

WATER SUPPLY RESILIENCE FOR URBAN COMMUNITIES:

New Report Provides Strategies for Water Security in Developing Country Cities

“For the past 15 years, since I have got married in this household, I have been getting up at 4:00 am, transporting 10-15 liters of water from the valve to my house, which is on the second floor. The valve is about a kilometer from my house. This practice has not only generated health problems but also sapped us of the energy to make more than two rounds. Children too are involved in the transportation of water.” - Woman resident of Nayapura, Indore, India, August 2009

December 1, 2011 – Oakland, California, U.S.A. and Indore, India: Thousands of cities in the developing world face rising pressures on water provision due to population growth and urbanization, and climate change worsens these impacts. Coordinating the formal and informal water sectors, improving water storage and management, and bringing community voices into water planning are critical to sustainably providing water, especially for the urban poor who are most vulnerable to water scarcity. A new report from the Pacific Institute and the Institute for Environmental Transition (ISET) provides detailed analysis of the water situation in Indore, India and shows a way forward to a more secure water future for developing country cities.

While in developed country cities, the government or formal sector often exclusively manage water supply services, in developing countries other informal ‘water managers’ also become important. In these cities, thousands of people rely on self-supply, directly accessing the water source itself through private boreholes, or they obtain water through the private water market, where water vendors supply water through water tankers and treated drinking water. In Indore, like most developing country cities, the urban poor have limited access on all three fronts: the formal system is unavailable to them, private markets are unaffordable, and self-supply is not an option because they are landless.

The research identified vulnerabilities in the water supply system in Indore through a Shared Learning Process of one-on-one discussions, focus group discussions, and surveys and multi-stakeholder dialogues over the course of three years with a multitude of water sector ‘managers’ in the city. The resulting report, [*Climate Change and Urbanisation: Building Resilience in the Urban Water Sector – a Case Study of Indore, India*](#), shows that giving these water managers the necessary tools to manage water services in a new water future will require efforts at national, state, and local levels.

“People in developing country cities like Indore manage water daily, wondering where they will get water from that day, how long they will wait for it, how much they will pay for it, what the quality of that water will be, and whether that water will be there tomorrow,” said Meena Palaniappan, director of the Pacific Institute International Water and Communities Initiative. “From our comprehensive look at Indore, we identified a set of climate and water resilience strategies that are relevant for people who are water managers at every level in developing country cities, from the household to the utility, and it’s a mix of both conventional and sustainable water management strategies.”

The *Climate Change and Urbanisation* report recommends policy and tool solutions to ensure that the systems and the infrastructure for the provision of basic services are managed in a more environmentally, socially, and economically sustainable manner:

- diversify water supply (Indore, for example, relies on one primary and energy-intensive source: the

Narmada River);

- increase access to municipal supply/improve infrastructure;
- increase water storage at all levels (municipal and household);
- promote water-use efficiency and reuse;
- implement equitable water rates;
- improve water quality;
- reduce energy dependence; and
- improve connections among all stakeholders in the sector.

The research in Indore clearly demonstrated that the decisions made by any water user (households, water tankers or water utility) affect the demands on and supply options for other users, yet different sectors are almost never brought together. A key component of comprehensive and informed planning is seeking out and incorporating both local knowledge (the bottom-up perspective) and the larger picture (top-down) perspective. The tools for shared learning used in this project bring these perspectives together, encouraging and enabling transparency and fostering good governance.

The report recounts the distress of the women of the Shanti Nagar community in Indore, who were emphatic during a focus group discussion that they “struggle every day to access/collect water, and though the politicians promise to provide relief from water scarcity during elections, this does not happen.”

“Water problems are in many ways primarily governance issues,” said Marcus Moench, director of ISET. “Technical solutions to many of these problems already exist. The challenges to implementing them lie in the political economy of water supply, use, and management and regulation and enforcement – and the lack of political will and resources to get such solutions implemented.”

In the city of Indore, with a population of 3.27 million, the Indore Municipal Corporation (IMC) has the primary responsibility for managing and providing water services. However, currently only about 54% of the population has access to a piped-water-connection and some 16% of residents live in informal settlements that lack adequate water supply. Some areas have access to less than 40 liters per capita per day. Many developing country cities around the world face similar situations.

The project team’s household water survey highlighted vast inequities in Indore’s existing water supply condition and showed ways in which the urban poor were the most susceptible to water insecurity as a result of climate change and changing precipitation patterns. This vulnerability and lack of access is exacerbated by lack of effective regulation of the informal water market and Indore’s dependence on a single, distant surface water source, the Narmada River. Analysis of the formal water system itself also demonstrated vulnerabilities: inadequate and crumbling infrastructure, the expense and precariousness of having a distant water source, and the lack of cost recovery at the utility level to provide capital for maintenance and improvements.

The water sector in developing country cities involves a number of water managers that participate in directly sourcing and supplying water. So beyond providing tools for a centralized water utility to plan for and manage water access and the impacts of climate change, *Climate Change and Urbanisation* is a roadmap for all of the water managers in developing country cities to work together, through communication, information exchange, and transparency, to meet the demands of their shared water management future. The report and executive summary can be downloaded free of charge at



Media Release

www.pacinst.org/reports/urban_water_Indore.

“Core to improving resilience will be improving governance and the capacity of water managers in the urban water sector. ,” said Eva Saroch, an ISET co-author. “Adaptive governance is the ability to manage systems that are accountable, transparent and responsive to change in the society, as well as those brought on by the uncertainties and unpredictability of climate change.”

The Pacific Institute is one of the world’s leading nonprofits conducting research to create a healthier planet and sustainable communities. We conduct interdisciplinary research and partner with stakeholders to produce solutions that advance environmental protection, economic development, and social equity.

ISET: The Institute for Social and Environmental Transition’s work focuses on understanding social and environmental change processes, including climate change and urbanization, and supporting adaptive responses to the fundamental challenges such processes pose for society and marginalized populations.

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