# Thinking Outside the Box

# A Case for Comprehensive Choice Examination in Infrastructure Provision

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Provision of adequate quantities of safe drinking water for a settlements population is an ever increasing problem in all urbanizing contexts in developing countries. Quite often conventional wisdom dictates setting up of more infrastructure, both physical and administrative, as a solution to the problem. More often than not, these solutions, if they fructify at all, soon degenerate into inefficient and cost-effective schemes supplying inadequate quantities of water with negligible cost recoveries. A significant body of planning literature also talks about improving project development and management practices, both at the planning and implementation stages of infrastructure projects as a way to improve their capital and operational benefits versus costs. However, much of such discussion takes place in the context of a project, designed to alleviate or eradicate a problem in a community, that has been approved and is soon to be funded. Traditional wisdom in tackling the problems present in these communities, is completely ignored, even when such solutions are community based, more egalitarian and frequently very low cost. Such a situation exists in Imphal the capital city of the state of Manipur in India.

About 50 percent of the city's 400,000 inhabitants are connected to a piped water network which supplies inadequate quantities of water of dubious quality and requires high levels of government subsidy. Simultaneously, there exist very efficient traditional water supply mechanisms that can be used to augment the city water supply system. Some of the traditional and non-piped sources of water in Imphal are: ponds (at the household, neighborhood and city levels), rivers and streams, water tankers and harvested rain-water. Planners and governments frequently ignore such alternate solutions, as they did in Imphal, based on assumptions that such systems may either not meet health and sanitation standards or not be socially acceptable or sustainable for more than five to ten years, given the rapidly changing (/ "westernizing") social context in

developing countries. This research questions these assumptions. The specific objectives of this research were to explore the causes of the inefficiency of the piped water network and examine the feasibility of being fully reliant on traditional water supply mechanisms.

About 300 household surveys were administered to a structured sample to gain in-depth information about the various traditional waters supply systems, and peoples attitudes towards these and the piped water network. These were supplemented with other investigations such as water quality tests. The information gathered through the questionnaires is at first being subjected to simple statistical analysis. As the project evolves it is expected that the data would be subjected to rigorous multi-variate analysis to develop a predictive model of long-term dependability on traditional water supply mechanisms.

One major group of findings of this research which confirms apprehensions about the public infrastructure operations in developing countries, was this: the government sponsored piped water network supplied water of dubious quality (in terms of biological, chemical and physical contaminants), was very erratic in supply with water not being supplied throughout the day and for a few hours each day at varying water pressures thus necessitating investment in household level water collection mechanisms, and that less than 15 percent of the operational cost (and zero percent of the capital cost) of the system was recovered directly from the users. Further, the existing infrastructure was badly maintained, was flawed in design and any augmentation of the network warranted high capital investments. And yet inspite of all this, the state government is poised to do precisely the same.

This research reveals that some of the alternate supply mechanisms have long-term sustainability, promote equity in access to infrastructure, and have environmental benefits too. One such alternate mechanism was neighbourhood ponds. Found widely throughout the city, maintained by voluntary community groups, these ponds provide potable water, year-round to all groups of people at almost no-cost. Further, they serve flood control functions. The research underlined the need for integrating social planning and physical planning. On the threshold of the third millennium, planning needs to facilitate long-term social, cultural, economic and environmental

goals. And this research suggests that such a vision may not only be possible but may be the most feasible course of action in many urban centers in developing countries.

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