

Driven by need, learning by experience

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For 600 million urban dwellers, without government or NGO support, basic services and infrastructure seem out of reach. But some people are taking action: these are the stories of three disparate communities' unorthodox and inspiring approaches to accessing water and sanitation.

WELFARE COLONY IS a low-income *katchi abadi* (informal settlement) spread over 30 to 35 acres of land near the centre of Karachi, behind Sabzi Mandi (the wholesale fruit and vegetable market). There are some 1415 houses and 117 lanes, and the area also includes three more settlements: Custodian Compound, Carnal Busti and Pir Bukhari Colony.

The municipality's role has been negligible, and considerable development has been achieved by the community on a self-help basis. Ninety-one per cent of lanes have sewerage lines laid by the residents who have invested a total of Rs1.5 million (around £23 000). Likewise, water lines in the lanes have been laid at a cost of Rs1.6 million. Other community efforts include the construction of three culverts over the *nala* (river), earth filling of lanes and roads, the construction of a boundary wall around half an acre of graveyard, and the preparation of a survey map. Today, as you walk through the lanes, you can also see natural-gas lines being laid.

The people of Welfare Colony have small shops, drive rickshaws and taxis, deal in fruit, and work as labourers in the *mandi*. There are also *tals* (fuel-wood merchants), fruit-packaging units, and home industries making *chappals* (slippers), prayer-caps, and clothes.

There are four separate *tanzeems* (organizations), one each for Carnal Busti, Pir Bukhari, Custodian, and Welfare Colony. With the exception of Custodian Compound, which represents the oldest residents in the area and those settled before the influx of the market-labourers, the three organizations work together. The most active, Anjuman-e-Ittehad Welfare Colony, is led by Mehboob Shah.

Securing water

In 1947, a water conduit, 18 to 48 inches in diameter, passed below the settlement, supplying water to two other areas. People took direct illegal connections from the water conduit. They did not ask the authorities — they

felt '*Aa bail mujha mar*' ('asking for permission was like asking for trouble').

Few new improvements were made until 1974, by which time the settlement had expanded considerably to accommodate the market-workers. A new water line for the Karachi Milk Plant was laid, passing through part of the area. The Custodian Compound residents were successful in their application for a water line for their area. Members of Welfare Colony, Pir Bukhari and Carnal Busti also wanted connections so, with the help of activists, the earlier request was replaced by an application for 12 standposts for the entire area.

For a few years, the supply was adequate but, as pressure in the Milk Plant line was reduced, shortages began. In some lanes in Custodian Compound and Carnal Busti, people took a second (illegal) connection from the main line; as their homes were near the water mains, there was sufficient water pressure. 'We laid another line and spent Rs300 (about £4.50) per house', recalls one resident.

Pressure drop

In 1979, through the organizational efforts of Shah and his colleague Taj Mohammad Khan, Rs150 to 200 was collected from each of about 200 houses in Pir Bukhari and Welfare Colony. Funds were also raised from the market-workers. With a total sum of Rs30 000 (about £440), Anjuman-e-Ittehad members made an illegal connection from the main line running along a nearby main road, and new standposts were installed in the settlement. But, after seven years, the pressure reduced again, as a result both of connections made by neighbouring settlements, and because luxury flats were being constructed nearby.

In 1989, an adjoining settlement received a government water pipeline. Shah and his members, with the permission of these residents, got a connection from the line through a local

councillor, for which each family contributed Rs200 to 300. In 1992, Deputy Iqbal, the Mohajir Qaumi Movement (MQM) councillor promised to provide a main line; around 100 households handed over Rs700. A water connection was given but, again, the pressure was low and could not cover all the houses.

To meet the shortage and irregular supply of water, the people have set up



The Orangi District of Karachi.

Mark Hakansson/Panos Pictures

an alternative water-supply system. Some have installed motor pumps to suction water into their homes from the municipal supply. Two houses have wells, up to 40 feet deep. Fifteen to 20 families have bored wells 20 feet deep. The cost has ranged from Rs3000 to Rs6000 (£45-90). Well-water is sweet, but the water obtained by boring is slightly saline, and is only drunk in times of acute shortage. These wells provide a source of income to those lucky enough to have an adequate supply; they sell the water to the market, and to neighbours. Donkey-carts mounted with 115-gallon water tanks deliver water to people's homes by pumping it into overhead tanks.

Sanitation

Waste disposal was makeshift at first: 'We made ditches near our house for wastewater collection and bucket latrines for excreta,' says Mehboob Shah. 'Scavengers used to charge Rs5 per house per month to clear excreta daily. But, as they were unreliable, people would throw waste in the *nala* that

passed through the settlement. Some people had also made soakpits. At that time the *nala* was twice the size it is today and twice the depth, approximately 18 feet wide and 8 feet deep'.

Between 1979 and 1980, people began to lay sewerage lines: as Mohamad Bashir says, 'my house was 40 feet from the *nala*. We laid the sewer line independently and spent Rs 300 on it.' Saeedullah Khan says

'We laid the sewer line ourselves, contributing Rs100 per house. First we collected Rs50; then Rs30 and Rs20 were collected in two installments. When we first laid the line, there was no estimate. We collected money as the work progressed. We hired area masons (*mistri*) as contractors. Now the line has been laid two to three times over. Each time, we increased the diameter of the pipe, and the cost went up from Rs150 to 200 per house. But our line always gets choked; we clean it ourselves or call a sweeper who charges Rs5 to 10 per family.'

In some cases, a group in the lane obtained estimates and organized household contributions. In other areas, each household simply paid for the section of pipeline within its own area. In some lanes, people did the work themselves, but most hired a local *mistri*. Mehboob Shah recalls:

'In our area, Subhan Chacha and Namakdar Khan motivated people to lay sewerage lines in a proper, organized way. There used to be lots of quarrels because people in connecting lanes were disorganized. Later, there were problems as the first group of lane-dwellers would not let the latter connect. But then the issue would be resolved and the lanes that joined later would pay extra for connection.'

Today, all 117 lanes have sewer lines

pipes continues wherever the system fails. Nasir Burki, General Secretary of the Welfare *tanzeem* has just relaid a portion of the sewerage line in his lane: 'Forty houses in my lane each contributed Rs100.'

Shah believes that the lack of technical guidance has meant people laying sewer lines twice or three times. A further problem is the rising level of the *nala*; as it has silted up, the lanes directly connected choked and had to be relaid. Encroachments, the silting up of the *nala*, garbage disposal, and sewage water connection from adjoining areas caused further problems.

It was obvious to the community leaders that neighbourhood sanitation could only be fully solved by developing the *nala*. For the last few years, the community has been working with the Sindh *Katchi Abadi* Authority and the Orangi Pilot Project to ensure that the drainage needs of the area are properly dealt with, and that the problem of flooding is controlled. The *nala* has been excavated and covered, and the people are optimistic.

Rio Vista, Manila

Rio Vista is a small community of 60 households in central Manila, close to the Malacanang Palace. Most people are employed informally, and the average monthly income is just below P2466.00 (£55).

Some of the present residents have been living in Rio Vista since the 1960s, but 60 per cent settled during the 1980s, attracted by its location and earning opportunities. Affluent families within the area need carpenters, laun-

structures (now costing about P3000 (£65)) that they once rented.

Toilets in Rio Vista had no septic tanks, and human waste was flushed directly into the river. Mang Pert, Chairperson of the community organization, was asked by his brother to build a low-cost, temporary toilet. Mang Pert's design requires very little digging and no elaborate plumbing. It incorporates an 'ordinary' toilet bowl, (which can be constructed easily out of cement and sand), an exhaust pipe, and an old drum open at the bottom.

The toilet was installed in 1987 and, at first, the neighbours feared that it might become the source of air pollution throughout the neighbourhood, but they have been proved wrong. Maintenance requires the addition of an open bottom-drum after every two to three years to replace the corroded drum underneath. This success galvanized Mang Pert into trying to stop his community using the River Pasig as its septic tank. He has incorporated this into the upgrading plan which will be put into action once land tenure has been secured. The complete toilet design costs around P500 (about £11): P150 for the drum, plus five kilos of cement, sand, and steel.

Water supply

Residents used to buy water from a nearby neighbourhood with legal water connections; this was then made illegal because — according to the residents — they are squatters. So the community organization identified the main pipe of the Metropolitan Waterworks and Sewerage System (MWSS); contracted somebody to make a connection, and collected money to buy piping and a faucet (and to pay him). But as soon as this supply was working, squatter residents from the other side of the street, where the faucet is located, appropriated the faucet for their sole use.

In the last two years, the riverside dwellers discovered a leaking pipe from the old hospital and decided to tap this new source instead — with the permission of the owner. With this new development, the organization laid down new rules: because the source is still illegal (the hospital's water meter is broken), they fetch water at night. During the day, those who were not able to fill their containers purchase water from entrepreneurs from other neighbourhoods at P3.50 per 10-litre container.

The community organization has already applied for a water connection, but the fee is prohibitive. It does have funds from the community rice store, but as their position is so precarious, they are loath to risk their money. If the



Ron Gilling/Panos Pictures

A boy squats on a pipe flushing Manila's waste into the river.

laid on a self-help basis, and most sewers work. Manholes vary in shape and sizes (concrete and block masonry), and most have covers. Where concrete covers are missing, people improvise with stone or wooden planks.

Rectification and the relaying of

dry-workers etc., and there are jobs at the Tanduy distillery. The later settlers rented their homes, although those with savings were able to put up their own places immediately — land permitting. The lower cost of services meant that many tenants were soon able to buy the

residents had security of tenure, they would pay for a meter.

Johannesburg

In 1991, a group of backyard shack-dwellers in Sebokeng formed the Pokolong Residents' Committee. The prime movers were Pule Raboroko and Mapotja. The shacks were put up within the plots of formal, black-township houses. The legal residents worked in the coal and steel industries, and supplemented their incomes by renting rooms to informal-sector workers.

The main issue was land. People were overcrowded, lacked toilet facilities, and paid very high rents. In the mid-1980s, the civic organizations were engaged in a struggle with the apartheid authorities, and the families in the formal houses heeded their call to refuse to pay rent and rates. But when the people in the backyards tried to join the boycott, they were prevented from doing so by the tenants of the formal houses, and they continue to pay high rents.

Recognizing the impossibility of a direct confrontation, and seeking their own land, the committee leaders identified a site just outside Sebokeng and decided to invade. The land, which belonged to the Transvaal Provincial Administration, was used for grazing; but the authorities planned to develop it.

The civic leaders got wind of the planned invasion and urged the residents not to take such drastic action. For a time, the committee agreed but, while the majority adopted a 'wait and see' attitude, as South Africa's first democratic elections approached, the committee leaders saw their opportunity. Pule and his colleagues went to a typical street in Sebokeng, they measured the plots and the width of the roads; they measured the soccer-pitch, and the plot size for a school and a clinic. This became the template for their own development. The first families moved on to the land on 13 April 1994. They marked their sites and left space for roads and public facilities.

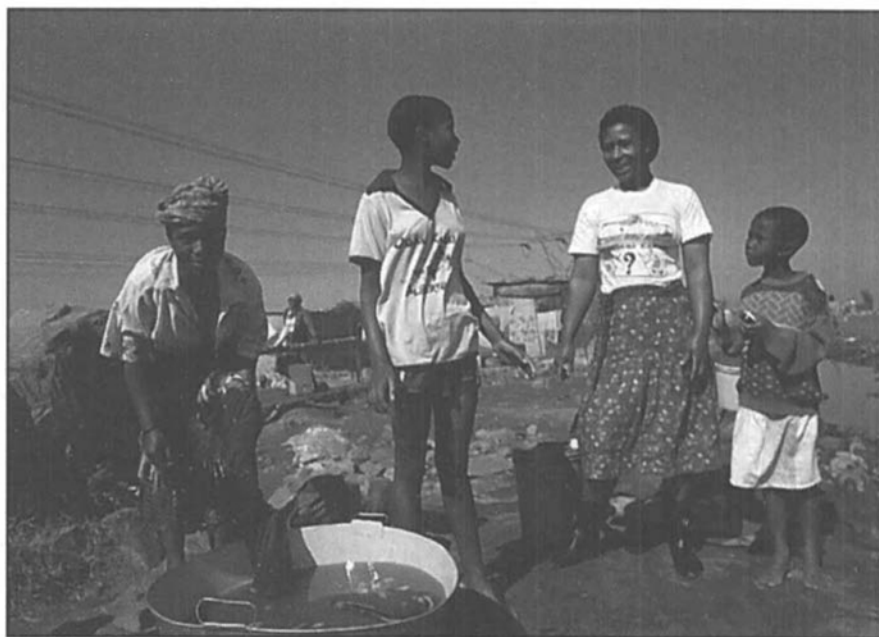
They named the settlement Kanana, 'Land of Canaan.' Pule and Mapotja, in the best tradition of real estate development, put up huge boards in their section of Sebokeng, and on the newly invaded land: 'Free Land for the Backyard Shack-Dwellers of the Vaal', with details on gaining access. Activists and the committee leaders began to allocate additional sites.

By 24 April 1994, over 1500 families were settled — and more spilled across the road onto more government land. The officials had a dilemma; the Prevention of Illegal Squatting Act was still on the statute books, and white magistrates were still in office — getting an eviction order would be as sim-

ple as ever. But no white local authority was going to be foolish enough to evict black squatters on the day Nelson Mandela became President.

When a team of officials visited the

When the provincial officials returned to Kanana to warn them that an eviction notice was to be issued, Raboroko and his colleagues showed them the settlement's water reticulation



Trygve Bolstad/Panos Pictures

South African squatters — electricity pylons range above their open sewers.

settlement they asked Pule Raboroko and his committee members to leave:

'We do not want to evict you because you are illegally on the land. That is no longer our problem. But we are very worried that there are so many people living here — thousands it seems — without any drinking-water. This poses a serious health hazard. For that reason you will have to leave. We will give you 48 hours to go peacefully. If not, we will have no choice but to evict you. We are sorry, but we have no choice. We cannot risk the possibility that people will die.'

The community leaders watched them return to Pretoria:

'Thousands without drinking-water! Since when has that bothered them? There are millions of black people in this country who do not have proper drinking-water. Are they all going to be evicted?'

The committee members decided that within 48 hours there would be water in the settlement. They went from door to door, asking for a R20 (about £2.60) contribution towards the purchase of water-pipes.

The municipal workers had been out on strike for weeks. The leaders in Kanana were well aware that the workers would be suffering from having little if any money. Kanana's leaders paid some of the strikers both for information about the water and sewerage systems in the area, and for advice on tapping into the water mains. Together with skilled workers, the community leaders bought the equipment that they needed, had it delivered to their settlement, and went to work. Within a few days, there was clean water.

system and the 117 new standpipes.

Before they left, the officials warned the committee leaders that, while the problem of water had clearly been solved, the community would now face serious charges of theft. The leaders replied that the community was quite ready to pay for the water. All that was needed was for the council to come and install meters on the taps. The provincial officials drove down the dust road. The people of Kanana neither saw nor heard from them for another two years.

Common cause

Although far apart geographically, each of these stories emphasizes the commonality of experience for the residents of low-income settlements in the South.

In each of these settlements, infrastructure and services were simply not being supplied by the state authorities. In the absence of any alternative, residents had to provide their own facilities. In all three settlements, they have come together to raise the resources, and obtain the skills needed to both extend water systems and improve sanitation. The resources for investments come from the incomes and experiences of the people themselves. Community leaders search out specialist skills from their neighbours, political contacts are nurtured and persuaded to support initiatives (or, at least, not prevent them), and small amounts are collected from those who can afford to pay.

continues on page 29