

Looking for a simple place to sit . . .

Men, women and children in Indian cities are sitting by the millions, not in toilets at all, but along roadsides and railway tracks, on footpaths, in empty lots, between buildings, over drainage nalas, in make-shift privies of sticks and gunny sacking and in the dark in-between places which great cities are full of, in the early morning, late night or at high noon. They are shouted at, molested, exposed to indignities, dumped-on, insulted. Nobody would endure these things if they had a choice.

For most, the choice of where to relieve themselves is not a choice at all, but a total lack of other options.

Either no toilets are available, or if there are, they are in such bad shape that squatting in public becomes preferable. Indian slums are littered with broken-down, badly-planned, ill-sited, unmain-tained toilets which even pie dogs won't go near, much less people.

Many people in slums have never even seen or used a decent toilet. On the other hand, many state officials who make big decisions about sanitation in informal settlements have never seen a viable, community-managed toilet themselves. With all these poorly-stocked imaginations, it's no wonder things are so slow to change. There is a poverty of examples, of models for how to make toilets that are affordable, replicable and work.



Nature's most basic call is everyday's nightmare for the millions living in Indian cities without access to a working toilet.

toilet talk



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Problems in Indian cities : Larger agendas and interconnectedness . . .

Cities in India have a long history of mixed development. All kinds of land uses and incomes have mixed together in a cheerful jumble for as long as there have been cities at all in India. This has always been convenient for both the city's haves and have-nots. The city, which depends for its prosperity on a vast supply of cheap labor, gets a workforce, and the poor, who depend on the city for their livelihood, get jobs. A poor settlement in your back yard provides a built-in support system - servants, carpenters, masons, porters, weavers, factory workers, waiters, drivers.

But it is one of the strange birds of Indian life that while the very poor and the very rich often live *right next to each other*, they can also manage to remain perfectly oblivious of each other's existence. It is as though the lives of the poor and the settlements they live in were **invisible**. The capacity to *not see* how your neighbor is living has been the leitmotif of Indian urban planning until now.

But things are changing. This passive coexistence is being exploded by the growth taking place in cities, by new economic and environmental agendas, which force Indian cities to compete for investment in a global economy, with all the world's other cities. Cities are the "engines of growth", the unit of India's economic development, and are being forced to spiffy up their image to make themselves attractive in this global market.

And cities are beginning, slowly and reluctantly, to peel off the cloak of invisibility and acknowledge the problems of poor settlements as being **problems of the whole city**. Cities can no longer afford to ignore the large portion of their populations forced to live in degraded and unhealthy environments, without access to basic services. If those people, whose cheap labour is so necessary to the city's economic vitality, are denied access to the most basic services, it's bad news for everyone, for the city as a whole.

This is nowhere so clear as in urban infrastructure. The lion's share of India's budget for developing infrastructure is being poured into cities. Even still, the grim statistics affirm that half of urban Indians do not have access to a functioning toilet. This circumstance makes big ripples: a health crisis, degradation of living environments, harassment of women, pollution of water bodies - you name it. But toilets are only part of the much larger story of inequities and shortfalls in the distribution of basic services in Indian cities, including water supply, solid waste disposal, storm water drainage, sewerage and sanitation, electricity, paved roads and walkways.

There's no point spending big money to improve the city's sewerage grids and waste-disposal systems, though, if those improvements reach only half the city's population, while waste from the other half continues to go into the rivers untreated. And even if communities could build lovely toilets in **ALL** the slums, they're doomed to the rats if the city can't deliver sewer lines and water supply to them. If you plan infrastructure for the poor, the whole city benefits, and if you leave them out, the whole city hurts.

THE WHOLE CITY

The high cost of being poor . . .

Over a decade ago, when the Bombay Mahila Milan first began gathering information about the toilet situation in Bombay's poorest communities, they came upon a strange paradox, which repeats itself across urban India:

*Middle class people, urban planners and city administrators all tend to see the poor as **free-loaders**, complain about the poor getting free amenities which everybody else has to pay for, and deplore this drain on the city's resources with great righteousness.*

But when women in pavement settlements spoke about their daily expenses, a very different picture emerged. Without ration cards, they couldn't buy the cheap government-subsidised cooking fuels wealthier households take for granted, and had to pay inflated black-market rates for the same kerosene. Without their own water taps, every drop their families drank or washed with had to be paid for, at a premium, and carried bucket by bucket, from far-flung sources.

And without toilets, they had to queue for hours and pay dearly for the privilege of using the smelly loo of some shop-keeper or building watchman who saw a profit in nature's most basic need. For a family of five or six members, each with the ordinary human digestive patterns, the daily toilet budget could go up to 12 rupees, which is pretty close to the daily wages of a head-loader or a vegetable seller.

Conditions like these are behind an ironic joke still making the rounds of Bombay's pavement settlements, which quips that the poor are the only ones who can't AFFORD to get diarrhoea . . .

The "service-delivery" sanitation paradigm :

Why hand-outs almost never hold up . . .

When there are toilets built in slum settlements, it is generally because some government agency or service organisation has come in and built them, usually without asking anyone in the community what they think about it or involving them in decisions about their design, location or number. Among the "service-delivery" toilet programmes which do exist (and there are many), there is a lot of confusion and overlap. Government schemes at national, state and city levels, local efforts by NGOs and foreign development projects all criss-cross each other, with some areas receiving huge inputs of money and effort, and others being completely ignored.

Each scheme has its own particular agenda, its own donor constituency and its own attitudes towards slums: government slum improvement schemes which pay for expensive contractor-built latrines but no maintenance afterwards, political organisations that do toilets only for particular castes, engineers who only do high tech ferro-cement wonders which poor people are scared to enter, Rotary Clubs which bestow "fully-tiled facilities" but don't provide water connections or follow-up maintenance to go with them, rival charities which do aqua-privies for Jesus, and appropriate-technology types who concoct elaborate biogas latrines with noble dreams of turning feces into cooking fuel.

It's not surprising that these kinds of *services* are perceived as *handouts*, and expected to be received by the poor with gratitude shining from their upturned faces, even if the handout doesn't quite fit. Because of this, when such schemes fail, as they often do, it's easy to fix blame on the communities, call them ungrateful and uncooperative.

Most sanitation schemes are set up to meet the needs of the organisations which implement them, not the needs of the communities which use them. When slums are targeted for sanitation investments, and when the resulting facilities deteriorate and become unusable, it happens for many reasons. The designs may not be appropriate to the conditions of use or availability of water, the management may not be worked out, they may be built in places which make them un-safe for women or children to use. In the end, many end up being abandoned altogether.

It's not that any of these toilets are *necessarily* bad. Technology is not the bad guy here. The problem is these efforts *bypass* community involvement, and because of that, fail to tap the rich stock of understanding already within the community about what will and won't work. People living in slum settlements are experts in the art of survival, and aren't stupid. When they take part in all stages of planning for sanitation, things go differently. When a block of toilets is perceived by the entire community as an asset, as something that belongs to them, chances are good that community will make sure it continues to work. Ownership in this sense is function of involvement. *Service delivery works against this kind of possession, and sets communities up to be passive recipients of somebody else's idea of what they need.*

You call this thing a "Civic amenity"?

The government's systems for building public toilets are designed to benefit contractors, not the cities and certainly not the poor families who have to live with stinky, sub-standard, broken-down toilet disasters like this one in Bombay.



The City can't do it, the private sector can't do it, the social organisations can't do it. Who is going to get toilets to all those under-serviced settlements?

Here comes some potent evidence that poor communities can be the prime movers in a process of building and managing community toilets, like this ten-seater beauty, built by poor women at Sarvodaya Nagar Railway Slum in Kanpur.



The **WHOLE** city : finding ways to bring communities into the sanitation planning picture . . .

For the first time, Indian cities are having to act together, as a **whole city**, because the big changes that are happening affect **everyone**. The assumption that follows is that everyone affected by these changes, rich and poor, will have a stake, and will become involved in steering them. But the odds are against the poor, who have no history of participation in decisions about the city, and are reluctant to believe they **can** change their own lives and their own cities.

Many people in poor communities feel it's a waste of time to organize themselves, and continue to struggle independently, as they always have done, to stay alive. The state, on the other hand, has no history of interacting with poor people and no mechanisms for delivering infrastructure to large numbers of people. The market, given the explosion in land values in Indian cities, has long since left the urban poor behind, and is having difficulty even reaching the salaried middle class. It is becoming clear that the problems are too big for the state or the market to handle alone, that communities and civil institutions have to get in on the act. This is the vacuum in cities now, and poor people are right in the middle of it.

One way to make these big ideas tangible to the poor is to begin with what communities consider most vital to their survival and which *they can handle themselves*, like constructing toilets. These experiences help communities to develop the confidence and skills they will need for the next, larger stage of involvement. In this way, small projects become the basic unit of multiplication of solutions at larger scales.

Most slum communities already contain within them, in atomized parts, all the expertise that goes into building cities and infrastructure: masons, carpenters, plumbers, stone-cutters, electricians, centering-workers, labourers. If the construction skills housed in slums can build cities, they can be channeled to improve the living environments of those who do the building. If you start with what the poor can control, like cooperative community savings, which make people skilled money-managers, and with house-building and community toilet building, which make communities their own sanitation providers, you begin to find capable partners for the improvement of the city as a whole.

Community-managed toilets are a way of bringing much-needed basic services to large portions of the city's population which have been left out of the picture: the poor living in informal settlements. This is not only a matter of equities, but of fundamental urban equations. All parts of a city are interconnected. If the city's infrastructure allows soil and garbage from half the city's population to go into the river untreated, that's not only bad news for the under-serviced poor, but for the whole city. When you plan for poor people's basic services, it's good for the whole city, good for everyone.

Starting with the basic unit of multiplication :

That's the big picture. But these ideas are difficult to get your hands around. The question is how to translate this mandate into comprehensible ways for poor communities and the state to work together, towards the same goal of better cities for everyone.

It is one thing to talk about poor communities participating in revitalizing the city, but another to put it into practice. A long history of misunderstanding and distrust on both sides generally works against attempts at cooperation. Jockin, the NSDF president, describes it this way :

"It's as though the poor were going along with their eyes on the ground, out of deference, out of fear, out of caution, while the big shots are going along with their eyes up in the sky, on their grand plans, above it all, indifferent to reality. And in the middle, between where the poor and where the big-shots are looking, is all the mess and all the garbage nobody is willing to look at!"

SHAKING THINGS UP

Nine years so far in the toilet business :

For the past nine years, the National Slum Dwellers Federation (NSDF), Mahila Milan and the Society for Promotion of Area Resource Centres (SPARC) have built strong ties with communities of the poor in many Indian cities and abroad. Most of these relationships began through human contacts: through somebody who knew somebody else, and began with a casual exposure, not with any specific purpose or training agenda.

Most often, the first step is for groups from other cities to come to Bombay see and hear for themselves what the three organisations are doing together there, with toilet building, and other things. If they want to try similar things back in their own cities, teams from the NSDF/MM/SPARC alliance visit, and a series of exchanges begin. As more and more toilet projects in other cities are completed, the focus of these initial exchanges is spreading out, moving away from Bombay to Kanpur, Lucknow, Bangalore and other cities.

The federation's simple toilet paradigm :

Communities plan, construct and maintain toilets in their own settlements. The State brings sewers and water supply to the site and pays for the materials. *That's it.*

Making communities into laboratories . . .

Behind this process of exposure is the belief that communities of the poor can and must be centrally involved in improving their own lives and the general conditions of the city in which they live. There are *communities out there* which have taken steps to change things, to transform their own lives and settlements in various ways. The exposure process acknowledges that these community-based transformations are powerful examples for other communities to learn from, and the best catalysts for other, larger transformations. These initiatives have changed the attitudes of city administrators, changed the strategies of how services and amenities are delivered to the poor, and inevitably changed the lives of the communities they involved. Exposure to work of this kind is the first step in breaking down the crippling belief that poor people are too poor and too marginalised to change things themselves.

The approach of the NSDF/MM federations around India is to undertake many different process, with different groups and in different cities, focusing on housing, sanitation, savings and credit, tenure, and then helping each group to carry its initiatives through to a conclusion. Once the solutions have some replicability, the group becomes a training resource in the federations and can begin to assist other groups,

■ Refinement through practice:

The idea of communities participating in work which assures every settlement has adequate toilets is very simple. For both the city and the community, the lack of toilets is acknowledged as a health hazard, and toilets remain one of the most critical but least resolved public problems in Indian cities. There are certainly plenty of government sanitation programmes, lots of development money specifically earmarked for sanitation and an overall impulse to improve the situation, but in almost every case, what the government administration seeks to do and what the people in under-served communities want to do, cannot seem to connect, and the process stalls again and again.

■ Women at the centre of changing settlements :

The federations see women's participation, especially, as critical to the issues of toilet construction and maintenance. If women in poor communities understand how toilets are constructed, and can participate in the construction, their ability to manage and maintain the toilets will be enhanced. Eventually, these women can go out and train others, and gradually, it will be possible for all settlements to build their own low-cost toilets where they are needed, and to manage and maintain them. Community building of toilets also initiates women into developing skills in masonry, material production, project management and maintenance which they can use later in their communities' house-building projects.

Making room for communities to try things out:

When communities are invited to participate in projects, they are often expected to do everything right the first time, without wastage, without mistakes, while the agencies and professionals involved get permission to experiment. This is the unspoken subtext in most development interventions, and it is a recipe which guarantees non-participation.





Communities learn by doing, seeing and talking, just as professionals do. While project budgets have big components for training and meetings, they seldom make room for community learning as equally important. That is considered waste. But that kind of "waste" is real learning.

The toilet projects : Using interventions to add more options to the poor's list . . .

The idea of an explicit, community toilet-building programme is to give a big push to communities to undertake projects, and to create an environment which makes room for experimentation, which allows for mistakes to be made. Outside, or "artificial" interventions like this do not actually set new standards, but alter and influence the circumstances which allow communities to develop standards of their own.

These toilets are not theoretical ideas on paper, but *real buildings*, built in *real slum settlements*. They are all much-visited, much-talked about, much analysed, within the NSDF/MM network and without. Their mistakes and successes are widely ruminated and provide start-up fuel for the projects that follow. The people who built them take their experiences to other settlements, other cities, and become trainers themselves. In this way, the evolution and refinement of ideas occur *in practice*, in different situations.

Each new toilet that is built is better than the last one. Each time it gets easier and smoother, the "circle of preparation" shrinks and the number of people with heads full of new images grows considerably. It is the NSDF/MM federations' ability to link people together and to help them create control of these processes that make this possible.

It would be stretching the truth to suggest that all these toilet constructions emerged entirely and spontaneously from the communities in which they were built. The lack of toilets *is* one of the most often and urgently articulated problems of slum-dwellers, but it is important to understand all these projects as involving a potent, external intervention - somebody coming in from outside these *particular* communities, shaking things up, asking questions, posing challenges, and *intentionally* pushing forward the steps required for communities to plan and carry out solutions to their own sanitation problems. In this case, the outside group is the NSDF/MM/SPARC alliance, and this report documents the first stages of that experience in several Indian cities.

No two toilets are alike :

These toilet projects all work along the lines of some of the federations' fundamental ideas about building the capacities of communities (outlined in the next pages in "Ten Big Ideas"), but all of them are *different*, and represent tailor-made responses to complex *local* needs and *local* realities. The different toilet projects reflect different political climates, different negotiating strategies, different degrees of official support, different materials markets, different skill levels, different site realities, different access to sewer and water mains, different community dynamics. *The projects do not present a single toilet type but a range of toilet options.*

No time to waste waiting around for ideal conditions :

None of these toilets are perfect. Lookers for perfect solutions need read no further! Most of them were built under circumstances that could be called impossible, by anyone's yardstick, and against some pretty tough odds.

But what every one of these toilets represents is a vital investment in learning, and human capacity. These things are the building blocks of large-scale change, much more than perfect designs or innovative engineering. One of the NSDF/MM Federation's old philosophical horses is the notion that you should never allow your work to be held up while you wait for something else to be ready, or some other condition to be in place. You might as well just dig in and get going - since *thing's will never be perfect, no matter how long you wait - Never!*

Like making salt :

Sagira, one of the senior members of the Byculla Mahila Milan and veteran trainer of dozens of community toilet and house-construction projects all over India, makes an analogy with the process of making salt from seawater.

You stir and stir and stir and stir, she says, until you're so tired of stirring. Just when you think nothing will ever happen, and there's no use carrying on with this infernal stirring, the salt crystals begin to form. They won't form without all that stirring.

In the same way, solutions to complex problems don't happen overnight, but need the same sustained, faithful nurturing and push.

TEN BIG IDEAS

Why the poor make good sanitation partners :

In the toilet projects described here, poor communities in six cities undertook the process of designing, building and managing their own toilets. Then they invited the city to come and inspect what they'd done. It's a change in the roles. The poor are no longer on their knees begging the city for services. They own the process, and are the ones telling the city how they would like it to move. Behind this dramatic transformation are some clear ideas:



1 Communities can make good decisions about sanitation systems that match their capabilities, budget and settlement realities.

The job of providing basic services to a big city works like a vast field of shared responsibility and involves a lot of people: officials setting priorities, engineers drafting plans, contractors doing civil work, water and sewage departments overseeing maintenance, and special interests wheedling the process. At the edge of this field of decisions, are all the people who need water taps and toilets. It's generally assumed these people, especially the poor, cannot be involved in infrastructure decisions, since they involve technical matters over their heads. In fact, the poor *can* be involved, and technicalities of toilets, water supply and sewerage *are not* over their heads. Poor people can analyse their own sanitation needs, can plan, construct and maintain their own toilets.

2 When communities manage their own sanitation, it's cheaper and more efficient, good for the poor and for the whole city.

When poor communities design, build and manage their own shared toilets, it brings much-needed basic services to a large portion of the city's population traditionally excluded from infrastructure planning. This is not only a matter of equity, but of fundamental urban equations: if soil from half the city's population goes into the river untreated, it's not only bad news for the poor, but for the *whole city*. It costs the city at least Rs 25,000 to build the same toilet communities can build for Rs. 5,000. Every community-built toilet saves the city 20,000 Rupees. That adds up to *millions of rupees* when you look at the staggering toilet deficits in Indian cities. And, because community toilets are maintained by communities, the city frees itself from long-term maintenance headaches.

3 The poor are an enormous and untapped source for solving urban problems. They can be catalysts in changing Indian cities.

The poor are already the designers and implementors of India's most far-reaching systems of housing and service delivery. These systems are not ideal, largely "illegal", and often inequitable, but they reach down to India's economic bottom, and cover more ground and more lives than any government programme could ever do. Officials, with their rules and procedures, are apt to view this as a species of misbehavior, and seek ways to control or punish what is actually a reasonable and ordered response to urgent necessity, where no "legal" alternatives exist. This human creativity in ragged clothes is one of the great, unchannelled sources of energy in India. It makes solar power look like wet matches by comparison. Imagine if this creative energy were legitimized and assisted, the way scientists are given laboratories and research grants, to refine their solutions?

4 Big Pipes and Little Pipes: Finding more efficient ways of dividing the tasks involved in bringing basic services to poor communities.

The mind-boggling complications of city-wide infrastructure are made simpler if you think of it as involving *big pipes* and *little pipes*. The *big pipes* which carry and treat water and sewage are at the big end of the system. Only the city can handle these *big pipe* items, which involve politics and big budgets. Toilets and drainage lines, on the other hand, are genuine *little pipe* items and don't really require the city at all. They can be planned, installed and maintained locally, by communities. The federations propose to cities a kind of deal: stop wasting money and effort on the *little pipe* items, which slum communities *can* handle themselves, and concentrate on the big-pipe items, which they *can't*: expanding the sewerage and water-supply grids. If the city can deliver sewers and water supply to the settlements, communities can take over from there.

5 People in poor settlements are experts and best qualified to make decisions about improvements in their own communities.

There is a myth going around that only experts with advanced degrees can plan improvements in slums. But the realities of life in India's slums are something slum dwellers themselves understand best. This sounds obvious, but those who make decisions about slum improvement programmes operate on the assumption that *they* know best, and leave to their *experts* what people living in slum communities can do better. Plus, if *experts* are responsible for the deplorable state of infrastructure in Kanpur or Bangalore, there are some *serious* holes in this "expertise." Perpetrators of this myth forget that slums are home to those *who actually build Indian cities*: masons, pipe layers, cement mixers, brick carriers, shuttering designers, stone cutters, trench diggers, metal fabricators. If people with these skills aren't experts, who is? People in slums are the best *experts* to plan and carry out improvements to their own settlements.

6 Communities don't need handouts, they need space to develop their own commitment to improving the lives of all their members.

Toilets are one of the most *communal* improvements. They can do a lot to bring communities together - everyone will use them, will have feelings about them. Toilets become central, unignorable facts of people's daily lives. A toilet building project is small enough to be planned and built within a small budget and time frame, but big enough to start many things happening: women get involved, people learn to understand their problems, to work together, to tap skills within the community, to manage money. If you squat along the nala all your life, it's pretty hard to imagine toilets not being *dirty places*, but being so clean and well-cared for that they become points of congregation! The next step is realizing slums don't have to be *dirty places* either, but can be beautiful communities in which to live.

7 There's an obvious but important difference between Public Toilets (for the public), and Community Toilets (for communities).

The federation makes a clear distinction between *public toilets* and *community toilets*. This distinction is important because building a toilet in an informal settlement, like any amenity, changes people's perceptions about their own settlement. *Public toilets* are built for whoever happens to be passing by, and assume transience, anonymity, strangers coming in for a piss. To build a *community toilet* is to acknowledge that a community *does* exist, and that inside that community live women, men and children who have needs which are *legitimate*. A *community toilet* is an asset which belongs to and is controlled by a community - not the city, not the government and certainly not a passing stranger. Within the murky politics of land and tenure in Indian cities, the construction of a community toilet can be a powerful maneuver, *especially if it is built by the community itself*.

8 Golden Boobos: making room for communities to learn, as we all do, by experimenting and by making mistakes.

Solutions to complicated problems don't happen overnight, they come from trial and error. You have to do something more than once and make plenty of mistakes before you get it right - all of us learn that way. It's no different for poor communities, where solutions are a lot more complicated. To those mistrustful of community involvement in urban improvement, mistakes only confirm entrenched attitudes towards poor people, who are thought to be lazy, bungling and sneaky. Built into many community-participation programmes is an "only one chance" clause, which doesn't allow the *training capitol* of mistakes to be reinvested in subsequent learning processes, but lops off participation at the first whiff of error. Poor communities are prevented from their own experimenting because they have no resource margin to absorb those mistakes. This is the crisis of poverty, and this is why these toilet projects make room for and even *encourage* mistakes.

9 People on the move : Poor people training others, breaks isolation and creates a richly complex field of ideas in motion.

People in communities which have built their own toilets are the best teachers for others interested in doing the same. Whether or not their project was *successful*, their experience can give a head start to other communities, which shouldn't have to start from scratch every time. In order for skills to be refined and spread around, it's important that as many people as possible visit the toilets, participate in their building, and return to their own settlements stocked with head-fulls of impressions. In these ways, the learning potential of these experiences is maximised, their successes and failures are discussed and digested with many others. Each time, the *circle of preparation* gets smaller and the process gets easier. Each time it's cause for a festival, and each festival draws a larger crowd.

10 Developing standards that are realistic for poor communities, through experimentation and practice.

When cities build toilets in slums, they pull out their same old *standard designs* - expensive, difficult to maintain and mostly doomed to failure. Despite their uninspiring track record, these standard models are duplicated again and again, partly because nobody has a better idea of how to do it. Fresh, workable standards for community improvements are badly needed. But they can only emerge from a reality which poor people understand better than bureaucrats and can only be developed *through practice*. These toilet projects are a working search for better standards - standards for financing, designing, constructing, and maintaining toilets which are replicable, and which work within the realities of poor communities. Some ideas they test catch on, others don't. It is from this fertile process of experimentation that new standards emerge.



When communities take over . . .

When communities take charge of sanitation in their own settlements, lots of good things happen. Take the issue of how toilets are looked after, for example. Here is the best description we've heard of how community relationships and common sense can lead to strategies for keeping toilets really clean. This comes from Aisha Marchant, a Mahila Milan leader in Dindoshi Colony, in Bombay:

So we shout . . .

"Suppose we have 15 people using one toilet. If that toilet is left dirty, all of us will notice. We know that the toilet was soiled by one of our 15 members, because we keep it locked, and nobody else from outside our group has the key. So we shout! Who has gone and spoiled the toilet? Why didn't you pour water inside? Then, next time, it doesn't happen again. When everybody from outside uses the toilets, who can we shout at? Nobody is responsible for spoiling or for cleaning the toilets. Nobody cares."

TECHNICAL DECISIONS

Technical ideas and construction procedures : keeping it simple

The technical emphasis in these first toilets was not on snazzy new construction or sanitation technologies, but on known systems, which ordinary people with basic skills can be part of. All the toilets use simple plastered brick walls, sheet roofing and straight-forward plumbing.

All the toilets were built by communities, with a little expertise and training help from the Bombay team. In most, only one mason and one or two helpers were hired, and all the other labour, as well as construction super-vision was contributed by women, men and kids from the communities.

It takes a small team about two weeks of actual construction time to build a ten-seater toilet block of the sort described in this report. But in most of the projects, this time was spread out for various reasons. The toilets were built at a "community pace", which means room was made for dealing with money troubles, interference, squabbles, holidays, festivals, somebody's wedding, and lots of training.



Managing the toilets after the construction process . . .

When cities build community toilets, here's what generally happens: first the city engineer comes out, picks a location and a sewerage technology, pulls out a standard toilet design, hands over construction to the contractor with the lowest bid, and then assigns maintenance to that ward's conservancy staff. The new toilets, whose design, materials, fixtures and construction are all flamboyantly below standard, very soon break down. Without water for flushing, the place begins to stink. Without municipal cleaners, who never show up, clogged latrines get more clogged, and things go from bad to worse. The community knows somebody is getting paid to clean these toilets, so why should they do it? Before you know it, the toilets have become such a horror nobody will go near them. ***Everybody seems to assume that all this planning slapstick is doing a great big favour to poor people, and that the golden light of goodness and charity falls on these substandard potties.***

People who live in slums have intimate knowledge of all the things that can go wrong when toilets are designed badly and aren't taken care of. Fifty percent of making a good, successful, long-lived toilet is what you do *after* the toilet is finished. Even the most wonderfully-designed and solidly-built toilet will deteriorate if it isn't carefully maintained. The NSDF / Mahila Milan federations around India have developed through these toilet projects a set of options for assuring their beautiful toilets *stay beautiful*.

1 Toilet ratios: The question of *how many* toilets is as much a maintenance issue as a planning one. On the one hand, you have World Bank consultants talking about private toilets in every house. That would be lovely, but toilet solutions have to be based in reality, and the reality today is that urban India's poorest 30% could *never* afford a private toilet, even if they had room for one, which they don't, given conditions of crowding which squeeze families of nine into rooms scarcely ten feet by ten. Plus, in the few settlements which *do* have sewers, the systems are not sized to handle the sewerage loads so many individual toilets would bring. On the other hand, you have municipalities setting target ratios of 1 toilet per 50 people, which in practice is a sure formula for overuse and breakdown. So, *back to reality*:

MM/NSDF toilet ratio: 1 : 4

The NSDF/MM/SPARC alliance promotes a more viable toilet ratio of one toilet for every four families (or about 25 people).

2 Community-managed maintenance of toilets: When communities are involved in designing, building and looking after their own toilets, a scenario unfolds which is very different from the city-built horror-story we told above. When people feel assured of the toilet's quality, when they understand its design, when it is perceived as an asset they have created themselves, and which *belongs* to them, it's not hard to imagine how well that toilet will be looked after, repaired, kept up, *even treasured*.

3 Systems for maintaining toilets: Many of the toilets, especially in Kanpur, are run by the communities on a "pay-and-use" basis, where community members pay Rs. 10 per month per family and outsiders pay Rs. 1 per use. In many of the toilets, the economics of the pay and use system have made it possible to hire a full time woman from the community to maintain the toilets, keep the water tanks filled, monitor use and collect fees from outside users. In Bangalore, though, most of the communities have worked out rotating schedules where different families take turns swabbing out the toilets and keeping the water tanks full and charge no fees. There are dozens of strategies for organising the task of cleaning and monitoring shared toilets - the important thing is that these strategies are hashed-out *right in the community*.

4 Good water supply: A protected and uninterrupted source of water is well understood to be one of the most essential elements in toilet management if the toilet is to be well used and remain clean. People who have had to use bad toilets know water supply can make or break a toilet, and know what happens when cities build toilets but then are casual about water supply (*refer to the sanitation nightmare of Dindoshi*). In many of the toilets, a protected water storage place is part of the design.

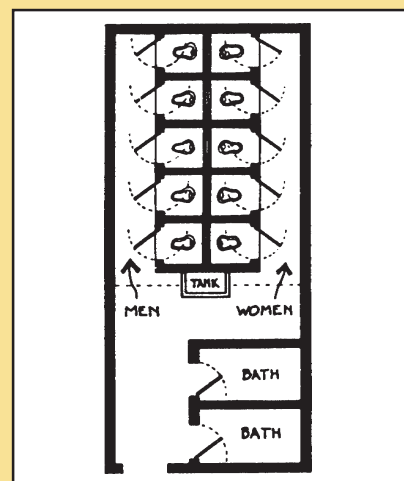
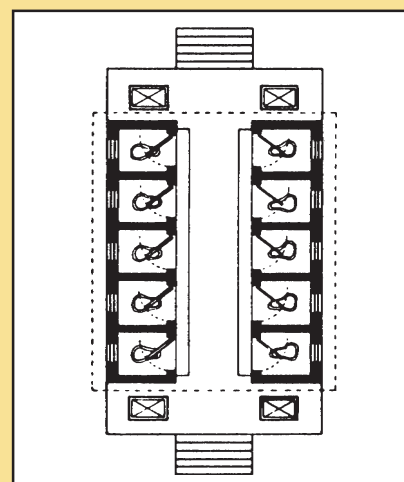
The fine points of community toilet design :

Small design details make a big difference in how shared toilets are used and maintained by communities. Here are some of the significant design features of one of the Federation Toilet blocks in Kanpur. We compare it with a conventional State-built toilet block to give you an idea how great a difference these subtle features can make.

- ❑ **TOILETS AT CENTRAL LOCATIONS:** In the NSDF model, community-toilets are not isolated "dirty places", but intentionally built in central, "nodal" locations and combined with community gathering spaces, so use is automatically monitored, and upkeep is tied to the usability of these spaces.
- ❑ **SEPARATION OF MEN'S AND WOMEN'S TOILETS:** In the Government model, the toilets face each other across a central space, without any separation of men's and women's toilets. This leads to hassling of women, lack of privacy, arguments about cleanliness. The NSDF/MM model is organized with two separate, back-to-back lines, one clearly for women and one for men.
- ❑ **INCREASING PRIVACY:** The standard-issue government "Aqua-Privy" model is about 4-feet above street level since it sits on top of its own septic tank, and is accessible from both ends. When the doors to the stalls deteriorate, as they inevitably do, from the bottom-up, passers-by can look right up into the stalls. In the NSDF model, even if the doors deteriorate, the 5-foot walls outside the stalls block the possibility of any peeking.
- ❑ **ORGANIZATION FOR HEAVY USE:** The 10 stalls in the government block are ranged around a large central space, accessible from both ends. In the morning hours, when competition for use of the toilets is heaviest, there is much acrimonious jostling and queue-breaking in the competition for toilets. The NSDF block's layout, with its 2-lines and narrow passages is an effective "crowd-organizer" and strife-avoider. Two lines form and lead right out of the enclosure, while at the toilets end, one person waits outside of each stall. When that person goes in, the next in the queue takes his place.
- ❑ **DOOR DESIGN:** The stalls of both models are pretty small. To make it easier to move in and out of the stall, when you're carrying a bucket of water, the NSDF model has doors which swing both ways. The government model has inward-swinging doors which force you to press against the dirty inside walls to open the door and get out.
- ❑ **PLANNING FOR CHILDREN:** When queues for toilets are long, children often get shunted aside, and end up being forced to squat outside, where they soil the drains and periphery. There are also real dangers of very small children falling into trap-less aqua-privy toilets and drowning. The federations take the needs of kids seriously and have designed special, shallow children's latrines, but so far, these have only been tested in the one toilet at Dharavi.

- ❑ **PLENTY OF VENTILATION:** The stalls in the NSDF toilet block are ventilated on all four sides, with ventilating grilles placed high-up on the wall between the back-to-back stalls, one-foot gaps at the top of the side walls, and gaps above the 6-foot doors, so the stalls are ventilated on all four sides and bad smells have four means of escape.

- ❑ **CLEAN OUTSIDE WALLS:** In the NSDF block, the toilets are *inside* an enclosure, whose exterior walls have no plumbing and are therefore *clean*. So the toilet block has a clean public face. These clean outside walls work better in crowded conditions, where other buildings might directly abut the toilet block. This also allows toilets to be built up against existing compound walls without befouling them, and cuts the compound wall-building bill. Compare with the government blocks, whose exterior walls are the dirty back-sides of toilet stalls and rusty, leaky plumbing.



Here's the comparison: On the top is the plan of the standard issue slum toilet block, drawn up by the engineers up at the Bombay Municipal Corporation. On the bottom is the plan for the NSDF/MM federation's toilet block at the Burma Shell settlement, in Kanpur.

Below: one of the defunct municipal toilet blocks in Dindoshi Resettlement Colony, Bombay.



NOTES ON COST

Why these community-built toilets are cheaper :

When the state builds community toilets, it costs a lot. In Kanpur, for example, the State Urban Development Authority (SUDA) in Uttar Pradesh has used UBSP money to build and maintain a very small number of toilet blocks in urban slums, with bio-gas plants. These blocks cost between Rs. 25,000 and 30,000 per seat to construct, and require large yearly outlays from the state for management, maintenance and repair.

Compare that with the NSDF/MM toilet blocks in Kanpur, which cost about Rs. 5,000 per seat (one fifth the cost of the State toilets) to construct. Why are they so much cheaper? Because the toilets are more efficiently designed from the standpoint of superstructure and plumbing, because they use materials efficiently to prevent wastage, because they are built by communities, using community labour and only a small amounts of hired skilled labour, and because the cost of maintaining and repairing them is borne by the communities who use them. Nothing complicated.



100% fat-free toilets:

This simple but servicable four-seater toilet block, designed and built by the community at Basha Compound in Bangalore, cost just 12,000 Rupees, or about half what the city spends to construct a single seat in a public toilet. (The jasmine shrubs planted along the entryway, which adorn trips to the pot with their fragrance, were free.)



Some of the technical and cost-reducing measures in the toilets :

1 SINGLE PIPE LINE:

In most of the NSDF toilet models, back-to-back lines of toilets feed directly into a single central pipe line, with a single inspection chamber at the end. This arrangement cuts in half the expensive underground plumbing bills of the typical separate-line arrangement in the Government toilets, with pipes on both sides.

2 REDUCED WALL AREA OF SUPERSTRUCTURE:

Arranging the toilet stalls back to back, with outside compound walls that are only five feet high, reduces the wall area of the entire superstructure and cuts down construction costs by reducing the use of bricks, cement, sand and labour.

3 COMMUNITY-BUILT:

Because communities planned all the toilets, managed the construction and provided most of the unskilled labour, the bill for hired skilled help was dramatically reduced. Most costs included the wages of a single mason with two helpers, and a day or two of help from a special sanitation plumber, who can often be found within the communities. There were no middlemen, no contractor's profits, no cream for anybody to skim off. These are 100% fat-free toilets.

4 DIRECT SEWER CONNECTIONS:

Toilets with direct connections to sewers are much cheaper and simpler to build than toilets with their own on-site sewage treatment, because they don't require the costly labour, excavation, building materials and extra piping involved in building soak pits or elaborate septic tanks. Because of this, whenever municipal sewer lines were available near the building sites, the toilets were connected directly to sewers.

5 KEEPING IT SIMPLE:

Most of these toilets stayed away from fancy construction tricks, and made use of simple materials, locally-understood systems of construction and straight-forward plumbing. Sometimes, the best "cost-reduction" innovation means passing up high-tech, "alternative" techniques for the simple, sensible, locally handle-able systems everybody else is already using.

6 POUR-FLUSH LATRINES:

All of the toilets use the simple *pour-flush latrine* system, where a half-bucket of water thrown in the pan provides enough water and force to clean out the pan. *Pour-flush latrines* have their own water seal, which keeps smells from coming into the stall, do not require costly venting or flushing hardware, use very small amounts of water, and can be flushed with second-hand or dirty water and still work fine.

Burma Shell Toilet

Detailed cost of one federation-built toilet :

Burma Shell is one of Kanpur's Railway slums, named for the oil refinery whose high walls the settlement is strung along. Living conditions in Burma Shell are pretty bad, without pavements or drainage lines, and during the monsoon, the settlement is one long line of muck. A single water tap serves the whole slum and there is no electricity. The Kanpur federation and Mahila Milan did actually build a toilet within the slum, on railway land, two years ago, a small two-seater with a closed pit sewage system, but the Railway authorities smelled *improvement* and hastily demolished it.

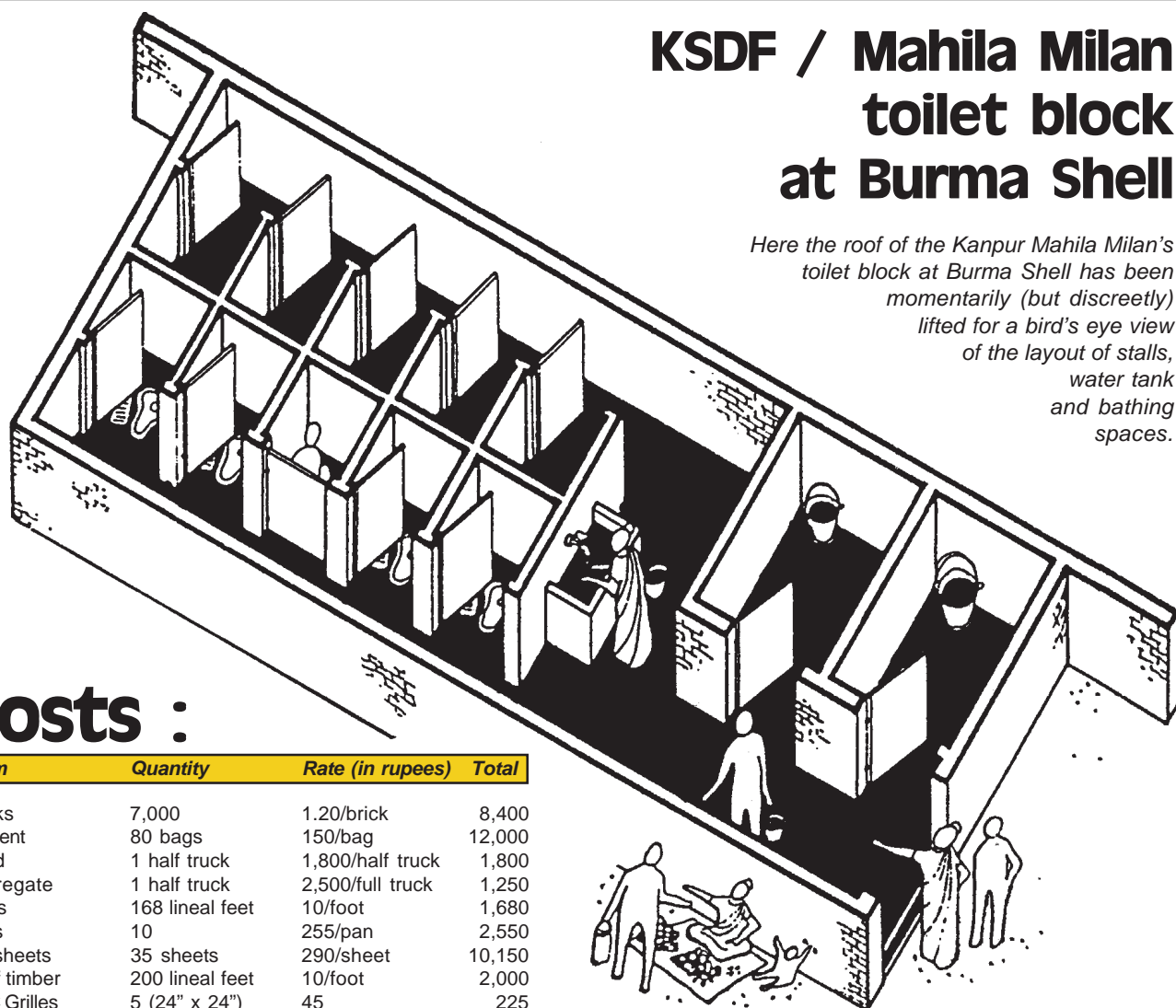
This ten-seater toilet block was the second to utilise the strategy of bypassing the Railway's veto by obtaining permission to build on municipal land, along the road that crosses the tracks, at the end of the settlement. The toilet is directly connected to the municipal sewer line which runs nearby. Within the toilet's enclosure is a water storage tank, hand-washing sink, two bathing enclosures and ten toilet stalls.



The Kanpur Federation's roomy, street-side toilet compound at Burma Shell has become a popular pit-stop with labour-ers and rickshaw wallahs, and chai and pan shops have sprung up around it.

KSDF / Mahila Milan toilet block at Burma Shell

Here the roof of the Kanpur Mahila Milan's toilet block at Burma Shell has been momentarily (but discreetly) lifted for a bird's eye view of the layout of stalls, water tank and bathing spaces.



Costs :

Item	Quantity	Rate (in rupees)	Total
Bricks	7,000	1.20/brick	8,400
Cement	80 bags	150/bag	12,000
Sand	1 half truck	1,800/half truck	1,800
Aggregate	1 half truck	2,500/full truck	1,250
Pipes	168 lineal feet	10/foot	1,680
Pans	10	255/pan	2,550
Tin sheets	35 sheets	290/sheet	10,150
Roof timber	200 lineal feet	10/foot	2,000
RCC Grilles	5 (24" x 24")	45	225
GI doors	10	300	3,000
Plumbing labour	10 seats	150/seat	1,500
Mason labour	34 days	160/day	5,440

TOTAL

Rupees 50,000 (US\$ 1,400)

COST PER SEAT

Rupees 5,000 (US\$ 140)

SANITATION PROJECT

Mega sewerage project offers opportunities? Maybe . . .

As the federation's toilet building experience expanded into other cities, an extraordinary opportunity presented itself right in Bombay. In 1994, the World Bank began negotiations with the Mumbai Municipal Corporation to loan money for a large sewerage and sanitation project in the city.

*This mega-bucks, mega-infrastructure project involved large-scale expansion of Bombay's undersized and overtaxed sewer system. Thanks to pressure by local NGOs, the World Bank set one condition for the loan - that the project also address the needs of the poor and include the building of community toilets in a selected group of slums (we all loved that part!). The project set a target of providing toilets for at least **a million people**, at a less-than-perfect ratio of **1 toilet for every 50 people**.*

When the MM/NSDF/SPARC alliance was invited to help, they saw a chance to test some of their ideas about community-managed sanitation at a much larger scale, and to strengthen a constructive partnership between the urban poor and the city government.



Bombay Sanitation Project : Working with the big agencies leads to a noisy clashing of paradigms . . .

Twenty crores of rupees (about US\$ 5.5 million) was assigned to the community-toilets portion of this enormous World Bank financed **Bombay Sanitation Project**. That's the same amount the Municipal Corporation spends every year building public toilets. Since most of these toilets aren't maintained and become unuseable within two years, that represents a Rupees 20 crores loss for Bombay every year. *The federation set out to use its participation in the Sanitation Project to show that community-managed sanitation is a much better investment.*

The project's first task was a survey of existing sanitary conditions in the chosen slums. An engineering firm was hired by the city to manage the "feasability study." When the Additional Municipal Commissioner invited the federation to help out, it was agreed that the federation would be subcontracted to do the survey jointly with the engineers.

As it happened, the 70 surveyors from the NSDF/Mahila Milan knew those settlements like the backs of their hands. They made a good team with the engineers, many of whom knew plenty about hydrology and invert levels, but almost nothing about how people live in Bombay's slums. What the team found in the settlements was gruesome almost beyond imagining: broken doors, overflowing septic tanks, latrines clogged with excrement, acres of surrounding garbage, entire toilet blocks deemed so hazardous that they had been boarded-up by those they were intended to benefit. Where there should have been 20,440 toilets (according to the city's target of one toilet for every 50 people) there were only 3,433. And of these, only 687 (20%) were in useable condition.

On the basis of these grim statistics from the joint survey, the federation proposed to jump in head-first, and begin tackling this sanitary war zone with some community toilet demo projects. Both the Municipal Corporation and the engineering firm agreed - the obvious next step was for the city to invest some of those Sanitation Project construction funds. A few communities could simply start building toilets in a few locations, to get things going, to train communities to take on toilet-building contracts themselves, and to test the federation's cost-sharing model - with communities constructing and maintaining their own toilets and the city providing construction materials.

This simple, direct plan, however, set alarm bells ringing up at the World Bank, where another version of community participation held sway. The sanitation project came with its own army of *project development consultants*, who swooped down from their air-conditioned suites at this point, full of collective disapproval for this simple strategy. The World Bank boys had other things in mind. Their idea was to set up a competitive bidding process, which pitted one community against another to be chosen as demo projects, and subcontracted NGOs instead of communities to do much of the work.

The smelly facts about public toilets in Bombay :

Number of settlements surveyed	151 settlements
Population (from NSDF/MM Survey)	1,022,016 people

Municipal target toilet situation

Municipal target ratio	50 persons per seat
Number of toilets required	20,440 seats

Actual situation

Total number of toilets built by the Municipality	3,433 seats
Number of non-working toilets	2,746 seats (80%)
Number of working toilets	687 seats (20%)

Toilet deficit
Actual ratio

19,753 seats
1,488 persons per seat



World Bank Sanitation Project target communities three years later:

To the thousands who use this canal-side garbage dump in Dharavi as an open air toilet, all those cool arguments and top-level procedural debates within the Sanitation Project might as well be taking place on the moon, for all the difference they've made to people's lives in this neighborhood.

Sanitation project stand-offs : Mastering the art of constructive waiting ...

And after three years of debate, that World Bank Bombay Sanitation Project is right back where it started. It's been three years now since the city asked the NSDF/MM federations to find sites in Dharavi where communities could design and build toilets, using building materials and infrastructure mains provided by the city (with the World Bank Project's help). The federations did all their homework - sanitary conditions were surveyed and analysed, sites were identified, lists were drawn up, the communities were ready to build toilets. **But nothing happened.**

One of the project's original goals was to make room for local communities to devise their own toilet-building strategies. Instead, what has emerged is a complicated tendering process, which sub-contracts NGOs, and not communities, to do all the work, without any means for transferring ownership of sanitation processes to the communities. Instead of allowing many groups, with many different approaches, to develop a *range of solutions* to Bombay's staggering sanitation problems, the project's bidding process pits different organisations and different approaches competitively against each other, and reduces community participation to a spectator sport.

The NSDF/MM/SPARC team eventually decided to withdraw. This is a story about *constructive waiting*. When the city is ready to allow communities to construct the toilets, the federations are ready to play their part. The problem is, the city will have to change its procedures and learn to plan differently. So while the Titans continue to clash over procedures in the Sanitation Project, millions continue to squat on the road and railway tracks, as they always have done. Huge amounts of money and energy are swallowed up, enthusiasm is extinguished - **all without the creation of a single toilet!**

Another tragedy of this process is that the people whom the sanitation project targets, who are in most desperate need of toilets, are being cut off from benefiting, because they occupy land whose owners will not give permissions to build toilets. The politics of location and permissions are the bad guy here, not community initiative. We can't limit toilets only to communities which the city designates as *legal or authorised*. There is a need to provide *sanitation for all*. The minute you start quibbling about who's eligible for basic services and who's not, you're back to where you started, up to your knees in poop (*unauthorized poop*, mind you).

Keep this idea in mind as you read ahead about the Kanpur Railway Slums. When the Railway Authorities there kept saying "No" to community toilets, the people got around the location issue by building their toilets just outside the settlement, off railway land, on municipal land. This is a good strategy, but it doesn't work in all areas, especially in the middle of large slums, where municipal land may be miles away. Plus, many of the settlements in Bombay that are located on municipal land, where permissions are a snap, already have some toilets. They may need more, but they aren't nearly as badly off as others in non-municipal areas, where there are neither toilets nor hope of ever getting permission to build any.



The inheritor's syndrome :

The NSDF/MM alliance has one big advantage in all this: they will still be here after all the project hoopla has died down. And so will the communities. After all the millions of dollars have been spent and all the consultants have gone home, people will still be needing a place to relieve themselves. And the city will still be needing an efficient system for delivering adequate sanitation to everyone in Mumbai.

Whether the alliance participates in the big Sanitation Project or not, it will continue to engage the State and the Bombay Municipality to explore the federation's simple sanitation paradigm :

Communities manage and maintain the toilets, which they design and build themselves, using capital and service connections provided by the city.

DHARAVI TOILETS

First crack at toilet-building in Bombay :

Dharavi is, in many ways, the symbol and summary of all that is thought to ail Bombay - squalor, overcrowding, chaos, communalism. But if you peel back its admittedly battered outer layer, Dharavi's vitality reveals itself as one of the city's true wonders. Everyone is rushing somewhere, all is in motion - money being made, deals being cut, things being worked out. Children go to school, mothers knead the dough for parathas, marriage feasts go on, small businesses thrive amongst teetering godowns of scrap tin and plastic.

Once the Siberia of slum colonies, at the extreme edge of the city, Dharavi is now one of the city's most vital hubs, both geographically and economically the centre of town. All of Bombay's anatomical lifelines, its great water mains, sewers and electric conduits pass under Dharavi, its major rail networks, highways and dockyards line its boundaries.

Elsewhere, land is reclaimed by tetrapods and venture capitol, and sold off by the square millimetre to the highest bidder. Dharavi is the first tidewater in Bombay to have been reclaimed and developed entirely by poor urban homesteaders. The history of Dharavi is a remarkable story of sustained, piecemeal urban development, carried out by a million individual acts - a stolen brick here, a pocketful of rubble there, a mule-load of garbage for good measure, raising Dharavi, quarter-inch by quarter-inch, out of the brine. Houses sprang up on the fill, roads between the houses, rooms atop the houses, and rooms atop the rooms, until finally there was a city within a city.

The Chambda Bazaar, is one of the oldest, most densely-packed parts of Dharavi, where more than 700,000 people must share 400 working toilets. That means a toilet ratio of 1,750 people to a single toilet seat. The photo at right shows the back side of one of the broken down toilets built by the municipal corporation in Chambda Bazaar, which even goats are smart enough to steer clear of.



First Federation Toilets : Within a sanitation nightmare at Chambda Bazaar

But for all the human energy that has poured into Dharavi over the last century, it is still a long way from being a nice place to live. Crowded beyond imagining, under-watered, under-toileted, narrow laned, double housed, troubled by ethnic, cast and communal tensions. In the inner-most gullies of Dharavi, where scarcely two feet of space separate the fronts of houses, roofs meet overhead, families carry on their lives in tiny rooms made of scraps of packing crates which never see the light of day.

The *Chambda Bazaar* (hide market) is smack in the middle of Dharavi. The tanning of cow and buffalo hides, thought to be an *unclean* process, was traditionally banished to remote parts of Indian cities, far from sensitive Brahmanical noses. The tanneries were some of the first industries set up in Dharavi, in the 19th Century, and brought money, jobs and more informal homesteaders to the area. The wholesale leather markets in Dharavi drew big shoe manufacturers and small-time cobblers from all over India. Although many of the larger tanneries have now grown into multinational companies and moved their operations elsewhere, small-scale tanning and shoe-making continue to be one of Dharavi's entrepreneurial backbones.

Chambda Bazaar is as densely-crowded, and under-serviced as any area in Dharavi. Almost all houses have rooms upstairs, where tenants or branches of extended families live in make-shift lofts of scrap timber and flattened bisquit tins. Water taps and hand-pumps are scarce - a single pump might be shared by upwards of five hundred people.

TOILETS: There are several blocks of toilets in the *Chambda Bazaar* area, some built by the city and others by service organisations. But most have no water for flushing or keeping them clean, nobody maintains them, and most have deteriorated into stinky places nobody goes near. The *aqua-privy* toilets which the city generally builds in slum areas, require a hefty and regular supply of water for their anaerobic septic-tank system to work. When there isn't enough water, as in Dharavi, the tanks get blocked with sewage that can't drain off, they crack, overflow and pollute the surrounding areas.



Since *toilets* are out, the only places left to squat are along the drainage *nalas* that weave through Dharavi, whose banks and margins have become enormous, open-air toilets for a hundred thousand people, clouded with flies, crows and vultures. Some areas are so thick with excrement and gar-bage that people carry two bricks with them, to squat on while they relieve themselves. If these kinds of sanitary conditions are preferable to toilets, it's not hard to imagine how bad the *toilets* are.

Chambda Bazaar Toilet

Many of the federation's toilet design ideas get their first crack at Dharavi's Chambda Bazaar . . .

A very tight, wedge-shaped site was found to build the toilets, which had the advantage of being just a few metres away from an existing sewer line. Chambda Bazaar's 7-seater toilet layout evolved from discussions in the community, and was sketched out right on the site. The design included three men's and four women's toilets, an enclosed water tank and four children's latrines. Several things about the toilet's design set it apart from other toilets built in the area:

■ **Children's latrine** : Where toilets are heavily used and long queues form at certain times of the day, children are often shunted out of the way and forced to defecate in the lane or gutters. Many smaller kids feel safer going outside because they are afraid of falling into the deep latrines. The NSDF/MM federations felt the needs of children should be part of the toilet design, so a special outdoor "children's latrine" was included in the Chambda Bazaar. The design was simple: four special, small-sized "pour-flush" latrine pans were laid in a row, back to front, draining into a single four-inch sewage pipe underneath, with bars on each side for kids to hold onto. Since the children's latrines are in the open, adjacent to the women's toilet enclosure, adults don't use them, and mothers can keep an eye on them. Since the latrine pans are tiny, and, more importantly, the drains inside are tiny, kids aren't afraid to use them.

■ **Water tank inside toilet enclosure** : People who must deal with bad toilets know that water supply can make or break a toilet, and know what happens when cities build toilets but are casual about water supply to go with them. A depend-able, constant supply of water is one of the most crucial elements if a common toilet is to be well used, well maintained and remain clean. Because competition for water in Dharavi is so fierce, NSDF/MM decided to build a special water tank, secure within the women's toilet enclosure, and lockable, where it could be kept only for the toilets.

■ Community process:

The Chambda Bazaar toilets were built by women and men from the NSDF/MM federation in Dharavi and other parts of the city. The construction process was the occasion for much training and the subject of much discussion, within the local community, in other slums around Bombay and in government circles. But even with all the help and excitement, there were some big problems. Dharavi is irresistible material for bleeding hearts, and has been the target for many *good works*, over the years. Charities, NGOs, government programmes and international do-gooders queue up for their chance to *improve* Dharavi. It's

not surprising that its poor communities end up waiting passively for their development *goodies*. Some NSDF/MM leaders felt that people in Chambda Bazaar were not committed to the toilet's construction and because of this, were reluctant to participate, and sat on the sidelines and watched, saw the project as another give-away from an outside group. There were quarrels and stand-offs throughout the construction process. And there was a significant, intentional push behind the project, by the federation, which saw the need for *built examples* to fuel the development of community-control over sanitation in informal settlements. *Dharavi was an important first and something of a lab mouse.*

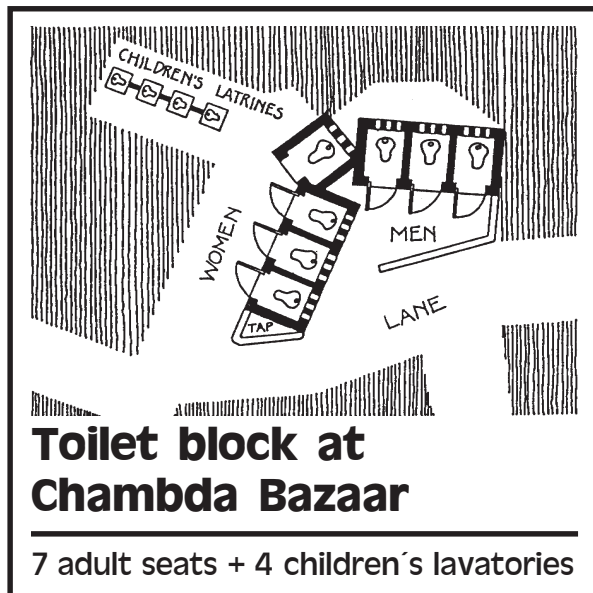


All but the water. . .

The toilets were finished, sewer-connected, and all set to go, but for the *water supply*. Many people in the community, still skeptical, were unwilling to go the final round of getting together and petitioning the city for a water connection. The NSDF/MM leadership, for their part, were reluctant to negotiate this final step on behalf of the community, felt it was important for the community to "claim" the toilets by pursuing this last hurdle themselves.

While the stand-off over the water-connection dragged on, the toilets were vandalized, garbage was dumped into the pans and some of the doors were broken. Skeptics claimed the pipes were laid at the wrong angle and would back up. A year later, someone extended their house and swallowed up the children's latrines.

The toilets are still there, though a bit battered, and still *potentially* useable. There is still no water connection, though, and some of the women nearby keep locks on the toilet stalls that still have doors, to keep them from being wrecked any further.



A happy-ish ending:

The story of the Dharavi toilets has a not too unhappy ending, though. They may be incomplete and a bit battered, but the toilets in Chambda Bazaar set a big ball rolling, and laid the groundwork for many subsequent, and more successful sanitation projects in Bombay, and other Indian cities. They were a sometimes painful but necessary first step in a process of experimentation and development of solutions.

P. D'MELO ROAD

Pavement dwellers and toilets :

Since it was first formed in 1983, the Mahila Milan has focussed a lot of its work on pavement-dwellers in Bombay. There are some 200,000 people living in pavement settlements round Bombay, many of them in the southern parts of the city, in Byculla, where the Mahila Milan was begun.

Of all the types of informal settlements, these are the most vulnerable, and in them live the poorest of the poor. In a landmark case in the 1980s, the Supreme Court upheld the city's right to evict families from their dwellings on pavements in Bombay. Even though many people have lived on the pavements all their lives, and many pavement settlements are decades old, they are not yet considered legitimate.

Besides the threat of eviction, the danger of living within inches of passing cars, the indignity of having no privacy, there is also the problem of toilets. Mahila Milan members in the Byculla pavement settlements pay between thirty and a hundred rupees a month for the right to use a private toilet in the shops or chawls along their streets. Multiply that times a family of seven and you have a full wage - more than most can afford.



City's first toilet-building contract to pavement dwellers :

P D'Melo Road is a busy thoroughfare just behind the Victoria Terminus. It runs along some of Bombay's oldest docks and shipping yards and is one of the most intensely bustling parts of an already bustling city. On the East side of the road are warehouses, entrance gates to the dockyards and big transport lorries parked end-to-end. The other side is lined with an old pavement settlement of about 200 houses, almost all of them Mahila Milan members. The P. D'Melo Road community has no water taps. Through their Mahila Milan collective, the community got ration cards and persuaded the city to bring water in tankers.

The next problem was the lack of toilets. Down the road and around the corner, near the back of Victoria Terminus, there is a small public toilet run by the taximen's association, and some families work out arrangements with the taxi men to use this toilet for a fee. The rest must squat in the shadows behind the wheels of the big lorries.

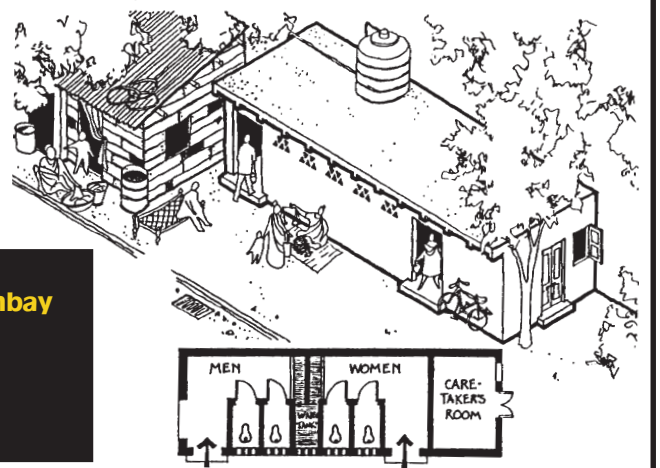
The toilet that made history: When the Mahila Milan and NSDF decided to build a toilet in P. D'Melo Road, their project made history in Bombay in more than one way. This was the first time the city of Bombay awarded a contract to construct a municipal toilet, using municipal funds, to a federation of poor people. Plus, it was the first time a public toilet was built to specifically serve a *particular pavement community*, and not only the *general public*.

A First for the city of Bombay: The roadside toilet block at P. D'Melo Road made history as the first case of a formal city contract for building a public toilet being awarded to the pavement dwellers who will use it.

Toilet block at P.D'Melo Road, Bombay

- Completed 1993
- 4 seats (2 women, 2 men)
- Water storage tank inside
- Caretaker's room
- Roof deck for night shelter

Mahila Milan / NSDF / SPARC



The toilet site : A narrow strip of open land on the west side of the road, carved right out of the rocky slope behind and used as a garbage dump, was chosen as the site. A steep wall of rock behind the site provided the toilets with a ready-made back wall, and allowed the community to cut brick and cement costs by letting this natural, cave-like surface be the interior wall of the toilet's passage.

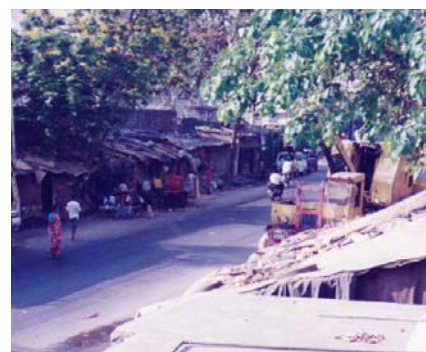
A young architect with SPARC drafted up a simple plan and submitted it for perusal to some experienced and highly-critical mahilas. Makhchand's first plan involved some pre-fabricated concrete wall panels, which everybody felt would complicate things unnecessarily and nixed these in favour of plain old ordinary brick masonry, which everybody could understand and help out with. But the plan's overall layout of toilets, inside water tank, caretaker's room at the side and night shelter for street kids up above got the thumbs up and became the basis for the final building.

Professional "Help"

It is interesting that with this toilet, which is the only one so far to involve any assistance from a "professional", it was the women's clear understanding of people's capacities and common sense about construction that determined the toilet's form. The architect, in this case, made suggestions and helped make formal drawings for sanctions, but didn't *control* the design process.



Making laadis for the roof slab: Here's the word from Samina about the construction process at P. D'Melo Road: "We built the toilets, all of us together - Mahila Milan and Sadak Chaap - the only outside help was from a mason. We would help mix materials and keep supplying him with mortar so he would work faster. I would not let him be idle."



Bad news from underground at the bitter end . . .

The only thing left was to lay the pipe connecting the toilet to the sewer main, which was across the street. That proved to be a crossing even Moses himself couldn't have managed. Between the shining toilet and that sewer runs a massive cable from Tata Electric, protected by a sophisticated computer-surveillance system. If you dig down and hit this thing, just bump it, or even TALK about it over a cup of chai down the street, sirens go off somewhere in the Mantralaya, and half the Indian army comes out in riot gear to defend the national security.

Nobody knew this until the toilets were finished and that pipe was all that was left. Maybe if they'd known, the toilets could have been built on a higher plinth, so that the pipe would run just under the road surface. Maybe then it would have cleared the cable without a problem and could drop back down in the chamber at the other side. No solution has yet been found which doesn't involve starting from scratch.

Even so . . .

Even after three years and still not being hooked up, the toilet at P.D'Melo Road is a point of great pride - within the community, and among all the NSDF/MM federations. While efforts to resolve the sewer connection problem continue, the toilet is kept locked and carefully main-tained. There's an up-beat sense about it - people are proud of what they've built, and sure that eventually this glitch will be ironed out and their toilet will be back in commission. *And it will!*

P. D'Melo Road toilet

Three weeks was all it took to build the toilet, and from start to finish, the mood on the site was electric. Television and newspaper reporters came to cover "Bombay's First Community Built City Toilet." An American producer was there to do a story on toilets and footpath settlements for National Public Radio. Visitors from around the city and around the world stopped in daily. There was a sense of important things happening. The chai-wallah's business down the street has never been so good.

The construction was supervised by three Mahila Milan members from Dindoshi, who took time off from their own house-building project at the Adarshnagar Society to come help build the toilets. All the labour - carrying water, mixing cement, soaking bricks, guarding the construction materials at night - was provided by the enthusiastic P. D'Melo pavement community, Mahila Milan and street kids from the Sadak Chaap. Only one skilled mason was involved, and he also lives in the P. D'Melo Road community.

The two women's and two men's toilets are entered from opposite ends of the structure, divided in the middle by a shared water tank. The water tank and tap were specifically located inside the toilet, to make sure that the water is available for flushing and cleaning of the toilets, and doesn't get used up for outside purposes. These two points - separation of men's and women's toilets and "supervised" water supply - became important design strategies in many of the subsequent toilets. The building is plastered inside and out. Cost-saving brickwork grilles bring in daylight and ventilation and add a distinguishing frieze of pattern to the building's street facade.

Beams and laadis :

The roof slab at P. D'Melo Road, though, did involve some *fancy stuff*. The original plan was to use space up on the roof to build a night shelter for street children. For that reason, a flat concrete floor slab was necessary, rather than a simpler sheet-roofing. The toilet's roof is made of pre-fabricated beam and funicular shell elements which the women call *laadis*. This is a structurally sophisticated spanning system which the Mahila Milan had seen in Kerala and decided to try out for making loft slabs in their own house building projects. They trained themselves to make the laadis and were then beginning to use them at a large scale in housing projects at Mankurd and Dindoshi, and in Bangalore.

The P. D'Melo toilet's roof slab required fourteen precast beams and sixty "laadis". All these were made on the site, in the dusty, narrow margin between the toilets and the roaring traffic. The process of making these laadis provided the occasion to train lots of new people in construction skills. Samina, one of the senior Mahila Milan members from Byculla, was in charge of the laadis, and got help from a team of street children from the Sadak Chaap federation. Visitors from federations in Bangalore, Kanpur, Madras and Pune came to watch and help out. Delegations of slum dwellers from South Africa and Cambodia made visits to P. D'Melo Road, and everybody had a turn with the trowel, gamela and shovel.

KANPUR TOILETS

A city of migrants:

Kanpur is one of the great manufacturing towns of Northern India. In the 19th Century, Kanpur grew from a village on the Ganges into a major industrial centre, with cotton mills and tanneries its major sectors. To this day, the city seems frozen in that darkened, nineteenth-century stage of industrialisation. Its monuments are those old mills, whose sawtooth roof-lines and black smokestacks loom over the city, casting long shadows across the ragged settlements which creep along the cracks between their high walls.

Kanpur, as hungry for cheap labour as any Indian city, continues to draw large numbers of poor migrants into its sooty fold. They come from surrounding districts in Uttar Pradesh and from all over northern India, by the thousands, looking for work. Most do find jobs but don't find affordable places to live and are forced to settle on whatever bits of vacant land they can find. In these settlements, the life of half the city goes on without access to the most basic services - water, lights, toilets or drainage. It's the same old story.

Without toilets . . .

Lack of toilets always hits women hardest. Women in Sarvodaya Nagar had to squat on the railway tracks after dark. But as one said, "When there's an emergency and we have to go, we have no choice but to put our heads down and sit on the road." There are ugly stories of men throwing water and taking photos as they drive by in cars. Rupa, an 11-year old girl who spoke at the inauguration of the Sarvodaya Nagar toilet, told how frightened she was of having to urinate, because sometimes boys would sneak up and pull up her dress, exposing her and making her feel ashamed.

Out from behind the walls: *There is a tradition in Uttar Pradesh of building walled courtyards ("aangens") in front of houses, even as in this tiny house in the Sangam railway slum. Much of women's lives still goes on behind these high walls. Through these toilet projects, more and more women in Kanpur are coming out from their aangens, out from behind their veils, and taking places of central involvement in their own communities.*



Slums on railway land : Conflicting ideas about what is temporary and what is not . . .

There is an extensive network of railway spur lines which thread through the central industrial quarters of Kanpur. Once, these lines were the chief conduits for goods coming in and out of the mills, but now, because of changing transport patterns and fluctuating fortunes of the mills themselves, many of these spur lines are no longer in use. The narrow sleeves of open land along these tracks are prime frontier for urban homesteaders, and most are now filled with long-established slums.

The land along these defunct tracks still belongs to the Railways, though. Although the tracks are no longer used, the Railways have taken a hard line on the slums in these areas, allowing settlements to stay on "temporarily", but strictly forbidding any improvements to water supply, toilets, electricity, paving or drainage within them. As a result, living conditions in these railway slums are among the worst in the city. The Mahila Milan and Kanpur Slum Dwellers Federation have been unable to soften the Railway's line on forbidding improvements (including toilets) *inside* railway slums. When one renegade toilet was quietly built at Burma Shell a few years back, the authorities swept down immediately and levelled it.

The Railway's position reflects an attitude towards slums we see again and again, throughout Indian officialdom: they allow people to stay (or at least slow down the evictions) but do not allow them to improve their conditions in any significant way. Built into this attitude is the conviction that any improvement to houses, toilets or infrastructural facilities is a step towards permanence and is therefore to be forbidden. *Temporary* is the desirable quality for official bodies, but in practice, *temporary* doesn't mean temporary at all, but means filth, lack of sanitation, unsafe construction, disease, and degraded living environments. The sad fact is that settlements go on being *temporary* for decades and decades. *Nowhere in urban India have degraded living conditions and lack of services made slums any more or less permanent, only more awful to live in.* The railways, of course, don't see it that way.

MIGRANT mentality and ENTITLEMENT mentality :

The conviction that that you are *entitled* to certain things can be an impediment in a situation where you have to break rules to get what you need. Poor migrants, who know nobody's ever going to give them *anything*, are often more ready to take responsibility for meeting their own needs, in whatever way they can, and to hell with rules. That's what Jockin calls the *migrant mentality*. In some cities, on the other hand, people in poor settlements have a lot more confidence in the "government as provider" than their counterparts in Uttar Pradesh. As a consequence, they can be very pushy about demanding what they feel they are *entitled* to, but slow to take charge themselves. That is the *entitlement mentality*. The formulas behind these disparate responses are complicated, but without a doubt, an energetic *migrant mentality* has helped the Kanpur federations to go full steam ahead with making water supply and toilets a reality in their own settlements.

Kanpur's first step: survey

Several people who are now part of the *Kanpur Slum Dwellers Federation* (KSDF) first linked up with the Bombay MM/NSDF/SPARC alliance in 1990. Groups from slums in Kanpur travelled to Bombay several times, watched, met people, took part in meetings and absorbed the kind of training processes that they would eventually take back home with them. After joining the federation, the group set out holding meetings in Kanpur settlements, setting up savings groups, planning things and hosting teams of trainers from Bombay. Gradually, women from many of the settlements began joining in, forming their own collectives, and developing Mahila Milan as a partner organisation for the KSDF, along the lines of Bombay's MM/NSDF alliance.

Every time teams from Kanpur were in Bombay, they watched the pavement dwellers and Mahila Milan training themselves to build houses, construct laadis and design toilets. They were around when construction began on the city's first municipality-contracted, community-built toilet at P. D'Melo Road. All this exposure, at a time when a lot of work on sanitation was happening in Bombay, helped set the pace and excitement for Kanpur's remarkable *toilets-to-come*.



New dancing partners in Kanpur :

The Kanpur toilet-building process has been much watched by the City and State Governments. It's a good match: a city willing to allow, and an energetic federation willing to do.

Nobody who visits Kanpur can miss the deeply-rutted thoroughfares, the illegal electric connections showering off every light pole, the crumbling buildings, the absence of schools, the over-all texture of decay. The government peers out from the rubble and seems at times at a loss where to begin.

The U.P. Government and the Kanpur Municipal Corporation are, however, official bodies with a refreshing lack of illusions about their incapacities. Their increasing willingness to support the KSDF/MM initiatives in Kanpur and Lucknow springs partly from a pragmatic awareness of their own inability to deliver basic services to half the city.

Being a mill-town, Kanpur has always had large numbers of low wage-earning workers, a history of labour unions and a political atmosphere at least *somewhat* cognisant of the needs of the poor. These circumstances have not made the city any better for the poor to live in, but *have* helped grease the wheels of the emerging alliance between poor communities and city.

The Municipality's attitude towards the toilet project has shown *some* commitment to community managed sanitation, by sanctioning toilets on city land, and pledging to contribute to toilet costs. But it has dragged its feet when it comes to following up this commitment with funds, and restricted the use of development funds to only recognized slums, *which account for less than a third of Kanpur's slums*.

A few numbers from the 1993 Kanpur survey :

Population

- Number of slums **228 settlements**
- Total number of houses **70,966 houses**
- Total population **471,156 people**

Settlement history

- Before 1947 **104 settlements (46%)**
- After 1947 **124 settlements (54%)**

Water supply

- Adequate **56 settlements (24%)**
- Inadequate **118 settlements (52%)**
- No water supply at all **54 settlements (24%)**

Toilets

- Adequate **29 settlements (13%)**
- Inadequate **47 settlements (21%)**
- No toilets at all **152 settlements (66%)**

Kanpur's first task was an enumeration of the city's slums. They began by looking over all the federation's enumerations in other cities and developed a questionnaire which explored issues they felt were important in Kanpur. At the end of an intense six-months of work, they put together all the information and drew up a report. Not surprisingly, water supply, toilets and electricity, in that order, were at the top of the problems list.

When their enumeration was over, the Kanpur Mahila Milan and Slum Dwellers Federation decided it was time to start working on toilets. Their toilet building programme was launched at Sangam Talkies Railway settlement, where the first community-designed and community-built toilets provided both training and demonstration project, and a model for many to follow.



Nowhere in urban India have degraded living conditions or lack of basic services made slums any more or any less permanent, only more awful to live in.

KANPUR TOILETS

Kanpur's first crack :

The community at Sangam Talkies was first settled in the mid-1960s. Its 165 houses are strung along the portion of defunct railway tracks between the Fadal Ganj Road and the Tata Factory. Although services of any sort are absent in Sangam, the community was clear about toilets being their highest priority. The Sangam toilets were the first to be constructed by the Kanpur Slum Dwellers Federation and Mahila Milan, and represented a breakthrough in many ways for the federations and for the city of Kanpur.

The toilets were built on a small patch of land owned by the municipal corporation, sandwiched between the end of the settlement and the main road, next to the Sangam Cinema, which gives the community its name. This land had been used as a garbage dump, an established "dirty place". The city was more than willing to give an NOC for a toilet on the site.

Women :

At first, women at meetings in Kanpur kept themselves hidden within their *gunghhats* (with their sarees hiding their faces). When the Bombay Mahila Milan came to help build the first toilets, they asked how women could hide their faces at meetings but squat next to men to defecate? To them veils weren't for hiding behind but for mopping away honest sweat. When people saw these poor women laying bricks, mixing cement and arguing about pipe sizes, it created a real stir. The women still held back, but not for long. A few months later, when the Sarvodaya toilets were going up, it was women from Kanpur who'd taken over construction.

These carefully-maintained, community-built toilets at Sangam Talkies are so intensely used that the "pay-and-use" fund has grown and given the people here the idea of using the surplus to build another floor of toilets above these ones.



Sangam Talkies toilet

With the help of the Bombay team, the layout of the ten-seater toilet block was worked out right on the ground. No drawings on paper were prepared until long after the toilet had been finished. A big crowd of people gathered around the area, and with only a tape measurer and handfuls of sand to sketch out rough lines on the ground, the fundamental details of the plan were discussed and decided upon. Once the basic plan was settled, to everybody's satisfaction, the sand-lines were replaced by stakes and twine, and the digging for the foundation began immediately. In two and a half weeks, the Sangam toilet was in full operation.

The toilet's roof was originally built with inexpensive timber and roofing sheets, but the community later replaced it with a stout reinforced concrete slab, using the inexpensive brick "filler slab" system that is common in Kanpur. The people felt a concrete slab roof was an important detail for giving the structure a feeling of permanence, and for making a place for water tanks up on top.

Eventually, the Sangam community wants to build more toilets. Given the cramped space in the settlement, there is discussion on about building a second story of toilets, right up on top of the first ten! Since the plumbing and floor slab are ready, it wouldn't be difficult or expensive to "go up" with another ten toilets. The "pay and use" fund is growing, and will eventually be enough to finance Kanpur's first *penthouse loos*!

■ Getting around official non-cooperation with off-site toilets:

Given the Railway's rigid stand on improvements, the railway communities adopted a strategy of side-stepping the railway veto and finding sites for their toilets off-site, on adjacent municipal land, for which permissions were forthcoming. The rail lines are crossed periodically by municipal roads, and these intersections provided the nearest and most practical sites for toilets. These main-road locations already had sewer lines running underneath, and offered the additional advantage of lower sewer piping costs.

■ Layout for heavy use:

In the morning hours, when toilet use is heaviest, the toilet's layout with two back-to-back lines of toilets, separation of mens and women's toilets and narrow passages is a good crowd-organiser. Two queues form, leading right out of the enclosure, while inside, one person waits outside of each stall. When that person goes in, the next in the queue takes her place.

■ The "pay and use" approach:

The Sangam toilet is managed by the community on a pay-and-use basis, with a two-tier membership system: 10 Rupees per month per family for community members and 1 Rupee per use for outsiders. The economics of this system have made it possible to employ a woman full time to clean the stalls, keep the water tank filled, collect fees from outsiders and generally keep an eye on things. Use of Sangam's clean toilets by outsiders has been so heavy, in fact, that there is now a handsome surplus fund for repairs and future improvements.

Shiv Katra toilet

Ten toilets are just one part of this shady complex of community places . . .

Shiv Katra is a large slum of about 1,200 houses out at the edge of Kanpur, just off the Grand Trunk Highway to Delhi, an unusual mix of well-off and extremely poor migrants. Some areas of Shiv Katra look like middle-class colonies, with two-story houses behind high walls. But at the back, the lanes narrow and darken, the houses get smaller, and conditions deteriorate. The KMC has built brick gutters and installed a few hand pumps in Shiv Katra, but no toilets. People were forced to squat on military land nearby or hike three kilometres to a public toilet in the Lal Bungalow area.

The toilet block at Shiv Katra, the federation's third, was built within the compound of an overhead water tank, on land owned by the Kanpur Water Authority (Jal Sanstan). After quite a struggle, the community's 600-strong Mahila Milan collective was able to leverage enough land for a ten-seater toilet block, plus a Mahila Milan office, caretaker's room and courtyard for outdoor meetings in the deep shade of huge old tamarind trees. The toilet is run on the same *pay-and-use* system as the others, and the fund is used to pay a woman who lives across the way to look after the toilets and fill the water tank.

■ Toilets don't have to be dirty places:

The amazing thing about Shiv Katra is the way the toilet and community spaces work together. The toilets are kept immaculately clean, with freshly white-washed walls and blue enamelled doors and trim. They are vivid proof of the NSDF/MM notion that toilets don't have to be *dirty places*. Central locations and good maintenance have made all the Kanpur toilets heavily-used by people from *outside* the communities - mill-workers, head-loaders, cycle rickshaw-pullers and layabouts. They are alive with activity throughout the day. Tea stalls and pan shops have sprung up around them, attracting still larger assemblages of people, vehicles and businesses. This almost *unimaginable* combination of public toilets and attractive places to hang out has come as a kind of revelation to the communities in Kanpur. *Make a clean toilet, they've realized, and the world will beat a path to your door.*

■ Uninterrupted water supply:

Women in the Kanpur Mahila Milan understood that a guaranteed, uninterrupted source of water is one of the most essential elements in managing a successful common toilet. They had been to Bombay and seen the kind of sanitation nightmares created in Dharavi and Dindoshi when toilets were built without water supply. Accordingly, the toilet at Shiv Katra, and all the others in Railway slums, were carefully planned to have *three sources of water*, to ensure a constant supply of water, twenty-four hours a day :

- **Municipal tap**, running on city's schedule only a few hours a day, morning and evening.
- **Hand pump** can be used when municipal supply isn't available, as a supplementary source all day, for washing, bathing and toilet.
- **Water storage tank** inside toilet enclosure, especially for toilet use, kept full by the caretaker, and "protected" from being used up for other tasks.

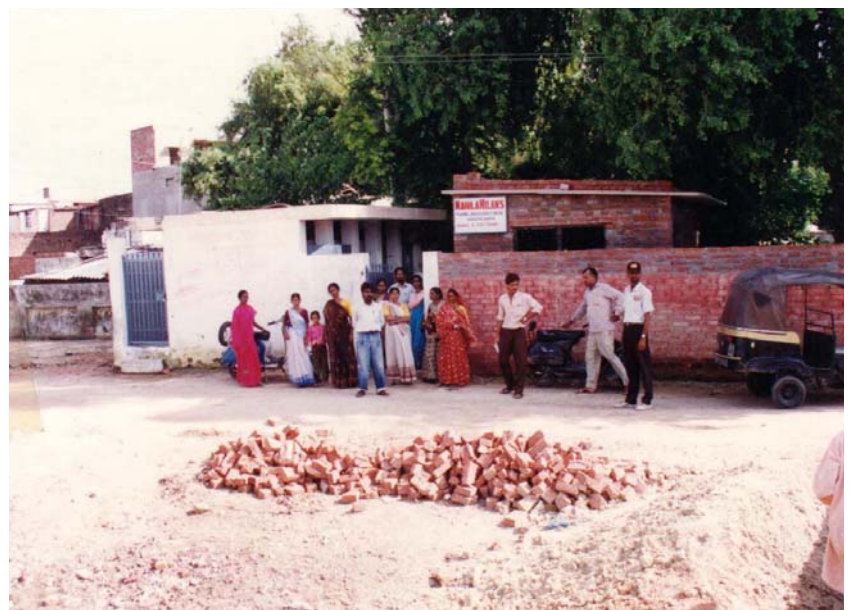
In practice, the water sources *outside* the toilet enclosures provide more than ample water for the toilet, and bring into underserved communities much-needed additional sources of water for drinking, bathing and washing clothes and vessels. In these ways, a toilet facility like this, when you look at it as an investment in basic services, pays itself off with *double benefits* to a community by ensuring maximum use, far beyond its specific purpose.



The next steps in Kanpur :

Three more toilet blocks are planned, sanctioned and about to go into construction - in two peripheral slums, Gangaganj and Saidulapur, and in another railway settlement at Mariampura. Talk in the communities is filled with plans. The mood is confident - like a shopper who's got money in her pocket, but is going to take her time deciding exactly what to buy.

In Sangam and Sarvodaya, they've got water taps, they've built toilets, now they want to lay footpaths and drainage channels along the railway tracks in front of their houses. This is going to involve confrontations with the Railway Authorities, who are not going to like the idea, and with the City, who is going to have to be persuaded that this is a reasonable way of using UBSP money. In the mean time, the communities are saving, discussing, preparing cost estimates to help them mobilize funds. There is also talk of starting a little community school, and a health post.



BANGALORE TOILETS

South India's latest, snazziest boomtown . . .

Bangalore is a city of broad avenues lined with old trees. Its handsome public buildings, built substantially in the classical style out of local granite, suggest a government leadership that is confident, paternal and generous.

For those who are enjoying the fruits of the city's phenomenal growth in recent years, Bangalore is indeed welcoming and provident. For them, it is a city of hip, well-educated, high-earning professionals who flock to Bangalore for jobs in the high-tech industries, for the cool mountain climate, for the pubs and night-life, for the perks of living in the top-most city on the Indian urban popularity charts just now. Bangalore is the happening city and everybody wants to be there.

But (and there's always a but), Bangalore has got problems - BIG problems. Until fairly recently, it was a quiet, south Indian provincial capitol, set up by the British, who came for the cool climate as much as anything. The city is now a reluctant newcomer to the Indian "mega-cities" category.

Where cities like Bombay or Calcutta have long grown accustomed to being enormous and unwieldy conglomerations of humanity, Bangalore is a little bewildered by the by-products of its phenomenal growth and popularity in recent decades. The streets are choked with traffic, much of the city's famous greenery is being cut down to widen roads and make room for more traffic. The policemen at intersections wear gas masks for the pollution. And all the city echoes with the collective lament, "How lovely it used to be!"

What poor people? Where? For some, Bangalore is not so welcoming . . .

The formula for urban prosperity is complicated, but it nearly always relies on the availability of a hefty quantity of cheap labour - the cheap labour that builds, makes, serves, carries and supports the creation of wealth in cities. It's no different in Bangalore, where hundreds of thousands of people have been drawn to the city for other reasons than pubs and micro-chips. For them, the city is a lot less welcoming, but they come anyway, looking for work and finding it. What they don't find is decent, affordable housing, and make do as best they can in Bangalore's slum settlements, where the evidence of all this boom and prosperity seems very far away.

Half the population of Bangalore now lives in 450 slums, spread over the city's area. Most of these settlements have no amenities of any sort, and in them, people must survive without water supply, toilets, drainage, roads, pathways, schools, healthcare or electricity. As in other cities, urban planners and decision-makers in Bangalore are reluctant to make connections between these poor families and the city's economic vitality, to acknowledge that the city depends on them as much as they depend on the city, that their contribution to the city entitles them to a share of the benefits of that vitality. Informal settlements are more likely to be viewed as evidence of lawlessness and defiance of civic norms, than as the vital support systems for the city they are.

There is little evidence in Bangalore slums of any sort of state intervention. Most are left entirely to their own devices. When the city has tried to do something, those efforts, mostly in the slum-clearance and resettlement categories, have been disastrous. Bangalore's outer edges are dotted with enormous resettlement colonies set up by the Slum Clearance Board over the past twenty years, where tens of thousands of poor families, evicted from different parts of the city for different reasons, have been dumped and told to start anew. Although these colonies have been "planned", presumably by responsible professionals, Oops! somebody forgot the water supply, sanitation and drainage. Conditions in these huge resettlement colonies are often far, far worse than in older and more crowded slums towards the centre of the city.

One of Bangalore's most alarming sights is an abandoned HUDCO housing project, in the vast Chandra Layout resettlement colony. The high-profile, architect-designed colony of neat 2-story blocks was launched by the Chief Minister fifteen years ago, and offered one-room flats for families in the "EWS" category. Something went terribly wrong, though, and within a year of completion, nearly all the buildings had collapsed in jagged heaps of concrete and snagged steel bars, as though there'd been an earthquake. Most were never occupied. Some say the contractors used mud instead of cement, or cheated on quantities of steel reinforcing. Only a few of the blocks are still partially standing, and inside of these, a few desperate families camp out, without electricity, water or sewage, waiting for the day this disaster will collapse around them.

Nearly half the population of Bangalore lives in the 450 slums which are spread across the city.

For most of them, who must live without tenure, water supply, toilets, drainage or electricity, in conditions that are as dangerous as they are foul, the city is not quite so welcoming.





The excrement from a million bowels flows through this open sewage nala in Vinobanagar Slum, in central Bangalore, every day. Breaches in the nala's raised walls send raw sewage flowing directly into the settlement's narrow lanes, inches from where the spices are being ground for the night's sambar.

What's underground?

Less than you'd think for such a big metropolis . . .

In no area of urban planning has Bangalore fallen more behind its explosive growth than in infrastructure. The large tasks of extending water, drainage and sewerage grids over wider areas of the city have stagnated, while the city's economic vitality has flourished.

Open nalas for drainage and sewage :

In Bangalore, there is an extensive system of drainage nalas which act for much of the city as open sewers, and predate the city's skeleton system of modern sewage-disposal, which actually receives only a small percentage of the city's raw sewage. Toilets and raw sewage outlets from residential and institutional buildings in all parts of the city drain directly into these nalas, untreated, and then into the rivers, increasing pollution to lethal levels. Since sewers do not yet reach much of the city's new and older areas, these nalas are the de-facto and less-than-perfect sewage system. Of the very few public toilets the city government has built around the city, most are built at the edge of these nalas, and drain their soil directly into them, without any sort of treatment.

In this context, there is certainly room for some "self-contained" toilet and sewerage technologies, in places where the sewer lines don't reach and centralised sewage-treatment is not available. But many argue that there is no reason why toilets in the middle of a huge metropolis like Bangalore should be treating their own waste, using technologies designed for remote villages! Bangalore is not a village. Often, these on-site, alternative sewage treatment systems cost more money, are more difficult to manage and less efficient in the long run than centralised, city-wide sewage collection and treatment. It's much easier and cheaper to run a pipe to the sewer line, than to dig soak pits and construct elaborate septic tanks, and arrange for all the cleaning and extra maintenance such systems require.

Dealing with less-than-perfect conditions :

But it is important to be pragmatic. Unfortunately, there are still vast quantities of land and segments of the urban population in cities like Bangalore which the city sewer and storm-water drainage grids do not reach, where direct sewer connections are still a mile and a dream away. The question is, does employing alternative, self-contained, on-site waste-disposal systems take the pressure off cities to extend their infrastructure mains?

The *Bangalore District Mahila Milan* and *Karnataka Slum Dwellers Federation* take the working position that extension of infrastructure grids and basic services *to include everyone, rich and poor*, is good for the city and good for the poor. This is a big task, something only the city can handle. But as a means of getting communities involved in dealing with sanitation in their own settlements, it's important to jump in and work with imperfect situations, rather than wait for ideal situations to be created by the city. That means building toilets that can work now, and not waiting around for sewer lines to reach everywhere. In the community-managed toilet projects built in Bangalore, a range of sanitation solutions are being tested which deal realistically with *imperfect situations*. A few of these are presented in the following two pages.

Setting the stage for the toilets:

The Bangalore Mahila Milan and Karnataka Slum Dwellers Federation have been active since 1988. Since then, several improvement initiatives in Bangalore slum communities have begun. Not all these projects have reached their conclusion, but have begun to offer slumdwellers and decision-makers in the city a vision of something better. Here is one initiative that has become a milestone for the notion that poor people can take charge of their own redevelopment.

Priyadarshini, a small slum of 30 houses in Okalipu-ram, has struggled for years to legitimise its settlement and rebuild its houses. The struggle has involved years of saving for new houses, developing house designs which the people can afford and build themselves, planning a new layout which allows each family houses of 180 square feet with a loft, winning official permission to rebuild their houses, obtaining bank loans and forming a cooperative society.

But sometimes, what seems the most sensible and harmless thing to do, can be the most political volatile. By taking charge of their own lives and settlement, the women in Priyadarshini have stirred up a hornet's nest of trouble: neighbors hostile to the idea of a slum near their houses being *legitimised*, confrontations with police and city officials, interference by politicians, riots, court cases, stay-orders. You name the poison and Priyadarshini's tasted it. But the women persisted, and are now building houses. People from all over Bangalore and from around India have visited Priyadarshini, are acquainted with the kind of grit and energy that have helped these women transform impossibilities into victories.



BANGALORE TOILETS

Sanitation solutions worked out for imperfect situations :

Over the past three years, communities in Bangalore have built 37 toilets in four settlements. Another 112 are planned in five other settlements. Here we take a closer look at two of the toilet projects. The first is a modest 4-seater toilet in Basha Compound, built with its own simple sewage treatment system in a location where sewer lines were not available, but a drainage nala was. The second is a much larger 10-seater toilet built at Doddigunte, and connected by a very long and very troublesome pipe to the city sewer mains.



Bangalore is famous for its sandalwood incense sticks, but not so famous for the thousands of women who earn their living by rolling them, on a piece-work basis. These women in Priyadarshini Society roll agarbattis from morning to night, and are paid six rupees for a thousand sticks, or about 15 rupees for a long day's work.

This modest little toilet block won't win any prizes for hi-tech sanitation, but to the people in Basha Compound, it's a wonder. They designed it, they built it, it's clean, it works. That's all that matters.



Basha Compound toilet

There are only thirty houses in the tiny Basha Compound settlement, clustered around an old well, which provides ample water supply. A drainage nala at the back of the settlement, and thickets of greenery nearby, used to provide the only places for squatting. But since strangers came off the main road to use these bushes, many women were afraid to go there. The site for the new toilets was carefully chosen to meet the community's three clearly-articulated criteria:

- It should be on city and not private land, so permissions would be less problem.
- It should be a fair distance from houses, for bad smells and flies.
- It should be close to the nala, to avoid long runs of costly drainage pipes.

The four toilet stalls built at Basha Compound have simple plastered brick walls, sheet roofing, and inexpensive doors of galvanized metal nailed to light timber frames. Since the toilets are located in a secluded corner of the settlement, people decided to avoid the extra expense of building a privacy wall for the time being. The four "pour-flush" latrines drain into a single 4-inch pipe, under the pathway, in front of the stalls. Small inspection chambers at all four pipe junctions make it easy to clean out any blockages. From there, the pipe goes downhill and drains into a small, brick-lined soak pit. The partially treated soil from this pit then drains into the nala.

Variations on a simple theme :

*An interesting feature of the toilets at Basha Compound is that the latrines inside face **sideways** instead of **outwards**, as in most of the other Bangalore toilets. People here in the community felt exposed with outward-facing seats, and less vulnerable if they could be sitting sideways, inside the stalls. These psychological fine-points of perceived privacy were an important point of discussion about the toilet's design and resulted in this subtle but remarkable design feature, unique in all the federation's toilet-building experience.*

The toilet was entirely community-built, with the enthusiastic involvement of women, who dug, mixed concrete, carried bricks, and wet the day's masonry. This was Bangalore Mahila Milan's second toilet-building experience, and the entire process took only ten days. Some of the young girls who'd picked up some carpentry skills were in charge of building the doors from sheet metal and light timber. The cost: A cool 12,000 Rupees. That's just 3,000 Rupees a seat, and very close to being a federation record for low price. Once a week, the whole community gets together and swabs out the stalls with water and brushes. Many people in Basha Compound were surprised that the toilets were not stinky, as they feared they would be, and need not have been banished to the remotest corner of the community after all.

Doddigunte toilet

Doddigunte is a large and fairly recent settlement of 375 houses out at the Bangalore city limits. It is a declared slum and most people have ID cards (*Akapatra*) from the Slum Clearance Board. There is much less evidence of pro-sperity here than in settlements at the centre of Bangalore - most houses are lean-tos of dried thatch, tightly clustered along unpaved lanes. Only a few hand-pumps serve 2,000 people, and though a sewer line runs along one side of the settlement, there were no toilets. People squat in nearby fields, but as development in surrounding areas intensifies, it gets harder, especially for women, to find private places to go.

The long, troubled story of Doddigunte's ten-seater toilet makes the first two toilets in Bangalore look like a piece of cake. Of all the toilet projects, Mahila Milan president Laxmi Sanmugam says, this one needed the most outside push to keep it going. The story starts in 1994, with two energetic boys, Nilagandan and Anand, who heard about the Karnataka Slum Dwellers Federation /Mahila Milan work with toilets and asked for help building a toilet in Doddigunte. Another woman in the settlement, Katijabe, took great interest in the toilets from the start and helped the boys fire up local women to chip in.

This wasn't easy. Doddigunte has been the target of a many outside groups, all with their different agendas, and all competing for followers, doing battle with their overlapping programmes. This has exacerbated caste, communal and income divisions already within the settlement. Katijabe's new Mahila Milan collective was seen as another competing group. But Katijabe persisted, persuaded the women to see how valuable clean toilets would be, for themselves and for their children, and convinced them to contribute labour, one woman's help per house, to build the toilets. In practice, these arrangements drooped a little, and a much smaller team actually did the work than Katijabe would have liked. But even with this reduced work force, it took only about two weeks of actual construction time to build the foundation and walls and to install the latrine pans and internal plumbing. The outside pipes dragged on a lot longer.

■ Handling local opposition:

It seems hard to believe anybody would oppose the building of toilets by impoverished families, *but they do*, and they do so *fiercely*. With Rs. 20,000 start-up money from SPARC, work began on a piece of open land at the edge of the settlement, close to the road and sewer line. As soon as digging began, though, the landowner squawked and work ground to a halt. A year later, with help from KSDF, work resumed. Again there was trouble, this time from neighbors across the street who didn't like the idea of slum-dwellers getting toilets. More scenes, police were called, and work stopped again.

At this point, the team decided to go *above board* with their toilets, and went straight to Anil Kumar, then the city's Deputy Commissioner of Development, and a supporter the federation's earlier toilets. Because Doddigunte is a declared slum, even though on private land, the city has the authority to give permission for improvements. Waving a fresh *No Objection Certificate* like a red victory flag, the community went back to work.



Hard lessons : Water only flows down . . .

The next troubles in this trouble-ridden project were neither political nor legal, but *technical*. When it came to running the long underground pipe connection to the sewer mains, the team ran into complications with levels and slope. The sewage has to make a *very long* trip from the toilets to the sewer line - across a field, around a corner, down a hill, over a nala, and under a road - before it finally meets the city sewer line. It is extremely important that a specific downward slope be maintained all the way along. By the time the team laid almost all the pipes, they realised the whole run was at the wrong level and would have to be redone.

After a lot of digging, and some help from the Municipal Corporation to install a deeper manhole in the sewer main, they finally got the levels to work, and "the sewage flowed beautifully," as the beaming Katijabe ebulliently described it.



The completely complete, freshly-white-washed ten-seater toilet block at Doddigunte is a beauty, for all the hellfire and brimstone that was gone through to make it. This is Bangalore's first community-built toilet block to be fully connected to municipal sewers.

The toilet block at Doddigunte cost about 40,000 Rupees all together, or about 4,000 per seat. The first 20,000 went into building the foundation, walls, doors and roof. The next 12,000 went into pipes, sewer connections and the construction of chambers. Another 8,000 went into *re-doing* the pipes to correct the levels. The bill for pipes swallowed up a lot of the budget, since it was such a long run to the sewer line, and since the whole business had to be laid twice. Chalk it up to experience, *and don't forget those typical costs per-seat from the city, at ten times this amount.*

TRANSFER SOLUTIONS

Doing it again, and again, and again . . .

When this kind of community toilet-building process moves into other cities, the cast of characters, the local politics, the peculiarities of different settlements all change. The thing that stays the same is that communities are the tools of change, not professionals.

But people in poor communities have to be prepared to take up these ideas and go forward with them. Helping mobilise communities in different places, helping find ways of transferring all those skills that people in one city have developed to people in another city - that's where the lion's share of work is behind these toilet projects. Those ways of negotiating with government officials, those methods for getting women involved, those plumbing and construction tricks. All these things take on new colours in different places.

These are the tools that will help communities in new cities challenge existing delivery systems and demand alternatives which increase their own participation.



Hyderabad toilets

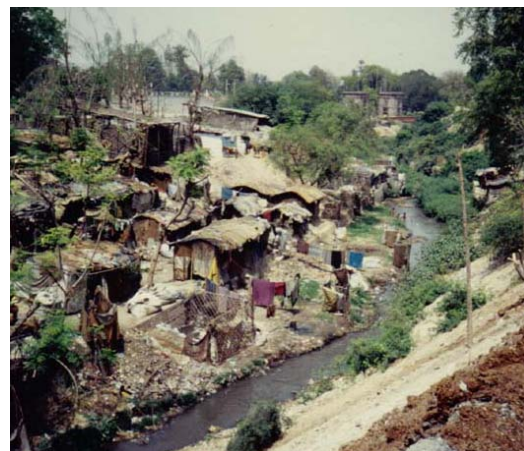
The federation began working in Hyderabad in 1996 with the idea of helping set up similar sanitation strategies there. In Hyderabad, unlike Kanpur, Lucknow and Bangalore, *work began with toilet building*, with the idea of making a palpable thing to begin talking about. As usual, the federation was looking for a community willing to become the path beaters. The *Jagjeewan Ram Cooperative* (known as the Tyre slum) volunteered. 70 families chipped in money and labour, NSDF helped plan and the city's first community-built toilet block began. City officials watched and discussions are now on to find other areas for toilet building. The exchanges, training and other learning strategies are why this happened. Now, 28 toilets have been built in Hyderabad: two 5-seaters and one 10-seater at Ambedkar Nagar, and an 8-seater at Yousuf Bazaar.

Soon after the first toilet was done, Mahila Milan helped set up a house-building savings scheme in Hyderabad. People save Rs 10 a day towards a downpayment of Rs. 3,000 for housebuilding, with HUDCO. Community members will contribute 10% of the loan amount as a deposit, then get a loan of Rs 30,000. They then make repayments of at least Rs 300/month. MM and NSDF will help in the construction and ensure the process works for the settlement.

Many of Andhra Pradesh State's smaller towns have urban development departments which are trying earnestly to improve infrastructure. The NSDF/MM federation hopes to expand work in Hyderabad and Secunderabad and to begin to influence policies to involve poor communities in sanitation in these smaller towns.

Lucknow toilets

Toilet building in Lucknow began with NSDF/MM's involvement in the British DFID-funded Gomti River Clean-up and *Nala Improvement Project*. For the federations, this was a chance to fire up a federation in a city where the poor have never participated in anything, and to test their toilet paradigm within the context of a large project-partnership involving city, state, bilateral agency and communities. For the government and DFID, it was a chance to understand the extent to which communities can take on contracts. The project was a ground-breaker for everybody involved.



The federation's strategy was to help poor communities along the nalas to take up small toilet contracts from the Nala project. This toilet-building process would create *milestones*, help build the skills and confidence people need to initiate other improvements in other settlements, and to help build a federation of nala settlements.

Work started with the half-century-old toilet at Sabzi Mandi. The 20-seater toilet was connected to the city sewers, but with ancient plumbing and lack of water, was in a royal mess. But the toilet's location between the slum and the market made it a potentially useful facility for both community *and* public. Rebuilding the toilet became the Sabzi Mandi community's plunge into toilet building, and the project partnership's first venture.

But sometimes doing the simplest thing ends up being the most complicated proposition. From day one, gaps between how communities plan, and how those plans get approved caused strains in Lucknow. The toilet projects were very small. Since communities purchased the materials and provided all the labour, the proposals and estimates they submitted were very simple. But DFID's cumbersome permissions procedures required blue-prints and documentation far more elaborate than communities could provide. Sorting all this out meant precious time was lost and the real gains of the process got strangulated in procedures. For the federations, the Lucknow project has been a lesson in patience. For the DFID, it has been a lesson in sensitivity to community process, and in looking at community contracts with less red tape.



The cleanest toilets in Dindoshi Colony:

The Mahila Milan had had enough of being silent spectators at the deterioration of their own communities. Taking over, repairing and managing the toilets that already exist, no matter how poorly built, was the first step in their sanitation strategy.

Dindoshi's sanitation strategy : Fixing up what's already there

The sprawling Dindoshi resettlement colony in northern Bombay is nearly 25 kilometres from the city centre. In 1986, slum and pavement dwellers evicted from other areas were dumped out here and assigned little squares of undeveloped jungle. Nearly 2,500 poor families had to start from scratch in Dindoshi, miles from jobs and markets, without lights, water, toilets or roads. Dindoshi is like a catalogue of all the mistakes cities can make with slum resettlement. But Dindoshi has also become a fertile learning ground, and the site of many breakthroughs.

When the city finally got around to installing basic services, the communities could see trouble coming. The *aqua-privy* style toilets, with tanks which supposedly need cleaning only after five years, require lots of water. The women knew that with so many people and so little water, the tanks would clog and overflow in a year or two - they'd seen this all before. They also knew when the tanks were full, the city's heavy-duty suction trucks wouldn't be able to reach the toilets for lack of wide roads. Eventually, the forseen became the real, and Dindoshi's energetic Mahila Milan set to work.

MM collectives in different sectors plugged their noses and took a close look at the sanitation situation in their areas. Nobody was surprised to learn that Dindoshi's toilets fell far short of the city's stingy target ratio of 1 toilet per 50 people. Worse, more than half the toilets were broken down and totally unuseable. Plus, the 24 sweepers, paid by the city to maintain Dindoshi's toilets, took months to clean out clogged tanks.

■ Locking the doors:

First the women got together in committees, cleaned up the toilets which didn't have any structural damage, persuaded ward officers to make sure the sweepers really showed up, and even threatened to hire their own cleaner if they didn't. Then they tried experimentally putting padlocks on some of the toilet doors. The philosophy behind this strategy was simple: *things that clearly belong to somebody get looked after, while things that belong to nobody get trashed*. The women assigned each toilet to 5 or 6 families, locked the doors and gave keys to the families, leaving one toilet in each block open for general use.

■ Reconstructing broken toilets:

Now, with SPARC's help, the women are beginning an ambitious programme to reconstruct Dindoshi's broken down toilets and build enough new ones to bring those unhappy toilet ratios up to viable levels. The women keep pressuring the city to finance their programme, and the city keeps dragging its feet. Meanwhile, a grant from the Tata Trust is providing bridge financing so work can proceed. When the city chips in its share, the Tata funds can be recycled in other settlements. But whether or not the city comes through, Dindoshi's community-managed sanitation overhaul will be a first in Bombay, lots of women will be trained, expectations in surrounding settlements will get higher, and another approach will be added to the sanitation options list.

Planning better toilets leads to other kinds of improvements . . .

In the process of looking at toilets in Dindoshi, the women also began seeing stark connections between sanitation and problems with garbage disposal, water supply and storm drainage. Many toilets were jammed with garbage thrown into the latrine pans, and many broken-down toilet blocks, perceived as "dirty places", had become garbage-dumps, creating more stinky places, causing blockages in storm drains, breeding rats and mosquitoes and even polluting the water-supply lines.

In a large and dense settlement like Dindoshi, these infrastructure systems interrelate, and once you start dealing with one, the others also come up. So while working specifically on toilets, the women jumped into the next cycle of learning about ways to manage garbage, water supply and drainage.

In this way, explorations in one area lead naturally to explorations in others. And that's how communities can integrate just about anything that comes up into the ongoing work of managing their own settlements. With each cycle, with each added layer, confidence grows and the scope of what is possible widens.

Now besides their work overhauling toilets, the Dindoshi Mahila Milan have teamed up with street kids from the Sadak Chaap and with the Municipal Corporation to test and expand strategies for cleaning up and processing the colony's staggering solid waste, using innovative composting and recycling techniques.

The poop on Dindoshi :

Population

Number of families	4,309 families
Total Population	30,119 people

Toilets

Total # city-built toilets	362 seats
• working but flooded	235 seats (65%)
• unuseable	127 seats (35%)

Target Ratio	50 persons per toilet
Actual Ratio	379 persons per working toilet
Toilet Deficit	240 seats

CITIES AS PARTNERS

Degrees of involvement :

Bringing sanitation to all poor communities in Indian cities is a job poor people can't do alone. City and State Governments have to be in the picture. There's no choice. The community toilet projects described in this report all represent, in varying degrees, partnerships which begin to break the old mold of service delivery and bring communities and government to work together in new ways.

Bangalore's municipal government, for example, has been a tentative partner, going only so far as to allow the toilets to be built. Kanpur's municipal government has gone three steps further, providing land, water connections and helping pay for one of the toilets. In Bombay, the city contracted a poor people's organisation to build community toilets. These are just the beginning.

"NO OBJECTION"

If you want to try something new, above board, you need permission. A "No Objection Certificate" (NOC) is the smallest coin in the currency of bureaucratic sanction in India. It requires the least commitment, makes no change in status quo and costs no money. It's not even an approval, exactly, but simply a willingness to withhold any objections. It's easier to squeeze an NOC out of bureaucracies traditionally miserly with their permissions, and because of this, NOCs can be a foot in the door, a vital first step in a process of change. Many of these sanitation partnerships had their humble beginnings in NOCs.

How to win toilets and influence municipal corporations:

It's not surprising that when a packaged toilet deal like these comes from communities, cities have a hard time saying No, (even though it may take them a while to say Yes).



Notes on the gentle art of negotiation :

A necessary step in building these kind of sanitation partnerships is convincing some very reluctant, often suspicious government agencies to stop seeing poor communities as problems, and start seeing them as contributors to good solutions to city-wide problems. That means negotiation. The increasingly confident negotiating skills of the NSDF/MM federations in Bombay, Kanpur, Bangalore and Lucknow have clinched commitments to sanitation in slum settlements from a lot of officials in the municipal corporations and state governments. Here are a few of their negotiating strategies:

■ **Start small and keep pressing** : Mahila Milan in Kanpur and Bangalore started small - negotiating for the corporations to provide hand pumps and water taps in slums, and through those negotiations gradually developed the confidence, persistence and visibility to press for the next level - community toilets. Here's how it worked: imagine a situation where both government and communities feel that everything is stagnant, that change is impossible. Convince the officials that they *can* use their limited powers to make a *little* change. First, they might give only a limited consent, but later, when they see things change, even in these small ways, that consent might become support, and support is the first step in the creation of a genuine partnership.

■ **Paint beautiful pictures** : Sometimes, grassroots activism involves a great deal of scolding and finger-pointing: "Isn't this awful!" "Isn't that shameful!" If you're serious about exploring new ways to bring the poor and the state together to solve the city's problems, this kind of stuff has limited utility. People in power are more likely to pull back inside their bureaucratic shells like bumped turtles, the minute you start pelting them with *awfuls* and *shamefuls*. Better to kindle their imaginations than to excite their defenses, by describing possibilities in ways that make clear *how they can contribute*.

■ **Know more than they do** : When you come into negotiations prepared, with enumeration reports, with toilet construction costs all worked out and tested, with knowledge of city infrastructure grids, and with examples of community-state partnerships in other cities, it becomes much harder to argue away the things you are proposing.

■ **Cut an attractive deal** : The NSDF/MM federations around India have developed skills of persuasion that would put a Eureka-Forbes salesman to shame. The idea is to make the prospect of entering into an unconventional toilet-building partnership with a well-organized community organisation a realistic, even attractive proposition for solving big problems that stymie municipalities up and down the subcontinent. A sharp city administrator would have a hard time passing up these features:

- The city's sanitation cost burden is reduced by sharing costs with community.
- When communities build toilets, the city's construction burden is eliminated.
- When communities maintain the toilets, the city's maintenance costs are eliminated.
- Community-built toilets cost a fraction of those the city builds, so city's infrastructure budgets can be spread much farther around, increasing service delivery.

Who pays the bill for toilets in poor settlements?

A *ll these toilet projects are a search for terms* - terms which articulate clearly which responsibilities belong to communities, which belong to cities, and which to the State, in the interest of assuring *everyone* in Indian cities has access to sanitation. The NSDF / Mahila Milan / SPARC alliance began with a simple hypothesis: that communities can design, build and maintain community toilets in their settlements - *that was their responsibility*. And that cities and states can deliver infrastructure mains to the edge of communities and pay for construction materials, *that's their responsibility*. But so far, it hasn't always worked like that. In only a few projects has the government come through with its share of assistance to the toilets which people build.



And who pays for learning?

Most projects expect change to happen *immediately*, and if it doesn't, the project is a bust. The wayside is littered with good policies, chucked out before they had a chance to grow. What this kind of short-sightedness ignores is the staggering gap between current practice and the need for change. *Everything needs to be changed*. This takes time, and these "gestation periods," where most of the real learning happens, need funding support.

A few officials can always be persuaded to support the logic of community managed toilets, but even with allies in key positions, the vast bureaucracies around them repel anything new with all the force of their fossilized rules and tender-procedures, which react like oil and water to community management. *These don't change overnight*. Communities also need time to develop commitment to change, to find the ingredients of a solution. When you scale-up a decentralised process, you need large numbers of trainers from the slums, who can only learn by practicing, by outlasting delays, *by doing it again and again*.

How to get a lot more toilet out of your Rupee . . .

Most existing service-delivery systems work on centralised, top-down models, where the purse strings are kept tightly clasped up at the top. When you start decentralising the task of building toilets, and of controlling sanitation money, you spread funds further, get more toilets, better toilets and cover wider areas and constituencies with your rupee. It's simple.

Cost sharing: When you sit down and start listing all the contributions poor people make to these kinds of community-built toilets, now and in the long years ahead - designing, building, maintaining, repairing and expanding those toilets - and then calculate the cost of all those contributions, based on what cities would have to pay if they did it, the figures add up to *a lot of money*. They make those weeny little original construction materials budgets look like pocket change by comparison.

This is the "bottom line" of the kind of cost-sharing formula these toilet projects propose. And for municipal bottom-liners, it's a deal cities can't afford to pass up.

What people do and what cities need :

This cost-sharing formula is not a bleeding-heart's fantasy. It represents the distillation of years of discussions with city managers, with central government planners and with communities around India. The formula clearly separates those things done most efficiently by cities from those things done most efficiently by communities, and factors in who can pay in cash and who can pay in kind. Trunk sewers and water distribution networks, for example, are clearly most efficiently done by cities. And, as these projects demonstrate, construction of local toilets is most efficiently done by communities.

Cities seldom calculate the *real cost* of delivering sanitation, including construction, supervision, long-term maintenance and repair. When they pay communities for materials and a little skilled assistance, in almost every case, these staggering delivery costs drop by at least two-thirds, depending on the number of toilets seats being built - the more seats built at one go, the cheaper they get.

Most of India's over-stressed city managers readily confess that while they have no problem managing sanitation capital costs, they *always* have problems with maintaining those assets which came from that sanitation capital. The huge conservancy staffs, which all Indian cities maintain, fan out in a thousand directions at the beginning of each shift. It's almost impossible to supervise them, to see that they actually clean those toilets, to even monitor their positions. Communities, on the other hand, who enjoy immediate and perceivable benefit from paying someone to keep their toilets clean, can easily see that the person they've hired to keep their toilets clean is doing her job, because she lives and works right there, where everyone is. In this way, maintenance and supervision are decentralised, localised, and made far more efficient in the process.



SCALING UP

The crowded graveyard of pilot projects that never scaled up . . .

The term "scaling up" suggests a process where a particular task evolves in a small way, is refined and then multiplied at a much larger scale. In development interventions, there is usually a pilot phase, in which a possible option is selected and tested. If the option being tested is successful in the pilot phase, it becomes a candidate for replication, for scaling up. **Supposedly.**

However the history of development reads like a bleak landscape littered with pilots that never scaled up. It's getting harder and harder not to notice this. Among donor agencies even, where hope usually springs eternal, there is increasing reluctance to finance pilot projects doomed for the scrap heap. There is surprisingly little examination into the reasons why so many of these pilot projects never manage to scale up.



NO ENTRY!

This defunct public toilet at Chandra Layout in Bangalore makes a poignant statement about pilot projects that go bust. Why is it that all that enormous investment in new programmes and all those good intentions so often come to this?



Three stages of replication :

Doing something is the most powerful learning tool, and when skills and vision are in the hands of communities, that's when you can really start talking about multiplying solution.

1 First you figure out what the problem is and what to do about it. Here, the problem is toilets and how to assure that everybody in informal settlements has access to a decent, working toilet and that it *keeps being decent* and *keeps working*. So you start by building a toilet. Things won't be perfect. There will be kinks, opposition, unexpected hassles which have to be dealt with - from neighbors, from cities and from within communities. The poor have little experience coming together to improve their settlements, they're breaking new ground, upsetting the status quo. The important thing is to *begin*, because knowledge only comes with *doing*, and knowledge has to be owned by communities before there can be any multiplication.

You also have to ask *who does what* - what can community people, intermediary institutions and various branches of the state do? With toilets, the federation is clear: communities design, construct and manage them, cities provide off-site infrastructure and pay for materials. This equation gets tested when a community that *wants* a toilet actually *builds* one, with a push from the federation. The State might not be ready to do it's part at this stage, and the community might not be too confident. But when the public is invited to the inauguration and officials cut the red ribbon, that toilet is right there - a solidly-built thing which proves *such things are possible*.

2 Repeat it a few times until you've got a rhythm: A lot of real learning comes with *repetition*. When you repeat something, you start to see patterns, anticipate problems that will come up, figure out short-cuts, variations. You adjust, refine, streamline. Plus, the more toilets you build, and the more communities and cities you cover, the more people get pulled into this roving crash-course on sanitation management, and the more graduate to teach others. Replication needs lots of people being ready to do this - not just a few. At this stage, communities are clearer about what they can do, ready to expand their dialogue with the city to produce more toilets. This means creating more preparedness on both sides - the city needs to figure out how to give contracts to communities, and communities need to learn how to make technical proposals. Usually communities still need up-front cash at this stage to finance toilet building, which cities may agree to help fund slow to follow up on with cash.

3 Rally your helpers: By now, you can build a toilet blind-folded. You know exactly how to do it, how much it will cost. You know what you can do, and what you need help with. You have lots of examples. The relationship of all stake-holders is clear and a larger contract is given to the alliance. Then the operation clicks into a higher gear, becomes a *production process*. Communities that could do one toilet can now do five simultaneously. You've developed a new set of standards about how to design, construct and finance community toilets.

What changed in the STATE?

The toilet blocks in all these cities provide a growing collection of visible precedents. They are a set of undeniable, concrete, working things, things that can be photographed, talked about by the people who made them, and shown round like prize bullocks for all the world to see. The toilets are a kind of educational aid to imagining something better - a victory of imagination over stasis. Behind this evidence, though, lies a series of profound transformations, which the process of making these community toilets helped to bring about:

- **Development of a state example bank:** which shows the State new, workable partnership models for delivering basic services to the urban poor, shows inexpensive, sensitively-designed toilets which emerge from poor people's needs, as an alternative to expensive, under-provided and poorly-designed State-built toilets. The need for built, observable, concrete things to visit, examine and talk about begins - *just begins* - to be met through these toilet-building projects.
- **Acknowledgment that poor communities CAN contribute,** are store-houses of innovative ideas, can in fact solve large urban problems which the state can't. Now government agencies in Kanpur, Lucknow, Bombay and Bangalore are knocking on the federation's door to come and do toilets!

What changed in the COMMUNITIES?

- **From stasis to imagining:** A shift in the communities from massed, individual stagnation to confident, collective imagining. People know now that improvement is possible, that they can do things, can call the shots. They don't have to wait around for pokey governments to provide the things they need, they can move ahead as they see fit, and in so doing convince the state to come along and support them.
- **Thresholds of initiative broken through:** Getting out of the house, coming together to talk things over, identifying needs, organising, starting savings groups, getting used to approaching officials and pressing for what they want - all this represents a kind of *first threshold for communities*. The toilet projects pushed community initiative several steps further, by helping people go beyond identifying a need, to conceptualising a solution (an unorthodox solution too), and making that solution happen themselves. *First you make a noise, then you make a toilet.*
- **Negotiating skills developed in practice:** The toilet projects are helping communities develop enough *patience* to deal with delays and enough *craftiness* to deal with opposition - opposition from within the community, from outside and from the state - and enough *impatience* to keep pushing on all fronts and sustain the process.
- **From breakthrough to a standard:** The toilet projects have gone beyond setting a precedent, and have begun to describe a process of standardisation, of carrying that precedent to a larger scale. The standard is refined, improved and adjusted through replication in different situations. It gets easier and better every time. "Standardisation" doesn't mean mindless duplication the same solution, though, but a scaling-up, transferral of ideas (with variations) to other situations, and the establishment of a conceptual "kit-of-parts" for negotiating, making and maintaining toilets.
- **Increasing involvement of women,** in issues which affect them, and in developing solutions they can manage themselves. In the early stages of many of these community toilet-building stories, many were skeptical about a process which places women at the centre. The transformation in women's roles in these projects, in most of which women became the prime movers, is the necessary first step for the changes that are to follow.
- **Greater clarity about settlement improvement priorities:** and increased confidence about taking the next step, such as tackling the Railway authorities about making pavements and drainage in the Kanpur Railway slums, or initiating community involvement in larger toilet projects in Bombay, or setting plans for water, drainage and paving, schools and health posts, houses.
- **Development of a community example bank:** Realizing by example that communities CAN build and CAN manage their own toilets, with some assistance from the State, and once built, these toilets can be places that are clean, useable, well-managed and can even be nice places (!) to hang out.



When ideas have legs they run :

As this report goes to press, NSDF and Mahila Milan have just received a contract to manage the land development and housing construction for 1,200 households in a path-breaking Railway resettlement project in Bombay. The development of infrastructure systems, design of houses, lanes, toilets and community facilities will all be decided by communities of poor slum-dwellers. Other projects in other cities are also underway.

But none of these communities will be starting from scratch. Guess which projects were the training ground for these designers-to-be? Guess which strategies set the precedents and hammered out the options they will have to choose from as they begin planning their new communities? Guess what kind of track record of real projects led municipal governments to seek out a poor people's federation to do it, instead of an engineer in the Slum Clearance Board?

Meanwhile, the alliance continues to negotiate for land and resources, and the federations of poor communities around India continue to build their cooperatives and prepare themselves for exploring new ideas, new technologies, new partnerships.

The obstacles are still immense, the conditions are still bad, the numbers are still staggering, but there is one question that no longer need be asked : Can poor communities handle this task?

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*This little kohl-eyed
imp lives along
Lucknow's Pata
Nala, in a community
that is taking steps to
make sure she'll grow
up with a decent,
clean, working toilet
that is always
available to her.*

The NSDF/MM toilet resume :

Bombay

Dharavi	7 seats	with children's latrine
P. D'Melo Road	4 seats	with caretaker room, night shelter
Jan Kalyan	32 seats	(in 4-seat blocks)
Dindoshi	25 seats	(planned)
Kanjurmarg	300 seats	(planned)

Kanpur

Sangam Talkies	10 seats	
Burma Shell	10 seats	with 2 women's bathing rooms
Shiv Katra	10 seats	office, courtyard, caretaker room
Sarvodaya Nagar	10 seats	with 2 women's bathrooms
Saidullahpur	10 seats	(planned)
Gangaganj	10 seats	(planned)
Jajmao Tanneries	4 seats	(planned)
Mariampura	10 seats	(planned)

Bangalore

Hanumanthapuram	3 seats	with 1 bathing room
Basha Compound	4 seats	
Doddigunte	10 seats	
Malasandra	20 seats	(in seven and six-seat blocks)
Basti Compound	6 seats	
Kaval Byrasandra	40 seats	(planned, in 4 ten-seat blocks)
Chandra Layout	50 seats	(planned, in 5 ten-seat blocks)
Vinobanagar	10 seats	(planned)
Jakkarana Kere	4 seats	(planned)
Shanbhogana Halli	8 seats	(planned, in 4 two-seat blocks)

Coimbatore

Muthu Chetti Palayam	16 seats	(1 ten-seat and 1 six-seat block)
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Lucknow

Sabzi Mandi	20 seats	with women's bathing room
Moongphalli	20 seats	(planned)
Janata Bazaar	10 seats	(planned)
Rajendranagar	20 seats	(planned)

Hyderabad

Ambedkar Nagar	4 seats	
Chintal Basti	18 seats	
Jagjivanram Nagar	12 seats	

Madras

Arumbakam	8 seats	
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Madurai

Anna Nagar	10 seats	
Arun Dudhi Nagar	8 seats	

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