeable of financing using loans
- Encourage private financing and public and private financing (PPP) and BOOT (Examples of highways and airports)

Thank You

