



# Technical Assistance Consultant's Report

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Project Number: TA 6265  
March, 2009

## India: Implementing Pilot Projects for Small Piped Water Networks

Prepared by Saath: Initiatives for Equity in Development  
Ahmedabad, India

For the Regional and Sustainable Development Department (RSDD), Regional Sustainable Infrastructure Division (RSID)

This consultant's report does not necessarily reflect the views of ADB or the Government concerned, and ADB and the Government cannot be held liable for its contents. (For project preparatory technical assistance: All the views expressed herein may not be incorporated into the proposed project's design.)

**Asian Development Bank**



## **CURRENCY EQUIVALENTS**

(as of 31 March 2009)

Currency Unit	–	Indian Rupee (Rs)
Rs1.00	=	\$0.01953125
\$1.00	=	Rs51.19

## **ABBREVIATIONS**

ADB	–	Asian Development Bank
AEC	–	Ahmedabad Electricity Company
AMC	–	Ahmedabad Municipal Corporation
ISDP	–	Integrated Slum Development Programme
MHT	–	Mahila Housing Trust
NGO	–	nongovernment organization
RETA	–	regional technical assistance
SNP	–	Slum Networking Project
SPWN	–	small piped water network

## **NOTE**

In this report, "\$" refers to US dollars.



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## I. INTRODUCTION

Saath Charitable Trust was established in the year 1989 in Ahmedabad, Gujarat, India. Saath has completed 17 years as an organization working on initiatives for equity in development.

The vision behind Saath is to facilitate participatory and sustainable development processes that would make human settlements equitable living environments, especially for vulnerable groups. Its work is guided by the following mission statement:

For implementation of Saath's vision at the field level, it indigenously designed an 'Integrated Slum Development Programme' (ISDP). The ISD was visualized as a process that would put the slum residents at the centre of development and provide them with opportunities to actualize their full and true potentials.

One of the major development initiatives of Saath is that facilitating provision of drainage, water, road and toilet connections in various slum areas and Saath has been a pioneer NGO in providing the same through Slum Networking Project.

The Slum Networking Project was initiated in Ahmedabad in the year 1996 by the Ahmedabad Municipal Corporation (AMC) to provide basic infrastructure facilities. NGOs were the partners of AMC in the SNP.

The pilot project conducted in the slum areas of Sanjaynagar in 1996 and completed in August 1997. The partners in the project were the AMC, SAATH, SEWA bank and slum residents. Sharda Trust (promoted by the corporate partner) was the principal executor of the project at Sanjaynagar.

Post the Sanjaynagar experience, Saath, in partnership with AMC, took up Slum Networking Project in the slums of Pravinagar-Guptanagar I, with a large population of 1,200 households. The role of Saath in the project was that of a social mobilizer. Saath worked towards providing the soft components of the project, namely, health, education, micro credit facilities and community empowerment. Saath also mobilised people to participate in SNP and pay the required contribution.

Saath has done SNP work in 5 other slum areas with approximately 2000 households.

Saath also piloted the Slum Electrification Project with Ahmedabad Electricity Company (AEC) and AMC through which legal electric connections were provided to approximately 5,000-6,000 households.

## II. PROJECT BACKGROUND

ADB (RETA 6265) states

- To demonstrate that selected urban and peri-urban residents can quickly connect to piped water supply using small piped water networks (SPWN); with public and private agencies cooperating with community agencies
- Pilot aims to assess the potential for replicating SPWNs in ADB's lending Program.

With the above objective, ADB selected DMI as the implementing NGO for the project. This was the first experience of DMI in the field of physical infrastructure work. The project area (Chamundanagar) and project design was selected by DMI. Community mobilization processes were initiated by MHT (Mahila Housing Trust)-DMI. Sixty four (64) households had opened accounts with the SEWA Bank.

At this stage, in July 2006, Saath was asked to complete the project by ADB.

The table below gives a comprehensive idea about how Saath initiated the work

#### **A. Project Approval Process**

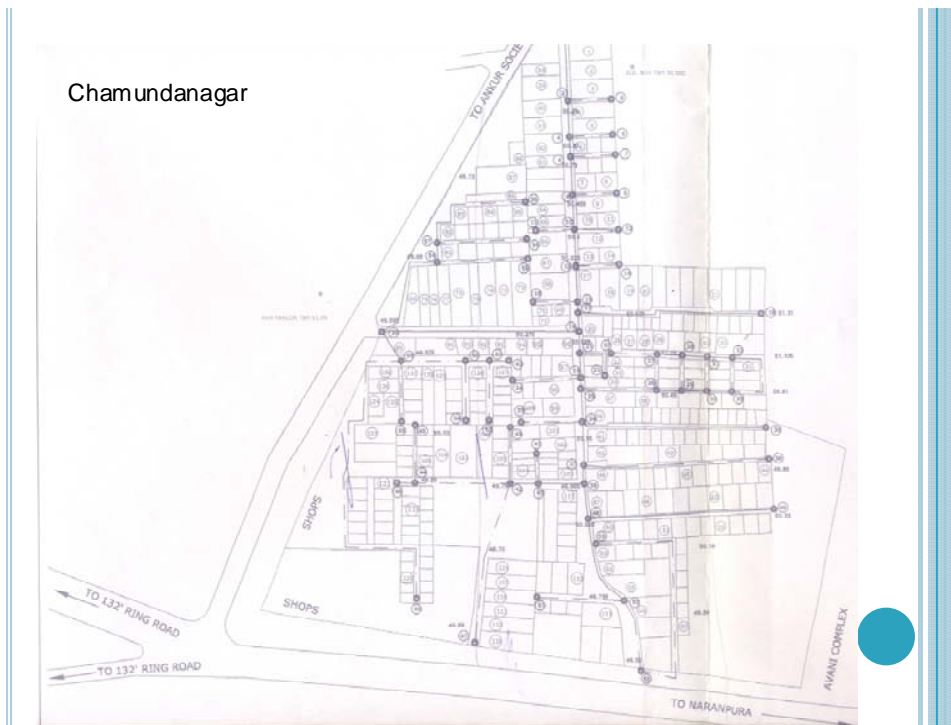
<b>Date</b>	<b>Activity</b>
3rd Aug 06	RETA 6265 Approval
23rd Sep 06	Proposal sent to ADB by Saath
23rd Sep 06	Revised proposal sent to ADB by Saath
4th Oct 06	MOA sent to ADB
9th Oct 06	Not MOA but LOA required by ADB
9th Oct 06	LOA sent by Saath
4th Jan 07	Clearance by GOI
27th Jan 07	Inclusion of drinking water by ABD
21st May 07	LOA signed and sent to ADB
20th July 07	Water component not approved by ADB, to be removed
6th Aug 07	Final LOA signed
30th Aug 07	Funds received from ADB
18th Sep 07	Tender Process completed and Work order issued

### **III. BRIEF PROFILE OF PROJECT AREA: CHAMUNDANAGAR**

Chamundanagar is located in Naranpura ward, West Zone of Ahmedabad city. The TP number is 29 and the final plot 238/239.

Chamundanagar has 3941 square metres of area with 387 structures, 263 rented houses and 51 shops.

The major occupations are cobblers/shoemakers, petty business and work in leather products.



#### **A. Pre Project Conditions of the Area**

Prior to the project, every 10-15 households had one water connection. The connection was illegal and had been broken from the main water line. The residents had to pay even for these illegal connections. There were specific timings for the water. People had to get up very early in the morning and stand in long queues to collect water for their houses. This led to an immense wastage of time and energy.

Similarly, toilets had been constructed every 15-20 households. Many used the Pay and Use toilet which is far from the area. They had to form a long queue for using the same. Moreover, this meant more expenditure. To add, the toilets were very dirty and unhygienic and had no water, many a time.

There was no proper drainage system which led to water clogging, especially during monsoons. This aggravated the incidence of diseases, lack of cleanliness and hygiene. There were no proper sanitation facilities.

### **IV. PROCESSES**

#### **A. Mapping of Chamundanagar**

Mapping (demographic) of Chamundanagar area was initially done to understand the exact conditions of the area.

## **B. Level Survey**

A level survey was also conducted to check if the level of the existing drainage and water lines was right and what modifications had to be made. The correct level of the main lines and internal lines were assessed.

## **C. Community Mobilization**

Saath identified few community leaders during mapping and survey. Along with the community leaders, Saath team conducted home visits to explain to the residents about the project and the facilities they will get through this project. Along with the benefits, the team also explained the details of expenses and payments to be made and the contributions that the residents had to make for the facilities. Systems related to bank accounts, paying in installments, etc, were explained.

The amount (Rs. 2100 for toilet, water connection, drainage and paving of internal road; Rs. 1800 without toilet connection) has to be paid in 3 installments. Regular follow up was done for ensuring smooth process of payments.

## **D. Design of water supply and drainage lines, toilet construction**

Based on the mapping of Chamundanagar and the level survey, design of water supply, drainage lines and toilet constructions was prepared. The designs were made in accordance with the AMC specifications.

## **E. Preparation of Estimates**

Based on the design, estimated were made regarding the costs and the kind and amount of resources that would be needed for successful; completion of all works. The estimates were made based on market rates and AMC specifications.

## **F. Tendering & Finalization of Contractor**

Tenders were invited from different contractors. Tender documents included specification of materials and quantities. Tenders were invited from 3 contractors. Tenders of 2 contractors were collected with fees. Tender was submitted by one contractor. The contractor is registered and approved by the AMC as B class contractor. The contractor has completed SNP work in 8 other slums. Rates, terms and conditions were finalized with contractor after mutual negotiations. 1% Security Amount Deposit was taken.

## **G. Issuing work order**

Following the above processes, work order was issued and work commenced in October 2007.

## H. Site Supervision

Site supervision was done periodically to ensure that work was being done as per AMC's technical specification and quality of work and materials was being maintained.

### I. Simultaneously community mobilization including collection of contribution, opening of bank accounts and local trouble shooting

Along with physical works, processes of community mobilization for fee contribution, opening of bank accounts, etc, were on. 124 accounts were opened. Rs. 1,75,000 were collected (Rs. 30,000 had been collected when Saath took over). Local committee of five leaders was formed. Issues and concerns of the community that arose from time to time were also resolved. Regular follow up has been a significant component of the project. This has helped not only in the collections, but also understanding the needs of people accurately leading to better efficiency and effectiveness of the project.

## V. DETAILS OF WORK DONE

Internal main water line and internal main drainage line have been laid. Earlier lines were illegal, uneven and without the correct level. So these lines had to be removed and new lines were laid again.

The table below gives, in a glance, information about the actual amount of work done.

Type of Work	Quantity	Work completed	Work to be completed
Water Supply Line	150 mm diameter	30 RMT	36 RMT
	100 mm diameter	347 RMT	-
	80 mm diameter	568RMT	-
Drainage line	300 mm diameter	-	150 RMT
	230 mm diameter	525 RMT	40 RMT
	150 mm diameter	130 RMT	30 RMT
	100 mm diameter	120 RMT	500 RMT
Toilet Blocks	24 (number)	-	24
G.T. (Gulley Trap)	130 (number)	50	80
Water connections	130 (number)	-	130

All work has been completed now.

## VI. WORK PROGRESS

- Tender approval 13/9/07
- Work Order Issued – 18/9/07
- Work Start Delay due to shortage of water supply lines – Oct 07

- Work Start – Oct 07 last week
- Diwali Holidays – 2 weeks in Nov 07
- Completion of water supply lines – mid Dec 07
- Start of drainage line work – Jan 08
- Completion of drainage line work – Feb 07
- Delay due to AMC duct line - completed

Work could not be entirely completed due to certain bottlenecks that have been discussed in the next segment of this report. All work was completed by the end of April 2008.

## **VII. CERTAIN BOTTLENECKS**

- AMC was constructing a duct line for storm water drainage adjoining the slum
- This had obstructed connections for water supply and drainage to the main external lines to the internal lines in the slum
- This caused a delay of 1 month
- Overhead costs for Saath increased due to delay
- Strong Rupee has resulted in monetary loss for Saath
- Narrow spaces prevented laying of drainage lines unless existing illegal lines were removed.
- New drainage lines could not be used till the completion of chambers and connection
- Some were used by children, etc – clogging new lines which had to be cleaned for continuation of work
- Narrow working space a major constraint

## **VIII. BILLING PROCESS**

Measurements were made by the contractor, verified and checked by Saath engineer. The bill prepared by contractor and submitted to Saath. This was cross verified and approved by senior Saath consultant after checking quality, quantity and tender rates.

The payment was done by cheque.

## **IX. PROJECT TEAM COMPOSITION**

The project team consists of

- 1 senior consultant (civil engineer)
- 1 full time site supervisor ((civil engineer)
- 1 full time Community Organizer (12 years experience)
- Inputs by senior Saath management

## X. BENEFITS TO CONSUMERS: POST PROJECT CONDITIONS

Through proper drainage, sanitation and water facilities, the living standards and conditions of the residents of the area have increased considerably. Some of the important benefits that the local people get are

- Regular water supply
- Water in every house-individual water facilities
- Proper sanitation facilities
- Decrease in incidence of diseases, especially during monsoons, due to systematized sanitation, drainage and water facilities
- No water clogging problem during monsoons
- Easier and healthier lives especially for women
- Positive social recognition and identity of the area

## XI. CONCLUSION

There have been delays in the project due to various reasons cited above. At the same time, facing the hurdles and moving ahead has made the project more challenging. It has been another positive learning experience for Saath.

## XII. SOME VISUAL GLIMPSES

### Chamundanagar



**Work in Progress**



