

## **WAITING FOR WATER**

### **The experience of poor communities in Bombay**

#### **Introduction**

Water is a scarce commodity, getting scarcer each year. The problem is not just the quantity of water available but the basis on which distribution networks are worked out. In most cities in the Third World, distribution networks have been grossly overstripped by the growth in numbers. Neither the quantity of water available, nor the way in which it is supplied, is adequate for the residents of these cities.

The people who bear the brunt of this, however, are the poor. Living in overcrowded shanty towns they are not supplied an assured or clean supply of water. They end up having to either buy water or steal it. The price they pay for this water, the daily struggle it entails and the cost of ill-health in such communities due to lack of clean water need to be factored into any planning for water supply and distribution in a large city in a poor country.

Unfortunately, the existing systems tend to exacerbate inequities rather than bridge them. For instance, the city of Bombay has different norms for the amount of water that ought to be supplied to people with individual connections and those who share community standposts, 120 litres per capita per day (lpcd) for the former and only 50 lpcd for the latter.

Although in the past, communities or individuals could work out water-saving or water-use strategies and survive, today that is not possible. Water scarcity is a reality in many cities and demand has outstripped supply to such an extent that existing plans have become hopelessly inadequate.

Local authorities need to devise systems of water supply and distribution that accommodate the needs of the increasing number of urban poor in every city in the developing world. Unless this is done in time, with imagination and in consultation with the affected communities, much of this precious resource will continue to be wasted -- literally flushed down the drain -- while the poor continue to beg for or steal water from any source accessible to them. Even the least enlightened would see that this is not an ideal way to run the cities of the future.

#### **Objective**

We, in SPARC (Society for Promotion of Area Resource Centres), believe that the issue of urban water supply cannot be discussed unless it incorporates the situation of half the population of that city, which happens to live in slums and on the pavements. This study was undertaken in order to understand the actual struggle of poor people in a large metropolis like Bombay to obtain adequate supplies of water and to study the ways in which lack of

information skews official schemes in such a way that the poor are left open to the worst forms of exploitation. Another objective of this exercise is to make available to poor communities as much information on the issue of water as possible so that they can use it to negotiate with the authorities for a better deal for themselves. Lack of information on both sides and the absence of communication results in inappropriate and unworkable solutions being implemented.

## **Methodology**

To understand the views of poor communities in Bombay, we worked alongside Mahila Milan, an organisation consisting of women pavement dwellers and the National Slum Dwellers' Federation, SPARC's partner organisations. We visited six settlements of the urban poor and spoke to representatives of the communities, particularly the women. They were asked from where they collected water, how far this was from their settlements, how much time was spent in the process, how much they collected each day, where they stored the water, what was the quality of the water obtained, how much they had to pay for it -- daily, weekly, or monthly -- and how much they felt they would ideally like.

We also spoke to officials in the municipal corporation, obtained all the available data of water supply and distribution and the schemes devised for the urban poor.

## **Supply and distribution of water in Bombay**

Bombay is a rapidly growing metropolis spread over an area of 437 sq km on the west coast of India. It has one of the largest systems of water supply and distribution in the world. As there are few sources of water within the city limits, it has to tap sources as far away as 75 - 100 km from the city.

In 1860, when the first water works were completed, the city received a supply of 90 mld per day for a population of 700,000. By 1992 the population had grown to 10 million but the supply was only 2950 mld compared to the demand of 3400 mld. By the year 2001, the population is expected to be around 12.7 million and the projected demand for water will be 4270 mld. The government believes that by then it will only be able to supply 130 lpcd as domestic water supply.

The Government of India's norms for water supply are:

- |                               |               |
|-------------------------------|---------------|
| 1. For population upto 10,000 | 70 to 100 lpd |
| 2. For population 10 - 50,000 | 100 - 125 lpd |
| 3. For population over 50,000 | 125 - 200 lpd |

Bombay falls in the third category and theoretically, the authorities will be able to supply water at the lower end of the scale even by the end of this decade. However, the reality is that while a small section of the population will receive well over 200 lpcd, the majority will get less than 50 lpcd.

As the total quantity of water coming into Bombay is not adequate, the Municipal Corporation of Greater Bombay(MCGB) has to resort to an intermittent supply of water that is distributed at different times to different areas. There are 22 reservoirs and additional reservoirs in the city that store the water that is treated and brought into the city and control its distribution through the 4000 km network of water mains that run through the city.

However, an area where people get water through community standposts receives less water than one where households have individual metered connections as the quantum of water released to a locality depends on the number of connections. Also, as mentioned earlier, there are different norms for metered connections, in terms of the quantity of water supplied, and for standposts. What this means in effect is that slums receive less water, even if the number of people living there are greater, because their housing conditions do not allow individual connections in their homes.

On the other hand, the better off, living in high rise buildings, who by virtue of their better economic status can afford individual connections in their homes, get a better supply of water. The latter also have the ability to store vast quantities of water in overhead tanks to which the water is pumped up by electrical pumps. Thus, they receive a 24-hour supply of water regardless of the time the municipal corporation releases water.

On the other hand, poor communities are completely at the mercy of the local government in terms of both the quantity of water supplied, the quality, and the time it is released. So if your area receives water for three hours after midnight, you have no choice but to be up all night waiting in line for your turn at the water tap to fill your designated number of vessels.

The irony of this iniquitous situation is compounded by the fact that both lots of people pay the same rate for water. Thus the resident of a affluent locality of Bombay, who probably consumes in excess of 300 lpd, pays the same rate as the slum dweller who may receive and use only 20 to 50 lpd.

Furthermore, while people living in highrise buildings generally do not have to buy water -- except at a time of scarcity --, the slum dweller often has to pay on a daily basis for water from her neighbour or from the water seller. Therefore, she ends up spending more on water per month per litre than the resident of the high rise.

The only exception to this rule are people who live in highrise buildings in the extended suburbs of Bombay who have not yet been granted a water connection. There are an increasing number of such buildings in the extended suburbs where the population growth is much greater than in the older parts of the city. (Many families have moved out of the old city to the new suburbs expecting better living conditions.) Yet the city's water distribution plans do not appear to reflect this reality as there are few new reservoirs being planned for these areas. Without such plans, people living in these suburbs, both affluent and poor, have no option but to buy water from private water suppliers.

However, here too there is a difference in the price paid by the rich and the poor. While the residents of highrise buildings successfully negotiate a lower rate for a regular supply of water from these water suppliers on the basis of a fixed rate per tanker, the poor in the nearby slum pay a piece rate, or a per bucket rate, which works out many times higher.

### **People's voices**

The dilemmas faced by poor people are best expressed in their own words. The section that follows sets out the views and the experiences of the urban poor in six different locations in Bombay. These vignettes provide a picture of the situation on the ground. Only by understanding this can one devise strategies whereby the poor can get a better deal.

### **Pavement dwellers**

Pavement dwellers are the worst off in terms of every public amenity. They are the invisible -- no one wants to acknowledge their existence, yet over 150,000 live on Bombay's pavements. They have become survival artists, stealing water from any source that is available.

There are 50 huts around the Jhoola Maidan in Bombay's crowded Byculla area. The women living in these pavement dwellings wake up at 4 a.m each day and go to the nearby Marathi chawl to beg for water. Twenty-five to 30 of them line up in front of each house. "If we get it, we get two to four *handis* (vessels which hold 10-15 litres of water)", says one of these women.

The next stop is in front of a private water tanker that arrives at 8 a.m. They must pay around Rs 2-3 for a *masak*, a leather water container which holds roughly 20 litres.

Two years ago, the elected representative from the area told these women that he would relieve their misery by giving them a tap in their huts. They were asked to pay Rs 1000 each. Says Sameena, "The plumber dug up the main pipe and connected it by a smaller pipe to our taps. We had to pay the plumber an additional Rs 200 for this job. Now I get water from 4 to 10 a.m in my house and the trickle continues throughout the day. I don't have to pay anything for this water as it is not connected to a metre". She has devised an ingenious system to ensure that every drop of water emanating from that tap is caught and stored.

Apna Zopadpatti, a half km away from Sameena's pavement hut, is not so lucky. There are 110 houses on this narrow street which hug two walls, one adjoining the Khatau mills and the other the housing colony of the Byculla Fire Brigade.

Some of them collect water from fire hydrants. If a hut is built near a fire hydrant, the resident of that hut manages to control the water from the hydrant. Of course, the fire brigade sends around people to check each morning. But somehow a way is found to avoid this and the water continues to be tapped from these hydrants on a daily basis. Sometimes a bribe to the security guard helps. "For the last two years, we are all getting water from the fire hydrant in Water Gully", says Bano. "We used to pay Rs 10 per month, now its more because the officer wants more money."

Says Salma from Water Gully, "We pay Rs 30 per month for two *handis* per day per person to the person who has the fire hydrant in her house. We stand in line from 3 a.m in the morning often up to 7 a.m."

According to Rehmat, "We get a maximum of four *handis* per day although sometimes as little as two *handis*. In addition we pay Rs 3 per *masak*. We are forced to buy at least three *masaks* a day."

In Dimtimkar road, the women from the 150 huts have to get up at 4 a.m and go to a nearby chawl (one room tenements) to ask for water. They manage to get three *handis* per family. "We only get it if we get up at 4 a.m.", says Sagira. "If I'm desperate, I have to pay Rs 3 per *handi* for water. We have to spend two and a half hours a day just for collecting water."

"I cannot bathe every day. On the day I bathe, there is not enough water to wash clothes and vice versa," explains one woman.

To sum up, pavement dwellers do not have access to community standposts or individual taps. If a few enterprising people like Sameena of Jhoola Maidan have succeeded in getting an illegal connection, this is an exception.

The majority have to devise daily strategies to get water and succeed at most in getting three to four *handis* of water per day. If a *handi* takes even 20 litres, this would be a maximum of 80 lpd for a family of five or more. That means less than 15 lpd per person. The norm, even of the MCGB, is 70 lpd per person in localities where there are community standposts.

In effect these women spend up to Rs 30 per month. The total amount of water they get per day is not more than 80 to 100 litres. This means they pay 10 paise per litre or Rs.10 per 1000 litres. The municipal rate is 50 paise per 1000 litres.

### **Non-regularised slum settlements**

Santoshima Nagar on Sahar Road is not yet a regularised slum. It is located on land which falls under the jurisdiction of the Collector of Bombay and sits on the left of the road leading to the Sahar International Airport. Because of its status, it is not entitled to amenities which other regularised slums get -- such as water and toilets.

At present there are 195 houses in Santoshima Nagar. Some families claim they have lived on this patch of ground for 15 to 20 years. Others have come more recently. The majority moved in around 10 years ago.

Subhadhrabai Ramachandra Bhagat came here six years ago. She says she has to wake up each day at 4.30 a.m. to be ready to fill water from the community standposts where water comes for around four hours starting at 5.30 a.m. The history of these standposts tells a story about the struggle for water in such slum colonies.

Six or seven years ago, the slum dwellers were promised individual taps in their huts by a member of the slum committee who had contacts with the municipal corporation. He asked

each family to pay him Rs 1500 to extend a pipe from the main pipe to the slum and to install taps in the houses of the 100 or so who paid.

After the taps were installed, people found that if all of them turned on their taps at the same time, none of them got any water because the pressure was inadequate. The system was found unsatisfactory. Thus the slum committee decided to set up community standposts with each tap serving an average of 20 families where water now comes for four hours a day.

On an average, people are able to fill up four or five *handis* a day which would have to last them the whole day. These community taps are metered and each family has to pay around Rs 10 per month as water charges. (Incidentally, this scheme is officially meant for people in regularised slums where 15 families together are supposed to pay around Rs 1500 in order to get one metered connection with an assured supply of water.)

The community complains that during the summer months there is an acute shortage and the water supply is not so regular. At that time, they do not have access to any other source. Private tankers are exorbitant. A tanker, which would hold around 1200 litres of water, charges Rs 2000 for one trip to the settlement, an amount the community can ill afford.

The only alternative they have is another water source which is 25 minutes walk away. This is a broken pipe where they wash clothes.

Before these taps were installed, the women spent the greater part of the day looking for water. One source was the broken pipe. Another was Leelawadi, another slum which is two or three kms away. Now most of these sources have been closed to them and if they run out of water they have to go and beg a relative or a friend who might have additional supplies.

How much water do people feel they need? The women estimated that they would be happy if they could get 20 *handis* a day, that is 400 litres per day per family. As most families have at least five members, this works out to roughly 80 lpd per person, the maximum amount that they can imagine they need.

The women also said that it would be more convenient if the water supply came twice a day instead of just once as at present. They would prefer the supply to be broken up into morning and evening so that they do not have to store so much water at one time.

### **Aarey Milk Colony, Unit 7**

This slum of 1000 houses is located in the middle of the verdant Aarey milk colony, at one time a popular picnic spot for Bombayites. It looks like a typical village off the main road within the colony. The houses are made of mud or brick. Many have small enclosures surrounded by bushes or Pipal trees. The residents of this settlements have lived here for 20 years or more. Yet they have no water or even electricity. As it is located on the slopes of the hills of Goregaon, people also have to contend with wild animals roaming the area at night, specially during the monsoon, and sometimes lifting poultry or even attacking children.

Although the colony has not water connection, the dairy authorities have provided a tap closeby which gets water 24 hours a day. To ensure that there are no fights over this water, the slum committee of women decided to hire a man who would control access to the tap. He is paid Rs 7 per month per family. His job is to regulate the distribution of water so that each of the 203 families who pay his wages get two *handis* of water every alternate day. This is their sole source of drinking water.

For bathing and washing utensils, the women go to the nearby *tabela* where the dairy cattle are stall fed. Here they face daily harassment. Sometimes their clothes and utensils are taken away by the authorities because it is illegal for them to be in that area. As a result, some women have to go almost every day to the main security office and beg for their belonging to be returned. Often, the men tease and harass the women but the latter say that they have no option.

The chawl committee tried to improve the situation by asking each family to pay Rs 200 each so that a tap could be brought into the slum. However, although this was done, they found that there was not enough pressure in the pipe to carry the water all the way into the slum. Thus, the system of collecting water from one tap is the only source available at present.

The residents of Unit 7 claim that theirs is a regularised slum and that each of them has paid the collector Rs 1491 to get a photo pass (identity card). They also say that they are on the voters list. Yet it is unclear why they have not been given either a water or an electric connection.

How much water would the women like to get everyday? "If we get 10 *handis* of water a day, it will be more than enough", says one of the women.

### **Mahatma Phule Nagar, Mankhurd**

Sandwiched between the old and new Mankhurd stations live 913 families in Mahatma Phule Nagar. This is one of several slums located along the two railway lines that connect north and south Bombay. According to a census of railway slums conducted by SPARC in 1988, there were 18,000 households with homes within 80 feet of these railway lines.

The families in MP Nagar face a strange situation. Although they have agreed to be relocated, they find now that no one is interested in helping them out. Earlier, as the railways wanted the land, they were anxious to move these families, some of whom had been living here from 1977. (In principle, the railway authorities want to clear all settlements within 50 feet of the railway line and MP Nagar falls within that category). However, once the new track had been laid, this piece of land lost its value because it fell between the old and new tracks. With the railway authorities having lost interest, the residents of MP Nagar do not know who to turn to for their basic needs like water.

The new railway line has cut them off from the main road. There is no vehicular approach to the slum now. To go anywhere, they must cross two railways tracks and watch out for fast trains that suddenly appear on the horizon without a warning.

Their closest water source is 150 metres away. To access it, they have to cross these tracks. One source is the transit camp where there are taps outside each building. However, the building residents are less than welcoming and usually shoo the women away.

A second source is a slum called Bharat Nagar which has common taps. But these taps are attached to pipes which run adjacent to the gutter. To collect water from these floor level taps, the women must either carry a plastic pipe with them to attach to the tap or a mug in which they fill the water before pouring it into their *handis*. It is a long and tedious task.

Given the weight of the *handis* and the distance they must walk, they can fill at most one or two *handis* a day. Each trip takes them at least 15 to 20 minutes.

A third source is Mankhurd village, which also entails crossing the old tracks. The residents of the village demand payment for water and the MP Nagar women generally end up paying up to 50 paise per *handi*. A further indignity is the fact that they must continuously beg for water and are never sure that they will get it even if they pay.

Even the Bharat Nagar water is not free because its residents extort money from the MP Nagar women during festivals, knowing full well that they will not dare refuse.

For bathing and washing utensils, people use an old well which has been in use for many years. Some years ago, the community had jointly collected the money to raise a concrete wall around it. But because the gutter runs close to the well, and often overflows into it, as does the dirty water from people's washed clothes, vessels and when they bathe, the water in the well is dirty and cannot be consumed.

Around 40 or 50 families have struck a private deal with a local plumber. They have paid between Rs 700 to 1000 to access a water connection in the slum. Here water comes, at different locations, for a few hours every day. Some of the women say that they are able to fill six to eight *handis* a day from this source.

The women say that they must get 10 to 15 *handis* a day. They do not mind if 15 families get together and are provided one water connection. At present, MP Nagar families spend up to Rs 60 a month on buying water.

### **Tata Nagar, Govandi**

This slum has earned its name because it is located below a high tension wire of the Tata Electric company. It also sits precariously on the side of the Central Railway track. In fact, there is nothing to separate it from the track. When people first settled here, there was only one railway line but in 1981 a second one was built.

The first settlers came to Tata Nagar 30 years ago, says Shakuntala. There is no water connection. Everyday, the women go to a nearby regularised slum and ask its residents to let them collect some water. In the Naaz society, one of the six or seven housing savings groups formed in the slum, the women say, "We have to pay Rs 15-20 per month to these chawl

dweller who then puts a pipe outside her house. She first fills water for herself and then allows us to fill water. We have to wait outside like beggars".

"Water comes for one hour a day and we get it for 15 minutes. During that time we can fill, at most four to five *handis* a day."

There is a well nearby which the women can use for washing clothes and utensils. However, the water is not good enough for bathing, they say.

Another source of water is 15 minutes walk away. The BMC has installed seven taps. But because of the location, no one uses these taps.

The well is jointly looked after by the community and people contribute Rs 2 per year to put bleaching powder in the well. Even so, the well water is only usable up to 10 in the morning after which it becomes dirty because people wash their clothes nearby and the dirty water slips back into the well.

In the Bhagyodhaya Cooperative Housing society, also located on the railway track, 22 families have joined together to get two taps. Every family pays Rs 5 per month for water. But as a result they are able to fill 8 to 10 *handis* a day. They have a well which they keep clean and use for clothes and utensils.

The consensus amongst the women was that they needed 15 to 20 *handis* a day.

## **Dharavi**

Mohammad Ali Jang Bahadur is the president of the Dharavi Vikas Samiti. He is one of around 450,000 people who live in Dharavi, one of largest collection of contiguous slum settlements in the world with a density as high as 800 to 1000 families per acre in some localities.

Mohammad Ali says, "I have been living in Dharavi for the 30 years. When I came there was only one house in the area where I live which belonged to Banwari Singh Jawan Singh from Gwalior district. The compound is named after him. Today, there must 70 or 80 shops in Banwari compound.

"When I first came here, there was no arrangement for water. We used to go to the Bandra-Mahim pipe where there was a joint from which the water leaked. We would collect the water in *handis* or buckets. It would take us two hours to collect the water because it was a small leak.

"Around 15 years ago, our local corporator, Shyam Shetty, said he would supply taps to all of us. Some people had already arranged illegal connections by paying Rs 200-300. The BMC would cut these illegal connections, and once, even mine got cut. Shyam Shetty was alive then. He managed to get it reconnected. Now there is no such corporator and if this happened again, no one will reconnect. But when that happens we will have to see. We get water in the evening for a few hours from 4 to 7 or 8. Some don't get at all but people get 8 to 10 *handis*."

The experience of S. P. Mary, from Bharatiya Chawl in Dharavi is slightly different. She says, "We have been having difficulty getting water for the last two years. We have three municipal taps from which 600-700 families use. Water comes for only three hours. It is dirty. When we went and complained to the authorities, we were told that our tap was spoiled.

"They promised us good water. We waited for one year. The water in the tap can't be used for drinking. Even the colour is bad. We have to go a long distance to get good water. One day, 40 women from Mahila Milan took a morcha to the G North ward office. We filled this dirty water in a bottle and showed it to the local official.

"As a result, 15 households have joined together and got three taps. We get 4 to 5 *handis* a day. Even those who haven't paid get some water. We paid Rs 1500 each to the corporator. Actually he had to pay only Rs 4500 to the BMC. The rest went into his pocket.

"Even now, we get water for three hours. For the first 20 minutes and again in the middle we get dirty water. This happens even in the metered taps. We have to pay every month according to the meter. It's been six or seven months since we got the taps. We have to pay around Rs 10-15 per month as water charges.

"Today, we have three municipal taps from which we get dirty water and three metered private connections. Those who did not have the money to get a private connection come to us and say that just because we have the money, we should not deny them water. So we fill about 8 to 10 *handis* a day and let the others fill two *handis* less than us. We have fights every day near the tap."

Mary says that it takes her around one hour every day to collect the water she needs for the day.

Mary and Mohammad Ali's experiences give some insight into the situation of water in Dharavi. Given the size of this slum agglomerate, the situation varies greatly from one area to another. But as this is a regularised slum, the authorities did provide community standposts. The water in these standposts, however, was generally of indifferent quality. This is partly because the sewer lines and the water pipes run contiguously under Dharavi. Lack of prompt repair of broken pipes and the fact that the water pipelines are often empty as the water flow is not continuous, permits the ingress of solid and liquid wastes into the treated water supply. Dharavi is one of the areas of Bombay where such contamination is fairly common.

## **Conclusion**

The above report covers important aspects on the subject of water availability for poor communities in a large urban metropolis like Bombay. There are many more aspects of water supply, quality and distribution that need to be studied in greater depth. For instance, Bombay has a number of fresh water wells that have been capped because the local authorities did not want to take the responsibility for their maintenance. In the past, and even today, these wells have been an important additional source of water for the poor.

Also, there is little data available on the amount of wastage of the water that comes into the city. According to some rough estimates, up to 30 per cent of piped water is wastage due to bad maintenance and pilferage. If plans were made to check this waste, through badly maintained and leaking pipelines, a greater quantity of water would be available for distribution.

Apart from shallow wells, the ground water can be tapped for non-drinking purposes. This has already been done in a number of slums. But once again, due to inadequate maintenance, many handpumps have fallen into disuse, thereby denying these communities an important source of additional water.

However, even in this limited survey of six locations in the city, which represent a cross-section of slum and pavement dwellers, several facts stand out.

\* The poorest, the pavement dwellers, pay the most for water. Even a minimum daily supply is not assured to them. They pay around Rs 30 a month per family at the rate of Rs 10 per 1000 litres, a rate which is 20 times higher than the official rate for water.

\* Those in regularised slums are being exploited due to their ignorance about water supply schemes. The municipal corporation has introduced the scheme of metered connections for groups of 15 households who together have to pay Rs 1500. Instead, many households are paying Rs 1500 each to get an individual connection only to find after paying the amount that there is not water at the end of the pipeline. If one multiplies the experiences of the people quoted above, plumber and elected representatives from these slum areas must have pocketed thousands of rupees by exploiting the ignorance of the slum dwellers.

\* There is a marked difference between the amount pavement dwellers and people living in unrecognised slums pay for water and those in regularised slums. While pavement dwellers could pay up to Rs 30 per month, those with metered connections in regularised slums only pay Rs 10 per month on an average although some of them paid an initial amount of Rs 1500 when they ought to have paid only Rs 100.

\* Many communities, such as the railway slums, survive because there are still some traditional sources of water like the shallow wells from which they draw water for bathing and washing. No one takes responsibility for these wells even though, if maintained well, they could provide a valuable additional source. Similarly, many slums have been provided with handpumps and borewells for water that can be used for non-drinking purposes. But many such pumps have fallen into disuse due to bad maintenance. As a result, even if households get 8 to 10 *handis* or 120-150 lpd, it has to suffice for all purposes including bathing and washing.

While information about water supply schemes, better maintenance of hand pumps and wells, and better quality of water would help those living in regularised slums, it is clear that the authorities must devise strategies to meet the needs of those living on pavements and in unrecognised slums. One can understand the fear of the authorities that providing these people basic amenities would lead to permanence. However, for reasons of humanity plans cannot be laid without incorporating the needs of this important section of a city.

With the speed with which urbanisation is accelerating in developing countries, it is incumbent on the State to formulate plans for basic urban services, such as water supply, sanitation and health, that place the needs of the poorest as the first priority. Unless this is done, the existing inequities will continue to grow. And given that the urban poor cannot be wished away, their distress will ultimately affect the life of even ostensibly prosperous cities.

**(This study was done by Kalpana Sharma for SPARC )**