The Case for "SHARED SOLUTIONS"

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Whether it is water and sanitation, integrated planning of land use and transport, public housing or mobility within the city through last mile connectivity, the challenges of Indian cities and towns are no different from what most other countries are facing or have faced at a comparable stage in their development. The experiences of Singapore, Phnom Penh, Bogotá and Curitiba are only some of the many which are of direct relevance to the challenges that Indian cities and towns are currently facing. At the same time, learning what not to do from the experiences of certain countries is also a shared solution.

Recently, some Indian cities and towns have begun to share their solutions to the common challenges of bridging the infrastructure investment deficit and improving service delivery, often deploying new technology instruments of Geographic Information Systems (GIS), Global Positioning System (GPS), General Packet Radio Service (GPRS) and Supervisory Control and Data Acquisition (SCADA) and software packages for e-governance in the delivery of consumer services. This learning and sharing may not be fast enough, or often enough, but the process has begun.

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Alandur, a small town outside of Chennai in Tamil Nadu, set an example by putting in place 100% of a sewerage network in a short period between 2000 and 2005. Chandigarh near Punjab, Navi Mumbai in Maharashtra, and Surat in Gujarat are close to fully treating their waste water. But this is in an overall context where only 30% of Indian cities are covered by a sewerage network, and only 15% of the waste water in urban India is treated. Even in Singapore as late as 1971, only 57% of the population was served by the main public sewerage network. But by 1990, Singapore had implemented its Used Water Master Plan with a 100% sewerage network and six water reclamation plants, one for each zone. This solution can be replicated in India, though the scale of the effort will be much larger. Similarly, the clean-up of the Singapore River between 1977 and 1987 provides a good example to study in the search for a holistic solution to the cleaning up of river Yamuna in Delhi and river Ganga in Varanasi. There are challenges of funding and inter-state jurisdiction, but these would seem less daunting if the planning and governance aspects were addressed effectively.

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Again, Singapore provides an example for Indian cities looking for holistic solutions in municipal waste management and environmentally friendly wasteto-energy options. Beginning with an emphasis on waste reduction and recycling, Singapore has put in place a mix of outsourcing of waste collection for households under a regulated, uniform feepaying system; licensing of waste collectors engaged by industrial and commercial waste generators, for whom collection fees are market-driven; and consolidation of waste collection by reducing the geographical sectors from nine to six. Incineration of the waste with due placement of filters to ensure environmental protection has been found to be the cost-effective solution for the disposal of waste in Singapore.

India's solutions for waste management have to be conditioned by the local context, including the physical and chemical characteristics of its municipal waste. The relatively high proportion of biodegradable matter in the total waste warrants segregation of wet waste and its treatment in a decentralised manner. Pune, the second largest city of Maharashtra, was one of the first cities to attempt segregation of wet and dry municipal waste at source and improve working conditions for rag-pickers to recover recyclables. The Chief Minister of Assam personally visited Pune with his expert advisors

and examined these plants and later set up three such plants in Guwahati. Kerala's government is also actively exploring this option. In another example, Pammal, a small town in Tamil Nadu with a resident population of 85,000 and a floating population of 15,000, has shown the power of community action to transform its solid waste management scenario. Its 500 green ambassadors serve Mangadu (a temple town in Tamil Nadu), Panipat in Haryana, Sangareddy in Andhra Pradesh, and Kamarhatty and Panihatty in West Bengal in adapting their model of solid waste management to local needs.

In the area of providing potable water, Malkapur, a small town in Maharashtra with a population of 40,000, has provided continuous water supply through piped network to all its residents within a financially viable framework through concrete reforms undertaken by the city government and support from the Maharashtra Jeevan Pradhikaran, a state government entity. In doing this, Malkapur drew inspiration from Badlapur, a city in Maharashtra. In 2008, ECO-Asia (the Environmental-Cooperation Asia programme by the United States Agency for International Development) had facilitated a water operator partnership between Maharashtra Jeevan Pradhikaran and Ranhill Utilities of Malaysia to implement a 24 x 7 pilot project in Badlapur, with emphasis on reducing non-revenue water.

Malkapur's success replicates what the Phnom Penh Water Supply Authority did in Cambodia, when it radically transformed a decrepit and war-torn water system known for its missing water and missing customers. At the state level, a state-wide reform programme on water and sanitation in Maharashtra has been facilitating its cities and towns to develop solutions to their challenges of water and sanitation.

A number of public-private partnerships (PPP) for drinking water in Hubli-Dharwad, Gulbarga and Belgaum have successfully demonstrated the technical feasibility of providing water 24 x 7 to all their residents in the pilot zones of these cities, but up-scaling has been slow because of the challenges of cost recovery. Nagpur is using PPP for integrated water management to deliver 24 x 7 water, while trying to address the challenges of recovering costs.

In transport, the Bus Rapid Transport System (BRTS) has emerged as a lower-cost solution in medium-sized developing cities that are not able to make large investment in underground metro railway systems. BRTS in Ahmedabad was inspired by the systems in Bogotá (Colombia) and Curitiba (Brazil), and adapted to suit local requirements. Other Indian cities such as Bhopal and Indore are following the example of Ahmedabad, although the implementation of BRTS is not

associated with integrated planning of land use and transport to harness the full benefits of the transport system. Indian cities have also generally not made extensive and effective use of Floor Space Index (FSI) in urban design and planning, although Hyderabad, Ahmedabad and Bhopal are attempting to integrate land use planning with transport planning through a flexible FSI approach and unlocking land value. A much bolder and holistic approach is needed across the urban landscape.

A major game changer in the Indian urban environment in the past decade or so has been the Jawaharlal Nehru National Urban Renewal Mission, which was launched by the Indian government in December 2005 with a commitment to finance urban infrastructure and channel the funds to city governments through state governments, provided these governments also put in their specified share of financing and agree to carry out certain reforms to improve their planning, administration and finances. The Mission has created an environment in which cities have developed a spirit to compete; they are increasingly paying attention to what is happening around them, and looking for inspiration beyond national borders.

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