



**Working together.** The community committing meeting involved in the Karnataka Urban Development Coastal Environmental Management Project (photo by ADB).

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# The Karnataka Urban Development and Coastal Environmental Management Project

## Setting the Scene: The Innovation Opportunity

### MESSAGE FROM

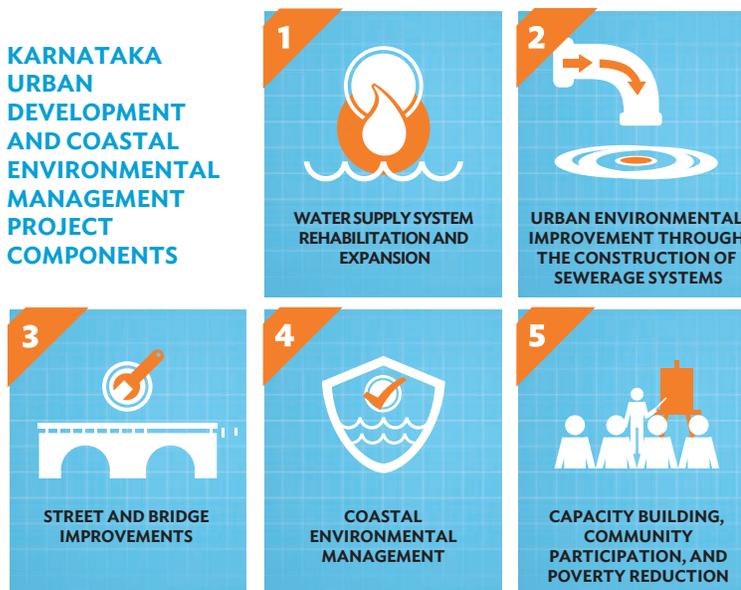
**Kenichi Yokoyama**  
 Director General  
 South Asia Department

I am pleased to share with you the *South Asia Innovation Project Brief Series* with the first issue on the Karnataka Urban Development and Coastal Environmental Management Project. The series aims to capture and disseminate knowledge on innovations embedded in the operations of the Asian Development Bank in South Asia, which will help promote cross-project learning, improve project design and implementation, enhance development effectiveness of ongoing and future projects, and strengthen south-south knowledge cooperation.

I hope this brief will reach broad internal and external audience to scale-up innovations and contribute to the process of achieving prosperity, inclusion, resilience, and sustainability in South Asia.

By the late 1990s, population growth in the urban areas of Karnataka state in southwest India already far exceeded the capacity of existing infrastructure and services. Inadequate infrastructure had caused harm not only to the natural environment, but also to health and human welfare. Women and children in particular were adversely affected by lack of access to safe water as the burden of carrying water over long distances typically falls on them. Between 40% to 80% of the population in 10 cities had no access to the municipal water supply. Some residents had water supply for an hour a day, others for as little as an hour a week.

### KARNATAKA URBAN DEVELOPMENT AND COASTAL ENVIRONMENTAL MANAGEMENT PROJECT COMPONENTS



Source: Asian Development Bank.

In 1999, Asian Development Bank (ADB) embarked on a major project to improve living conditions in urban coastal Karnataka. The \$175 million Karnataka Urban Development and Coastal Environmental Management Project (KUDCEMP) aimed to address infrastructure deficiencies and tap the economic potential of the region.

## Project Innovations in Action

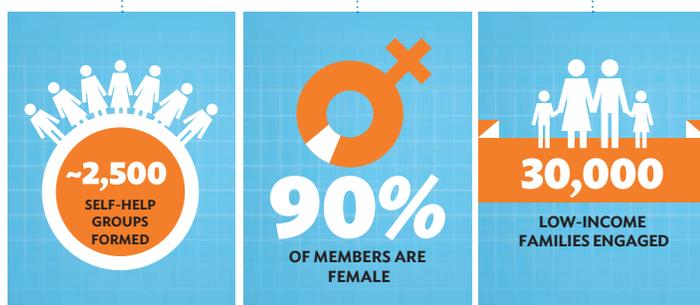
From 1999 to 2009, across 10 urban areas, the project laid 2,000 kilometers of water pipelines, providing an additional 322 million liters of water per day. By the end of the project, 86% of households in these cities were connected to piped water and were receiving clean, drinkable water for an average of 6–16 hours a day. The municipal solid waste management system benefited 800,000 people, and the wastewater component benefited 440,000 people.

The project was innovative in the following key areas: community participation, municipal reform, and public–private partnership.

### Community awareness and participation

The KUDCEMP was one of the first ADB-supported projects in India to adopt an extensive participatory approach to implementation through community awareness and participation. This has resulted into genuine and complete ownership of the project by beneficiaries. Women’s self-help groups were created as part of the project’s promotion of thrift and credit activities—bringing a cascading effect in terms of women empowerment.

### COMMUNITY AWARENESS AND PARTICIPATION



Source: Asian Development Bank.

### Municipal reform and infrastructure investment

The Government of Karnataka has launched a municipal reform, the Clean Town Program, through policy dialogue with ADB. The reform program supported computerization of basic municipal functions, modernization of the property tax system, introduction of a fund-based double-entry accrual accounting system, and establishment of participatory planning.

### Public–private partnership

The project demonstrated that partnership between stakeholders can work for their mutual benefit, and that wastewater can be transformed from an environmental liability into a valuable resource. Mangaluru’s centralized wastewater management system also facilitated an innovative public–private partnership between the Mangaluru City Corporation and the Mangalore Special Economic Zone Ltd. The latter runs one of India’s successful special economic zones to enable certain industries to use the wastewater treated at the sewage treatment plants set up by the city corporation.

## Innovation Takeaways

### Consultation is key to local ownership

Ownership at the beneficiary level requires the complete involvement of project authorities and beneficiaries from the very beginning of project preparation, which is the inception stage. Small investments in areas like microfinance, formation of self-help groups, low-cost sanitation facilities, and skills upgrading training can deliver outsized social and economic impacts and help build local support.

### International expertise + local solutions = project success

International experts are necessary for project structuring and planning. However, in order to effectively utilize that expertise, their outside knowledge needs to be tailor-fit to the local context by working with local people, tapping local resources, and leveraging on local solutions.

### Trees that can bend are stronger in a storm

Flexibility without compromising the project guidelines is important during project implementation. For instance, the contract schedule should consider the technical complexities of the project components; the capacity of executing agencies, consultants, and contractors; and the working season in project towns. If the project’s design and monitoring framework is too rigid, the opportunity is lost for changes that can improve it.



**Women empowerment.** Raiza, a member of the Ashraya Colony self-help group, took out loans to repair her house and bought a computer for her daughter. Other members of Raiza's self-help group have borrowed money to set up small hotels and tailoring shops (photo by ADB).

## Faces of Impact: Saugata Dasgupta

**Q:** This was a complex project with a lot of moving parts—over 60 subprojects in 10 cities. What were the enablers?

**A:** Ownership by beneficiaries, created through community-based interventions, and a bottom-up consultation process, were the primary enablers. From the country counterpart's side, it was the fact that their leadership was open to listening to the community. From our side, there was enough flexibility provided by ADB's system to accommodate changes along the way.

The lengthy and extensive consultation process was also a key enabler. Although it slowed the project down, the upshot of that was that the project was tailored to the exact needs of the beneficiaries, and not just in terms of hard elements like infrastructure, but softer terms, like the devolution of power and the economic empowerment of women.

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Saugata Dasgupta was the project officer of KUDCEMP and is now a project management specialist at ADB Nepal Resident Mission.

**Q:** What were the biggest challenges to its success?

**A:** The project started during the early years of ADB's intervention in the urban sector in India. At the time, the country was going through a big transition, and was making efforts to strengthen democracy at the grassroots level and devolve more powers to urban local bodies. Having dozens of subprojects was another challenge. The 10 cities were hundreds of kilometers apart. This means that the project officer couldn't easily visit all the subprojects. The need to consolidate and not spread the resources including project authority and project officer's time was one of our lessons learned from this project.

**Q:** What did you learn from being the project officer?

**A:** I have also evolved as a project officer—it has changed how I define project success. The easiest way to define project success is to keep everything within the scope of the project and just provide funding for that. Now, I look for opportunities for projects that can lead to institutionalization of the results beyond the project, in the wider government system.

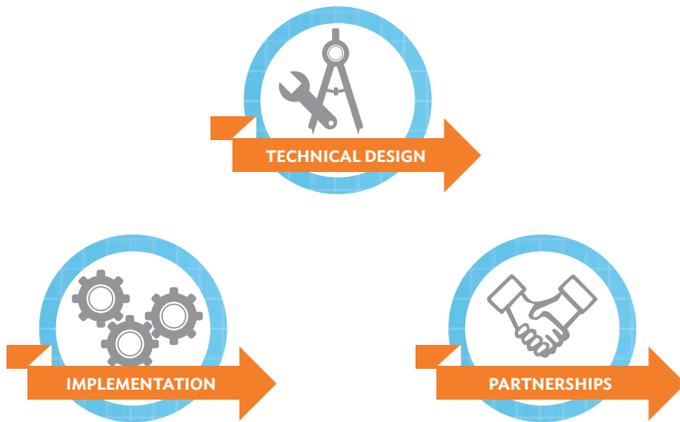
“The environs around the toilets have been improved with concrete gradients, and stormwater drains prevent water logging during the monsoon rains.”

—Nelson, project community development officer in Mangaluru

“The latrine has brought dignity and privacy to our lives. We [also] receive adequate water supply to meet the family needs. Overall, the quality of life has improved for my family; and children [throughout the community] fall ill less frequently.”

—Ashwin, resident of Mulakad located on the outskirts of Mangaluru

### INNOVATION AREAS



Source: Asian Development Bank.

## Learn more

Project documents: Asian Development Bank. 2012. *Karnataka Urban Development and Coastal Environmental Management Project*. Manila.

Blog: Sourav Majumder and Saugata Dasgupta. *Mangalore Shows the Way on Wastewater Management in India*. Asian Development Blog.

Photo essay: Asian Development Bank. 2012. *A Total Package*. 27 February.

Project Result/Case Study: Asian Development Bank. 2013. *India Sanitation: Investments Make Coastal Cities More Livable*. 15 April.

Akira Matsunaga, Saugata Dasgupta, and Sourav Majumder. 2020. *25 Years of Partnership with Karnataka: Evolving Model for Sustainable Urban Water Service Delivery*. Manila: Asian Development Bank.

**South Asia Innovation Project Brief Series** captures and disseminates knowledge on innovation embedded in ADB operations in South Asia. This series promotes cross-project learning, improves project design and implementation, strengthens the understanding of innovation needs and trends, and enhances development effectiveness of ongoing and future projects and south-south knowledge cooperation. ADB South Asia Department produces the series. Please contact [sardkm@adb.org](mailto:sardkm@adb.org).

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ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members—49 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

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