

Goa, 3-5 April 2008

Background note to the session on WATER SUPPLY, SANITATION & SOLID WASTE

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Prelude

Taking water as an example, it is a pity that no city or town in India has a 24-hour water supply at consumer's tap, leave alone the "quality" aspect. It is definitely NOT an issue of "lack of water resource" but entire blame is on "lack of proper O&M practices".

Barring a few exceptions like Chennai, Bangalore and desert areas of Rajasthan where water resource is a constraint, but the cities of Delhi, Mumbai, Kolkata, Hyderabad and most others, have plenty of water availability which does not reach the consumer due to "inefficient O&M practices". Water Boards and Municipal Corporations in each of the cities mentioned above lift river and ground water in excess of 200 litres per person per day while the average consumption per person per day as per international and Indian norms is 150 litres. Where does all this water go – "wastage" through the leaking underground pipes!

The showcase demonstration project

Government of Karnataka launched a pilot project in April 2005, covering about 10% population in 3 cities, namely, Belgaum, Hubli-Dharwad and Gulbarga. People in these areas received water in their taps only for 2-3 hours every second or third day while there was plenty of water lying around in the adjacent reservoirs. Veolia Water won the international tender and carried out rehabilitation of water supply infrastructure after a detailed study of existing system and are presently operating the system to provide 24-hour continuous and pressurised water supply, without the consumers having to store water in underground or overhead tanks – water flows whenever the tap is opened. Remarkably, the total quantity of water being supplied today is lesser than the quantity being used to supply water for only 2-3 hours every second or third day, reconfirming our assessment that huge quantity of water are being wasted through the leaking underground pipes and inefficient O&M practices.

What needs to be done to achieve good water supply service

☞ **INFORMATION** - creditable, authentic and auditable data base.

Most of the Water Utilities in the country do not know how much water they lift from rivers or ground, how much water goes out of the treatment plants, how much water reaches the over-head reservoirs, how much water is consumed by each customer. Nevertheless "theoretical" figures are available which do not match the reality. These figures are theoretical because they do not have meters installed at the source, treatment plants or the transmission system. Some places have the consumer meters installed but no consumer meter can work efficiently in an intermittent water supply system, since air enters the meter while there is no water supply and then the meter either gives wrong reading or stops working.

It is absolutely essential to install meters at raw water intake, outlet of treatment plants, along the transmission lines, at the outlet of over-head reservoirs feeding the distribution network and for every consumer once 24-hour supply system can be established.

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Electricity costs contribute anything from 60% to 80% of the total cost of any water supply system. Again information is merely available on the electricity consumption at critical pumping stations. Reliable Energy Audits and an experienced Operator's know-how to manage the pumping regime are essential. This could be the single largest factor in reducing the operation costs.

☞ **ACCOUNTABILITY** – for every individual's performance.

At some treatment plants meters were installed under bilateral or multilateral funding. However, they worked only as long as the contractors appointed to install meters were present at site. When one assesses the situation after a while, reality is that most of the time these brand new equipment is either not operating or not monitored. Private Sector Operators obliged for Performance through a Contract would not find it easy to escape Accountability.

☞ **STRATEGY** - to bring improvements based on hard facts.

Once it is known how much water is moving from one stage to another, it is only an engineering aspect to detect the reasons for losses and rectify the defects. This is the "core" of an efficient water supply system. Developed countries realized this a few decades ago and billions (actually billions) of dollars have been invested to rehabilitate the underground water supply network to reduce water losses.

☞ **IMPLEMENTATION** – through competent and experienced Operators.

It is a fact that there are not many experienced International Water Operators in the world. One can count and the number does not go beyond 10, who operate internationally besides managing their own domestic water supply systems. 3 of them have already been through the cycle of setting up their shop in India, waiting patiently for a few years for the process to begin, losing patience and winding up shop to exit India.

This situation needs to evolve while attracting competent International Operators and by no doubt good Indian firms would emerge by gaining expertise from this exposure.

☞ **MIS** – monitor and provide sustainability.

Assuming a system is finally set up duly correcting all deficiencies, it would be essential to have proper monitoring systems in place to make sure that the system does not derelict again and keeps improving further. There are established MIS available which can be developed as a part of the Project and the Utility Managers can be imparted training to use the MIS effectively so that the System becomes sustainable.

Jawaharlal Nehru National Urban Renewal Mission (JnNURM):

This is a brilliant programme started by the Central Government in December 2005 whereby State Governments and Municipal Corporations of specified 63 cities can approach the Central Government for financial support for water supply projects and obtain 50% to 70% grant aid subject to commitment to carry out defined reforms. It is recommended that sustainable operations should be adopted as a fundamental theme to approve projects involving conservation of energy and water losses. Also private sector participation should be encouraged to bring efficiency by introducing key performance indicators and monitoring them diligently.