

SUSTAINABLE INFRASTRUCTURE: PUTTING PRINCIPLE INTO PRACTICE

GUIDING PRINCIPLE 6: EQUITY, INCLUSIVENESS, AND EMPOWERMENT

Infrastructure investment must be balanced between social and economic priorities. Infrastructure should provide accessible and affordable services equitably to all, with a view to promoting social inclusion and fostering economic empowerment and social mobility, and protecting human rights. It should avoid harm to communities and users (especially those who are vulnerable or marginalized), be safe and promote human health and well-being.

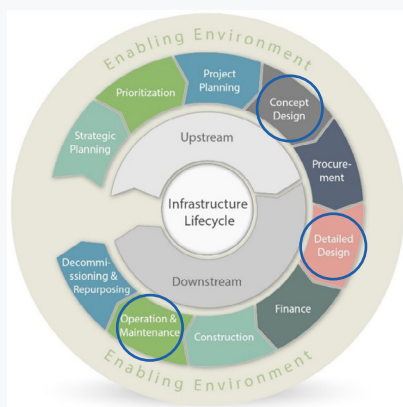
CASE STUDY: AFFORDABLE AND SUSTAINABLE WASH SOLUTIONS IN INDIA: THE CASE OF SWACHH AMBIKAPUR MISSION

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Organization: Ambikapur Municipal Corporation

Partners: Chhattisgarh State Urban Development Agency; and the Government of Chhattisgarh, Raipur



Need for Infrastructure Project/System:

Municipal waste management in Ambikapur was one of the city's significant challenges. Although Ambikapur contracted private waste management firms to transport mixed waste in the outskirts of the city, illegal dumping of household waste and littering were commonplace. Community garbage containers and municipal drains were overflowing with waste. Solid waste was frequently set on fire at the offsite dump, which resulted in noxious fumes being carried into town by the wind. In particular, the impacts of the waste mismanagement harmed the health and wellbeing of Ambikapur's citizens. A new and inclusive approach was needed to clean up the city.

Project Description:

In 2014, 17 administrative wards in Ambikapur were chosen to pilot a new decentralized strategy by setting up Solid Liquid Resource Management (SLRM) centres. The strategy focused on empowering less privileged women through training on a variety of technical and soft skills related to waste management, including how to properly and hygienically dispose of and sort waste. These women were encouraged to form Self Help Groups (SHG) that acted to collect, process, and recover valuable components from waste at SLRM centers. Segregated wet waste was processed into compost, and dry waste was sold to recycling centers depending on the type of waste. The female workers were paid from the user fees for waste collection, as well as based on the value of the recycled materials.

The program incorporated educational and inclusion activities, such as street plays and informational murals and posters, to engage the entire community. The initial SLRM strategy proved successful, and it expanded from the initial 17 wards to all 48 of the city's wards. As of 2020, the program successfully employed and empowered 447 women. It also resulted in 100% cost recovery in waste management, with the user fees, sale of recyclables, and a consolidated tax paying for the entire program. Overall, the program successfully reduced the amount of waste dumped throughout the city, and, as one of the most visible signs of the program's success, the city's dumping ground was converted into a popular municipal park.



A Waste Recovery Tricycle Ministry of Housing and Urban Affairs, Government of India

Challenges to Making Infrastructure Sustainable:

Technical and/or Programmatic Challenges – The availability of accurate and up-to-date data on the total amount of waste generated in a particular ward was initially a challenge. Therefore, as part of the program, ward-wide surveys were conducted to produce accurate and up-to-date data, thus ensuring all the waste generated in a particular ward is processed through this decentralized approach.

Governance and/or Political Challenges – Initially, the Government had difficulty in identifying land or sites for setting up the SLRM centres. In order to resolve this, a survey was done to identify all land under illegal occupation. Thereafter, all the SLRM centres were set up on public land reclaimed from illegal occupation. This hugely reduced the capital cost of the program.

Financial and/or Economic Challenges – One of the primary financial challenges was the high cost of developing the former dumping ground into a municipal garden. During remediation of the old dumping ground, all the SLRM Centers were not operational. Since all the SLRM centers were not operational during remediation of the dumpsite, the city administration engaged around 600 women from the SHGs who were trained in the initial phase to manually handpick the non-biodegradable waste.

Outcomes and Lessons Learned:

- The SLRM model is simple, cost-efficient, and driven by community-based structures.
- Public participation is key to sustaining the initiative.
- Creation of green jobs for women promotes women's empowerment without putting financial pressure on the State treasury.

For Further Information:

- [Solid Waste Management Practices In Urban India Compendium](#)
- [The Critical Role of Community Based Organizations in Urban Sanitation and Waste Management](#)
- [United Nations Environment Programme. \(2021\). International Good Practice Principles for Sustainable Infrastructure. Nairobi](#)
- [Webinar recording: Presentation begins at 37 minutes](#)

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