



## Water and Sanitation Program

An international partnership to help the poor gain sustained access to improved water supply and sanitation services

# Pilot Project on Solid Waste Management in Khulna City: *Community Organisation and Management*

### South Asia Region

Community organisation is an essential element in ensuring the effectiveness of the solid waste management project in Khulna city and increasing the likelihood of its sustainability. This paper describes how local urban communities were motivated to plan and manage the waste collection system in their localities. The major activities of the community organisation process were participatory appraisal, awareness and motivational campaigns and the establishment of Waste Management Committees.



Khulna City Corporation (KCC)



Swiss Agency for Development and Co-operation (SDC)

## THE PILOT PROJECT

The pilot project was launched in Khulna city in March 1997 with a phasing out date of December 2000. The project is financed by the Swiss Agency for Development and Co-operation (SDC), with technical and management support from the Water and Sanitation Program (WSP). A local NGO, Prodipan, was selected to implement project activities. The objectives of the pilot project were:

- ❖ To gain a strategic understanding of the urban waste and sanitation situation and to identify a range of appropriate options suitable for communities who are willing to share costs and participate in the management process;
- ❖ To make an assessment of social and economic prerequisites and institutional changes needed to incorporate the partnership approach in municipal service delivery;
- ❖ To identify ways in which municipal authorities can link up with community management of solid waste; and
- ❖ To identify the potential to scale up from the pilot project to a larger investment in urban waste management.

The project background, objectives

and general activities are described in detail in an earlier Field Note (Series No. 1). The project was divided into three major phases:

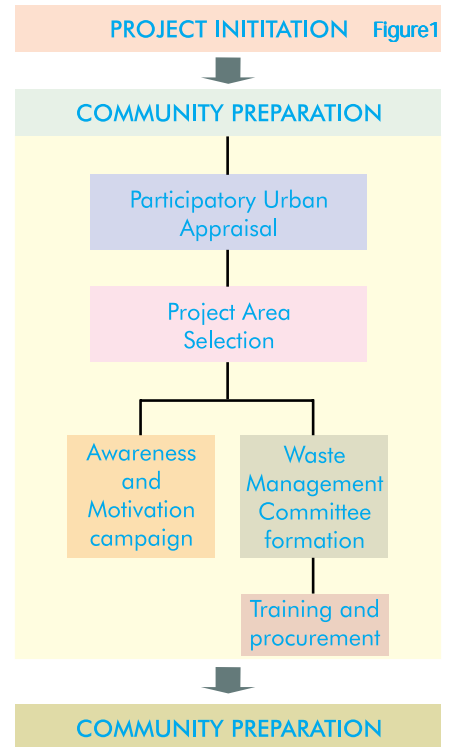
- ❖ Project Initiation
- ❖ Community Organisation
- ❖ Operation of Primary Collection System

This paper describes in detail the processes and activities of the community organisation.

Any solid waste primary collection system attempting to operate without community support would be doomed to failure. By the same token the chances of success and sustainability greatly increase when the system operates in response to community demand. The community organisation process was therefore seen as an essential preliminary to establishing the primary collection system.

## THE COMMUNITY ORGANISATION PROCESS

Figure 1 shows the major phases of the project with the activities and processes of the community organisation phase elaborated. The community organisation process can be divided into two sequential groups of activities. The first stage involves



assessment and design (Participatory Urban Appraisal and Project Area Selection). The second stage is about intervention activities and includes awareness and motivation campaign activities, the formation of Waste Management Committees and training and procurement.

### Participatory Urban Appraisal

The main objective of the Participatory Urban Appraisal was to select appropriate areas for project interventions and to establish a framework for the planning of



The project addresses a range of different city characteristics—built-up areas (right) as well as slums (left)

subsequent project activities. However, it also investigated current waste disposal practice, the willingness of the community to pay for waste disposal services and other critical issues.

An international NGO, DASCOH (Development Association for Self-reliance, Communication and Health) designed the appraisal and trained Prodiplan staff to conduct sessions in potential project areas across the city. Participants were selected from diverse backgrounds, income groups and professions with equal gender balance. The sessions used a variety of participatory methods; outcomes were analyzed and recommendations made for future action.

Many of these recommendations were adopted for inclusion in the subsequent planning of project activities. A detailed description and findings of the Participatory Urban Appraisal is provided in a separate Field Note (Series No. 3).

### Project Area Selection

From the outset it was clear that addressing the needs of all citizens, whether rich or poor, should be one

of the key project strategies. Preliminary studies identified several potential wards with a good population mix and a range of different city characteristics (built-up, peri-urban, slums, etc.). Based on the results of the Participatory Urban Appraisal, project staff and the Khulna City Corporation (KCC) jointly selected 6 wards for the project activities. The wards were divided into several primary collection blocks that could be served by one waste collection van. The Participatory Urban Appraisal also identified blocks within the wards where activities should start first. A description of the project areas is given in Table 1.

Once the project areas were identified the community awareness campaign began. Based on the appraisal results a rolling programme was phased in to cover all 26 collection blocks in the six selected wards; 10 blocks in year one, 11 in year two and five in the final year.

### Awareness and Motivation Campaign

Prodiplan instituted an awareness and motivational campaign to stimulate good practices in solid waste



City Mayor leading a promotional rally

management and generate positive behavioural changes. Social organisers who have been specially trained by Prodiplan are key players in the awareness raising process. At the start of the project 2 social organisers were employed full time in each primary collection block. That number has been reduced to one organiser for two blocks and the number will reduce further in the future. Two city-wide rallies in the first year and one rally in the second year promoted the benefits of a clean city environment. The City Mayor led the first rally and Prodiplan staff, representatives of the KCC, ward commissioners, political leaders, local NGOs and the general public all participated. Khulna city celebrated "Environmental Week 1999 and Environmental Week 2000" with rallies, and promotional events organised by Prodiplan and partner NGOs. Posters and leaflets highlighting project activities and detailing good practices in solid waste management were distributed in strategic public places.

In project areas, yearly rallies are organised by the local ward commissioner and local NGOs, CBOs, and prominent local citizens. Promotional leaflets are distributed and posters displayed in public places. Social organisers, trained and employed by Prodiplan, conduct awareness and motivational campaigns and support supervision of local waste collection in the project areas. Discussion of waste related problems and strategies are shared in small group meetings of 5 - 10

TABLE 1: A DESCRIPTION OF THE PROJECT AREAS

Name of Thana	Ward Number	Characteristics of the Ward	Number of Primary Collection Blocks	Number of Households	Population
Daulatpur	6	Located in city periphery. Mainly periurban but some agricultural land.	2	963	4,728
Khalispur	12	Industrial area located along the river. Many factory workers live here and there are a few slums	6	2,961	23,924
Sonadanga	17	Planned housing in built up area with higher income households	4	1,334	8,416
Khulna Sadar	24	Central area. Traditionally middle class and educated professionals live here	5	2,377	12,606
Khulna Sadar	27	Municipal market area with a majority of middle income households	6	3,116	13,734
Khulna Sadar	28	Mainly low income households	3	1,454	6,536
Total	6		26	12,205	69,944





*Motivation to low income communities: A Prodiplan social organizer holding discussions with community members*

people. Such meetings are convened regularly by social organisers, about half of whom are women.

Despite the provision of road-side municipal waste bins, it is common practice for many households to dispose of waste in the nearest convenient place such as open drains or areas around waste bins. Social organisers visited each household to explain the negative impact of improper waste handling habits on both personal health and the local environment. At the same time they promoted the benefits of good practices such as storing household waste in a container or plastic bag and handing it over daily to a waste collector.

Activities extend across all social classes within the project areas and different strategies were employed for different income groups. In slum areas women living in closely spaced houses were approached and motivated as they are jointly and directly responsible for the cleanliness of the internal slum areas. The housewives of middle and high income groups, who have overall responsibility for household affairs, were included; but it was to their housemaids that special approaches were made as it is the maids who are normally directly responsible for

handling and disposing of household waste.

### Waste Management Committee

In parallel with the awareness and motivational campaign, communities in each collection block were helped to form a committee to coordinate activities and address problems. The social organizers identified and approached potential members from a variety of backgrounds. The majority were school teachers, lawyers, and social workers but all had good standing among the local community. Project objectives, including the improvement of the local environment, were explained and



*House to house motivation by a social organizer*

sufficient numbers of identified individuals agreed to participate in local Waste Management Committees (WMC). These Committees were estab-

lished in advance of the experimental arrangements for waste collection in their areas.

At present there is one Waste Management Committee for each of the 26 blocks; each consists of a Convenor with 10 to 15 members, a third of whom are women. Prodiplan arranged training in committee organization, record keeping etc and facilitated the earlier sessions. The Committee meets monthly along with the van driver and his assistant. The Prodiplan-appointed social organizer acts as member-secretary and reports on activities, collection of monthly service charges, and any problems encountered during the previous month. The committee addresses these problems and decides appropriate action to resolve them. Box 1 and 2 illustrate some common problems. The Waste Management Committees are still informal institutions in a legal sense but the aim is to link them with the Ward level structure of the City Corporation by the end of the pilot project phase.

The Waste Management Committee is also responsible for setting the monthly service fee which varies depending on household income and prevailing socio-economic conditions. The intention is to gradually increase the monthly fee to a rate which will cover the full operation and maintenance costs to ensure the project is financially viable by the end of the pilot phase.

### Training and Procurement

The operation of the primary collection system requires a vehicle to collect and transport waste from households to secondary disposal sites. WSP provided design assistance for rickshaw vans specially adapted for this purpose. The vans were manufactured in Khulna and paid for out of project funds. Each primary collection block is allocated one van.

Each rickshaw has a driver and assistant who are jointly selected by the Waste Management Committee and Prodiplan and funded from the project

### Persuasion

Prior to the pilot project there was little appreciation of the problems posed by poor solid waste management and streets were visibly littered with waste. The primary collection scheme was initially ignored and waste continued to accumulate in drains and open spaces. Social organisers highlighted the dangers of continuing these habits while emphasising the advantages of the primary collection scheme. Members of the Waste Management Committees were instrumental in changing attitudes. Polly, a member of the Khalispur Committee, explains the advantages of the scheme wherever possible; for example to other parents when collecting her children from school or in social gatherings. She also specifically visits non-participating households to persuade them to dispose of their waste responsibly. Such advocacy, coupled with successfully operating schemes, have proved to be very effective weapons of persuasion.

### Social Pressure

In some instances households were resistant to these methods of persuasion and continued to dispose of waste in drains or open spaces. To deal with just such an entrenched problem the Dolkhola Waste Management Committee (Ward no. 27) appointed a team of socially respected citizens and WMC members to approach offending households. The team explained the problems being caused by their waste disposal practices and warned that social isolation from their community was a possible consequence. This social pressure resulted in a behavioural change by the majority of the households.



Polly, in discussion with community members

payroll. They receive training from Prodipan in collection and disposal methods, routing of vans, hygiene, interaction with households and routine maintenance of the vehicle. Protective clothing (overall, shoes and mask) and tools (spade, bucket, etc.) is issued to ensure safe and efficient waste handling.

## EXPERIENCES IN COMMUNITY ORGANISATION

⌘ The primary collection system is now fully functional in all 6 selected

Wards with good participation from different income groups and all sections of society. The motivational and awareness campaign has influenced behaviour patterns among the local populace who are now less likely to throw rubbish in open drains or along the road side and more likely to give their daily waste to the rickshaw van driver and pay a monthly fee for the service.

⌘ The intensive awareness and motivational campaign was vital in the early stages of the project, especially for the first 10 wards

targeted in Year One. Much less effort was required in the second and third stages as the effectiveness of the first phase was self-evident and this success was a great motivator. Prodipan were able to reduce their community organizers from two per collection block to one for every two collection blocks.

⌘ The Waste Management Committees initially organised the awareness campaign and supervised waste collection activities in their locality with active involvement and support from Prodipan. This

### NIMBY (Not In My Back Yard) opposition to transfer points



The new road side bins

With the inception of the primary collection scheme new transfer points had to be constructed along main roads in the collection areas. These concrete enclosures are substantially larger than the old road side waste bins and measure 4m by 3m with a 1.5m high wall. Waste is deposited here by the Prodipan collectors and collected daily (except on Fridays) by the KCC.

Prodipan invested time and effort to make the new transfer points acceptable to local residents. Gardens have been planted around them and the access door remains closed except for waste disposal and collection. Communities were involved in decisions about their design and positioning. However opposition continues in some quarters. One resident was very concerned that the placement of a bin near his shop might adversely affect his business, despite the fact that it was on government land and the KCC had approved its construction. Residents had to employ a guard to prevent the man from demolishing the bin but they, together with the Prodipan Social Organiser, eventually gained the shopkeepers support and the scheme is now operating well in the area.



support has gradually reduced as the Committees have built capacity and taken on more responsibilities. The aim is that communities will completely manage the primary collection system by December 2000. Meanwhile support is still required to fully prepare them for this task.

⌘ The obvious benefits for project areas have prompted people from other areas in the city to seek similar services in their localities. Khulna City Corporation and other

stakeholders are looking for ways to address these unserved areas.

⌘ The success of the primary collection system and more responsible patterns of waste disposal have made the original roadside masonry bins obsolete. Local people now want to remove them to widen the roads and improve the appearance of their neighbourhood.

Box 3 gives an example of what is happening to some of the old bins.

### What is happening to the old road-side bins now?

Box 3

The success of the primary collection scheme turned the old roadside bins into an obsolete eyesores. There is still some occasional dumping of waste in these bins to prevent this, communities are either demolishing the old bins or devising new uses for them.

#### A shower?

In Khalispur the local women sought help in converting the masonry bin into a washing cubicle for slum women who had no private washing place. They wanted to raise the bin walls by one meter, put in a door and erect a tin roof. Project organisers agreed to provide bricks and cement and the community supplied wood, other materials and labour. A hand pump already existed adjacent to the shower cubical and simple drainage around the pump was installed at the same time as the shower.



Once the primary collection system was up and running many people thought the old bins should be destroyed to prevent them being used as casual rubbish dumps. However there are problems of ownership as the bins are officially KCC property. The Ward Commissioners are seeking permission from the KCC to demolish the bins. In the mean time, a few enthusiastic communities have already demolished some bins.

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### Other Publications in the Khulna City Series:

1. Community Based Pilot Project on Solid Waste Management in Khulna City: General Project Description
3. Pilot Project on Solid Waste Management in Khulna City: The Role of Participatory Urban Appraisal

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