

Report

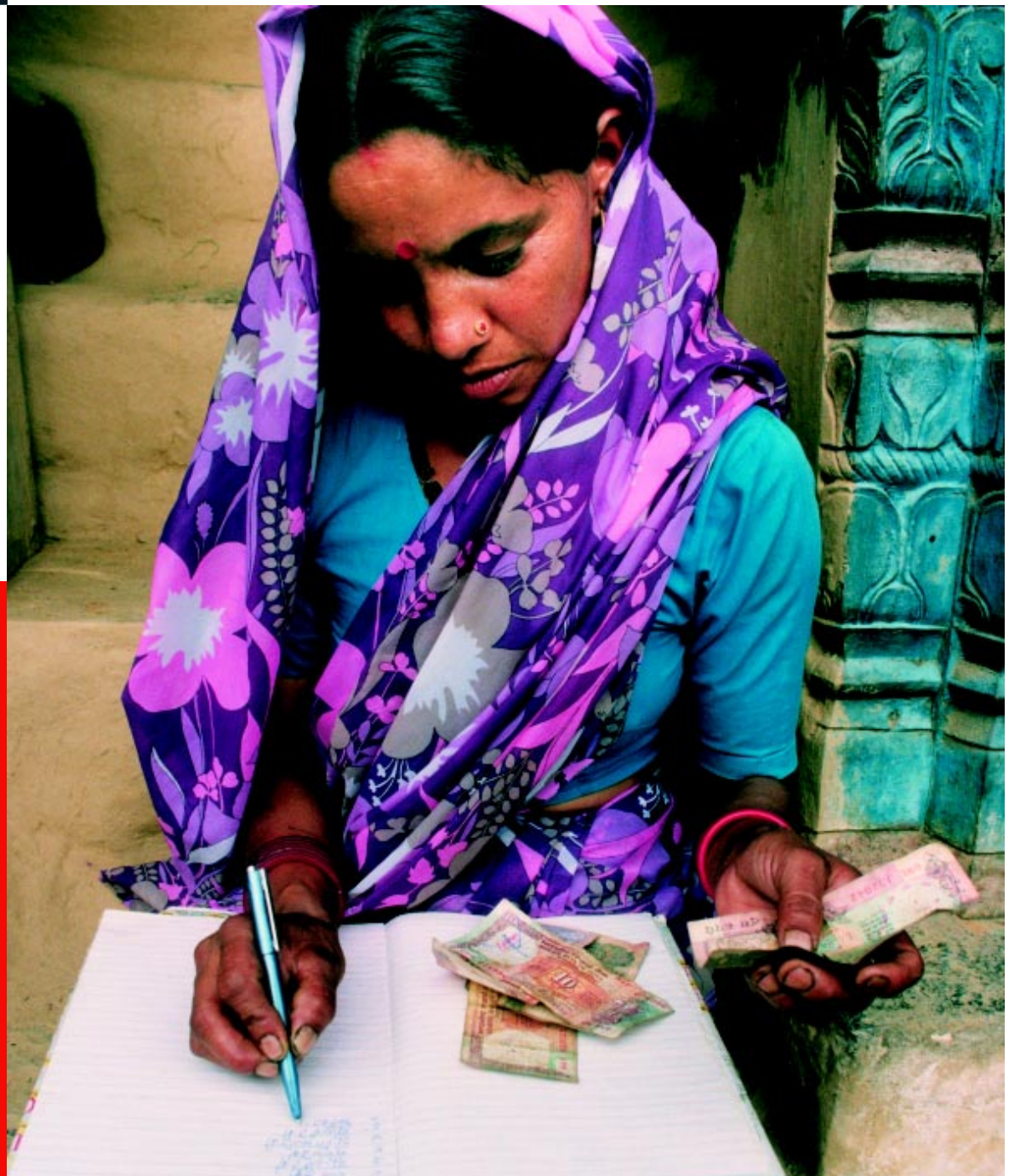


UNDP -
World Bank
**Water and
Sanitation
Program**

Water for India's Poor

Who Pays the Price for Broken Promises?

South Asia Region



Introduction

Ever since independence, poor Indians have been promised free, safe household water.

It is hard to be against such an appealing idea. Poor people would obviously favor it, and nobody else, however rich or selfish, would deny them access to such a basic human need. For both reasons, politicians have been quick to embrace 'free water' as an election slogan. And even economists with sharp pencils will concede that subsidizing water for the poor has benefits for society as a whole (see Box 1).

How have the promises been translated into reality over the past 50 years? How does this appealing idea look at the turn of the century?

In a word, the promises have been broken. The poor still have inadequate access to safe water,



and most are forced to live in highly insanitary conditions. They still have to pay for their water, sometimes 10 and 20 times more than their richer neighbors. Government subsidies now run at Rs 40 billion a year¹, but most of the benefits go to the better-off. Even the huge current subsidies come nowhere near the investment levels needed. And, in a cruel twist, the very policies that were designed to help suppliers provide water cheaply to the poor have, in fact, resulted in such bad financial and operational management by suppliers that they provide very little service to the poor, and embarrassingly inadequate service to everyone else.

The purpose of this Report is to examine the gap between promise and reality in water service

¹Throughout the paper, the Indian Rupee (Rs) is used as the unit of currency. At the time of writing (summer 1999) \$1 exchanged for about Rs 43.

The Promise of Free Water for the Poor...

...rests on the assertion that the government's duty is to provide safe water for the poor free of charge, since:

- no one should be denied access to safe household water because he (or more likely she) cannot afford it;
- the poor cannot afford safe water;
- the use of unsafe water by some leads to diseases that harm the users and can spread to everyone else; and
- only the government has the organizational and financial resources to supply safe water.

The Promises of Water for the Poor versus the Reality...

Promises

- The poor cannot afford safe water, and should not have to pay for it.
- Public subsidies are provided to help the poor.
- The government can solve the problem by running water programs itself.
- The government will raise the financial resources needed for water supply.

Reality

- The poor actually do pay for water, often far more than their fair share.
- But the subsidies for water benefit mainly those who are not poor.
- But public provision of water is inefficient and ineffective.
- But the investment requirements for water are far too great for the government to afford.

provision to the poor in India. It examines four enduring fallacies (*summarized in Box 2*) in the conventional wisdom of Indian water and sanitation service administration. Each of these is discussed in turn, drawing on real current experiences. In this, the paper seeks to summarize current knowledge and better inform policy makers in the search for a new politically acceptable framework where public policies achieve real results.

The Poor Actually Do Pay

The poor do not consume as much water as the rest of the population, but despite the promises, despite the bland assertions of politicians and policy makers, they can and frequently do pay for what little they consume. And they usually pay much more per liter consumed than those who are better-off.

Poor people pay for water in two rather different

ways. First, there are 'user charges', the payments in cash and kind that people make willingly, in exchange for a reliable supply of water. And then there are 'coping costs' – payments that are outside the system and that ought not to be required, but that they have to pay to gain access to water even when it is supposedly free.

User Charges: Few poor people in India have access to safe, convenient and reliable supplies and few are charged. Yet there is a growing body of evidence that poor people in India will pay for reliable, convenient and locally valued water services. Firstly, it is reasonable to assume that poor people – just like everyone else – can be counted on as reliable paying consumers of dependable, convenient and safe water services (as long as the billing is fair and reasonable and all other users are also required to pay). Secondly, in practice, there are many examples in India where the poorly served offer to pay for a fair service (see

Slum Dwellers Willingly Pay for Better Service

Vijayawada Municipal Corporation in Andhra Pradesh has a population of about 1,00,000 with water provided by about 900 private hand-bored wells, and a municipal system serving 36,000 house connections and 6,500 public standposts. Most of the standposts have lost any taps they once had and run continuously, and there has been persistent clamor for more (free) standposts, justified by 'public demand'. Collection of water consumption charges has been minimal, frequently not even sufficient to cover the costs of collection.

The municipality's standard charge for a house connection is Rs 4,000, plus a monthly consumption fee of Rs 40. Recently, the state government released funds under the National Slum Development Project to provide a 50 percent subsidy toward these costs. When the Vijayawada Municipality announced this program, there was an overwhelming response from slum dwellers, and more than 5,000 came forward offering to pay the Rs 2,000 as deposit. Using the cash inflow, the municipality has extended its distribution pipelines in unserved areas, and expects to achieve 100 percent coverage without drawing on additional sources of finance. It also expects a gradual reduction in the demand for public standposts.

Source: Personal communication from Arvind Kumar (IAS, Municipal Commissioner, Vijayawada Municipal Corporation), April 9, 1999.

Villagers Make Cash and Labor Contributions

In addition to regular savings efforts promoted by SEWA, water user committees in about 25 villages in rural Gujarat have started separate Village Water Funds to be used for operations and maintenance expenses. Individuals contribute up to Rs 5 per month to the Water Fund. The sum collected in these Funds amounts to well over Rs 1,00,000 in some villages.

Source: Personal communication from Reema Nanavaty, Coordinator, Rural Development, SEWA, Ahmedabad, April 22, 1999.

The Swajal Project (World Bank Uttar Pradesh Rural Water Supply and Environmental Sanitation Project, India) has proved that there is a willingness to pay for good quality service delivery. This is the first time in India that project communities are contributing towards the capital cost of water supply schemes. The community contribution in the Swajal Project is estimated at \$7.64 million, which is about 10 percent of the total project cost.* For latrines and other individual assets such as compost pits, each beneficiary contributes about 40 percent of the capital cost. In addition to contributing towards the capital cost, the communities undertake full responsibility for operation and maintenance of the water supply scheme, including paying all its costs. In order to do this, they levy user charges at different tariff rates from both household connection holders and public tapstand users.

**Draft Report for Mid-term Review (MTR) Report Vol 1, Uttar Pradesh Rural Water Supply and Environmental Sanitation Project, the Swajal Project, July 1999.*

Box 3 for an example of slum dwellers willing to pay in Andhra Pradesh).

Thirdly, there is evidence from numerous externally-funded projects that the poor, who have often grown weary of free-but-inadequate water supplies, can and will contribute to the cost of better services. There is a great variety of projects throughout India where cost recovery arrangements appear to be working well. There are village schemes sponsored by large and small Indian Non-Governmental Organizations (NGOs) such as Self Employed Women's Association (SEWA) (see, for example, Box 4). There are larger schemes involving NGOs and external donors (see, for instance, Box 5) and there are a few examples where poor consumers contribute to state government schemes (see, for instance, Box 6).

An alternative form of local financing is simply borrowing money to repair or instal a pump or other equipment, and repaying the debt over a period of time. In recent years, there has been a marked growth in the number and outreach of microfinance institutions (MFIs) disbursing infrastructure/housing loans to the urban poor in India. This is largely due to an institutional shift to recognize, support and facilitate MFIs working at the field level to enable poor communities access to improved infrastructure. Most successful MFIs, such as SEWA Bank, Ahmedabad, have average loan repayment rates ranging from 90-100

percent; a powerful statistic to reinforce their sustainability. Conservative estimates indicate that there are currently about 50 MFIs disbursing infrastructure/housing loans to the economically weaker sections throughout India. Of these, approximately 15 are based in urban areas. There are also over 150 additional MFIs, currently supplying income generation and a small proportion of consumption loans to the poor. A large number of these institutions are poised to begin on-lending infrastructure/housing loans to their clients.

These examples do not yet represent normal practice in India, but payment for service to the poor is increasingly widespread. They serve to underline a very important truth about water and poor people everywhere, not just in India. While they obviously prefer to pay less rather than more, they are willing to pay fair user charges for needed water if it is actually delivered. And in the case of new schemes, they are willing to contribute their time, labor and cash if they are confident that water will be supplied, and their views are taken into consideration when decisions about the scheme are being made.

Coping Costs: While user charges are paid more or less voluntarily, in fair exchange for something of value, coping costs include three kinds of payment which properly ought not to be required at all. First, there are 'informal' payments,

which can vary from burdensome hospitality (for instance, gifts, food and accommodation for repair technicians to induce them to visit a rural settlement) to outright bribes (for instance, to a water agency official, so that he will ignore an illegal connection). Second, coping costs include payments which are not contemplated in the original design of the water scheme, but which pay for real services that are made necessary by the scheme's inadequacies. Examples would be payments to water vendors, or investments in privately owned pumps or storage facilities. There is a third kind of coping cost, which does not involve cash payments, but which is nevertheless a very real cost and places a major burden on the poor – the time lost in collecting water, and in illnesses caused by unsafe water or inadequate supplies. Even though these costs are not paid in cash, they have exactly the same impact of reducing poor peoples' incomes, since time spent collecting water, or lying ill in bed, or looking after other ill family members, cannot be spent earning money elsewhere.

It is of course difficult to find out how much people pay in bribes, which by their nature are concealed, and the evidence is somewhat

anecdotal. In Bangalore, for example, 12 percent of respondents to a survey had paid 'speed money' to employees of the water authority to get better service, with an average payment of Rs 275. Even among lower income groups, nearly half the respondents were willing to pay higher official fees for services rather than under the table². Everyone knowledgeable about the sector seems to have a fund of such anecdotes, and overall there seems little doubt that bribes and other informal payments constitute a significant burden on water users, including the poor.

There are no national estimates of how much people pay to intermediaries such as water vendors or tankers, or in private investments to supplement public supplies. But there are many reports about what has happened in particular places, which seem to be fairly representative. In Baroda, for example (see Box 7), half the households were reported to have made private investments in water supply totaling Rs 280 million, and they spent four times as much on these measures as they did on the public system. In Ahmedabad, slum dwellers were found to be paying vendors up to Rs 4 a day for water to avoid standing in line³. In Dehra Dun,

Villagers Willingly Pay for Reliable Service

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In the village of Dakhin Durgapur in West Bengal, the only safe sources of drinking water were three handpumps installed 22 years ago. One was completely out of order, and the other two functioned poorly because of broken handles and damaged platforms. A regional NGO, Rama Krishna Mission (RKM), worked with the village youth club (Khudiram Smiriti Sangha) to organize meetings with women in the village, and they raised the problem of handpumps because they had to walk long distances to find alternative water sources. The women agreed to find out more about the problem and after training by RKM, conducted a household survey and analyzed the results. The survey results were shared with panchayat members and through RKM, the panchayat was able to obtain funds to purchase material for pump repairs and for reconstructing the platforms. The community also decided that a committee should be established for each pump, and that each household collecting water from a pump should contribute towards the cost of operations and maintenance. This was done successfully for two of the handpumps, the third needs to be raised above ground level and a committee has not yet been established. For the two rehabilitated pumps the fee was set at 25 paise per household per month, and has been collected regularly. In the past two years, the community has spent Rs 120 on maintenance, and one of the committees has a bank balance of Rs 200.

The village of Asurali, like many others in rural Bengal, has a community fund called the Solo Anna Fund which is replenished from time to time through community work at a common place. A handpump was installed in the village 20 years ago, but ceased to function after two or three years, and people continued to rely on the old 70 feet-deep village well. However, the well has recently become unreliable in summer, and the community decided to use the Solo Anna Fund to instal a new handpump. Because the balance in the fund was insufficient, additional amounts were collected from each household.

Source: Rama Krishna Mission Lokshiksha Parishad, *Quarterly Report on Community-based Sustainable Potable Drinking Water Supply in West Bengal, 1999*.

²See Samuel Paul, *A Report Card on Public Services in Indian Cities*, Public Affairs Center, Bangalore, 1995.

³Personal communication from Mihir R. Bhatt, Honorary Director of the Disaster Mitigation Institute, Ahmedabad, Gujarat, April 10, 1999.

Water Harvesting Initiatives in Gujarat

Tatana is a small and visibly poor village in Gujarat where the authorities twice dug a deep well and installed a pump to provide drinking water. But on both occasions the wells failed within four or five years. A voluntary organization in a neighboring village, Bhagirathi Uttar Buniyadi Vidyalay, helped the villagers of Tatana to consider the option of roof rainwater harvesting tanks. This is an old technology in the region but had fallen into disuse in recent years. Under a program run by the Gujarat Water Supply and Sewerage Board (GWSB), a subsidy of 70 percent of the capital cost of such tanks is available (with larger subsidies for those in fluoride areas or below the poverty line).

Ten families started digging pits for the tanks. They ran into rock and had to hire drilling machines, for which the families had to pay Rs 7,000 each extra (the GWSB scheme limits expenditure to Rs 15,000 for a 10,000 liter tank). The families received the first one-third payment from GWSB on schedule, but release of subsequent payments was delayed. The villagers decided to go ahead with the construction, borrowing money on the local market at rates up to 3 percent a month. Because of the drilling and other features to improve strength and durability, each family spent about Rs 24,000 in total for its tank, of which the subsidy program will reimburse – when payments are eventually made – about half. Once the tanks were completed, the villagers combined their resources to raise another Rs 60,000, with which they drilled a borewell and installed a plastic pipe to supply additional water to their new underground tanks.

The idea of ‘trading water’ is not new in the region, and tankers have long been used to bring extra water into a village for festive occasions or for irrigation purposes. Nowadays, it is not uncommon for poor families to combine their funds and pay Rs 200 to 350 for a tanker to fill one of the new household rainwater harvesting tanks.

Source: Personal communication from Trupti Soni, PRAVAH, Ahmedabad, May 12, 1999.

a slum resident paid a private contractor Rs 3,000 to instal a house connection, saying that was much faster and cheaper than having the municipality provide the connection⁴. In rural Gujarat, water trading and supply by tanker is a well established practice, for drinking as well as irrigation water, and people pay between Rs 175 and Rs 350 per tanker.⁵ All of these examples suggest that peoples’ willingness to pay for water is a good deal higher than the authorities’ willingness to charge for it.

The third kind of coping cost involves the *time lost* in collecting water. One estimate put the national cost of fetching water at 150 million man-days (in reality, woman-days) a year, costing the Indian economy Rs 10 billion in lost production⁶. More detailed estimates have been made in particular cities. The Dehra Dun study, referred to earlier, calculated that for the whole city these costs averaged Rs 10 per cubic meter consumed, while the water authority was billing an average of only Rs 2 per cubic meter to those with connections.

More significantly, the poor paid far more for water than the city-wide average would suggest. In the dry season, the combination of low pressure and long queuing times drove the cost as high as Rs 50 per cubic meter for those using public taps.

The time costs associated with inadequate water systems are not just those related to collecting water. The country suffers huge costs because of illnesses caused by unsafe and insufficient drinking water. By one estimate, India loses 90 million days a year due to water-borne diseases, costing Rs 6 billion in production losses and medical treatment⁷. A more detailed study in 1995 concluded that each year India lost 30.5 million ‘disability-adjusted life-years’ because of poor water quality, sanitation and hygiene. It estimated that improved water and sanitation services could halve this loss, with savings to the country of between Rs 110 billion and Rs 290 billion, depending on the value assigned to a ‘life-year’⁸.

These rather technical-sounding statistics are

⁴See Choe, Varley and Bijlani, *Coping with Intermittent Water Supply: Problems and Prospects, Dehra Dun, USAID, 1996.*

⁵Personal communication from Trupti Soni, PRAVAH, Ahmedabad, Gujarat, May 12, 1999.

⁶See Rajat Chaudhuri, *Water: What are Our Rights to It?*, Safety Watch, Calcutta, 1998.

⁷Ibid.

⁸See Carter Brandon and Kirsten Homman, *Valuing Environmental Costs in India*, World Bank, 1995.

not just about losses to India's national productivity. They translate into very real human suffering, especially for India's poor. About 80 percent of Indian children suffer from water-borne diseases every year⁹. And nearly 7,00,000 children die of diarrhoeal diseases directly as a result of drinking unsafe water¹⁰. Poor women, and their daughters, suffer doubly. It is they who take care of whoever is sick in the family. And it is they who, in sickness and health, spend long weary hours collecting water for the family. The problems faced by women particularly in dealing with government programs are illustrated further in Box 8.

Subsidies Benefit Mainly the Better-off

Total subsidies for domestic water supply in India are currently about Rs 40 billion a year. Of that amount, roughly Rs 12 billion goes to urban water

systems, and Rs 25-30 billion to rural schemes (half from the central government, and half from the states). The actual beneficiaries of this subsidy are people who receive some sort of water service – clearly people who do not get services do not benefit from the subsidy, regardless of how much is spent. In rural areas, it is generally the better-off who live close to good water sources, while the poor have marginal land and less reliable sources, and suffer most from falling water tables, seasonal variations, etc. In urban areas, most of the subsidies also benefit the non-poor, who typically pay far less than the real cost of the water they consume (in both Baroda and Dehra Dun, the proportion was only about 20 percent).

To justify these huge subsidies, it is usually claimed that people, especially poor people, cannot afford the real cost of water. But this is a highly dubious argument. First, it is clear from the

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Baroda Municipal Corporation — Who Gets the Subsidies, Who Pays?

The Baroda Municipal Corporation earned revenue of Rs 1.24 per cubic meter of water supplied in the early 1990s. At the time, operations and maintenance expenditures alone amounted to Rs 1.49 per cubic meter, and total costs (before depreciation charges) were Rs 2.32. The 50 percent subsidy is paid for out of Octroi income, contributed by everyone in the city, including those who get very little water such as those who live in slums. Industrial and commercial users pay higher charges to cross-subsidize domestic consumers, and pass on the costs through higher prices to all their customers. The main beneficiaries of all these arrangements are middle and upper income households, who pay less than 20 percent of the actual cost of the water they consume.

One-third of all households reported spending time collecting water, averaging one hour a day (fully one-fourth of households with piped connections reported having to spend time collecting water). Because the supply is unreliable, better-off households resort to a variety of coping mechanisms, such as underground storage tanks, lift pumps to reach the upper floor, or pumps to extract larger flows from the municipal pipelines. Over 20 percent of households employed one or more of these devices, and another 19 percent used water from private or shared borewells. Investments in such items averaged nearly Rs 3,000 per household, with annual expenditures of around Rs 440 per household. Municipal water charges added only another Rs 100. In sum, to obtain water, the people of Baroda spent more than four times as much on private measures as they did on the public system.

Poor households typically cannot afford large cash outlays and are forced to rely on public sources – 62 percent of households in the income group below Rs 1,500 a month did so. Contrary to popular opinion, however, water from public sources is not free. The Corporation collects water charges from local residents. For example, one group of 15 houses paid Rs 480 for installation of a standpost, plus Rs 180 a year in charges. In addition, they paid Rs 2,000 for construction of a washing place and soak pit at the site. More important than these cash payments are the opportunity costs of time spent collecting water, and therefore not being able to earn an income. These opportunity costs (conservatively estimated at only Re 1 per hour) amounted to about Rs 26 million annually just for collecting water in Baroda.

Poor households, in the income group below Rs 1,500 a month, incurred opportunity costs of Rs 250 per annum on average. For households with monthly incomes above Rs 6,000, the corresponding figure was naturally very low (only Rs 13), since these households solve the problem by paying more in capital and recurrent expenditures. When opportunity costs and all other expenses are included, the average city-wide cost of water amounted to 1.7 percent of household income. But for poor households in the income group below Rs 1,500 a month, it was 2 percent.

Source: Chetan Vaidya, *Willingness to Pay for Water and Sanitation Services: A Case Study of Baroda*, HSMI, New Delhi, 1998.

⁹See William Gunyon, *India: Making Government Funding Work Harder*, WaterAid, 1998.

¹⁰See Ashok Nigam et al, *Fresh Water for India's Children and Nature*, UNICEF and WWF, 1998.

Women Especially Disadvantaged by Government Programs

The NGO SEWA works especially with women, and in response to their concerns has, in recent years, helped members undertake a number of water schemes in rural Gujarat. A participatory assessment carried out in 1997 highlighted the special difficulties faced by women when dealing with government programs.

- Often, water was turned on only after dark, when it was unsafe for women to walk such distances alone. Elsewhere, water was released when the women were out in fields for work.
- Many women were not aware that the government service exists to benefit them. It was easy for landlords to divert pipelines away from villages to irrigate their fields or demand a higher payment from poor families for access to water sources.
- Women who were versed in their rights said they had been restricted by social custom or law from confronting exploitative upper caste males, or reporting technical problems to higher officials. Borewell motors that had worn down from frequent electricity blackouts or taps that had run dry were thus left unattended.

Source: Reema Nanavaty and Rina Agarwala, *Managing Water for the People by the People*, SEWA, Ahmedabad, 1997.

previous section that poor people actually do pay for water, however 'unaffordable' it may be. And second, 'affordability' is a very slippery concept, which entails judgements about how other people should spend their money, as well as averages that can be highly misleading. But for whatever they are worth, rough benchmarks of affordability (costs of domestic water in relation to household income) have been worked out in many developing countries, and the upper threshold usually discussed is about 5 percent. In India, an upper threshold of 3 percent seems to be considered normal¹¹, and of course wealthier families pay a much lower proportion. All in all, the affordability argument is simply not persuasive.

This is not to deny that there are a few extremely poor and marginalized people in every community, people who really cannot afford to pay for water or food or any other basic necessities of life. But such unfortunate people are much more likely to be known and supported by their own community than by any government subsidy system¹².

It emerges from the previous paragraphs that subsidies for domestic water in India are at present, extremely large, spread very widely, ineffective in helping the poor, and mainly an advantage to the better-off. This is not the result of a vast conspiracy but a lack of a detailed understanding of the effect of high subsidies on individual incentives. Any

subsidy quickly becomes an 'entitlement' for those who benefit, and the group of those considering themselves entitled to the subsidy grows rapidly. This seems to be true everywhere, and India's experience is no different from the rest of the world. The unfortunate result is that, in India today, most people continue to feel that the government should subsidize the cost of their water consumption, and many feel water should be free. This is a completely impractical and unaffordable delusion and one which lies at the heart of India's shocking service record. Concerted political will is required to change this public mindset.

Public Provision is Inefficient and Ineffective

What has actually been accomplished through these enormous public subsidies? In rural areas, more than two million handpumps have been installed under successive Plans, as well as 1,16,000 piped schemes, including 1.5 million standposts. As a result, the government can boast that 52 percent of the rural population is 'fully covered' and almost all the rest is 'partially covered' by improved water supply (fully covered means a source meeting the standard of 40 liters per capita per day within a distance of 1.6 km).

These accomplishments are unfortunately diminished by the huge gaps still remaining. It is

¹¹See Wilhelm Kedderman, *Ghogha Regional Water Supply and Sanitation Project*, Netherlands Economic Institute, 1999.

¹²This should not be interpreted to mean that all forms of subsidy are always bad. Indeed, there are many situations where cross-subsidization is highly desirable. Cross-subsidization occurs when revenues from one group of consumers are used to subsidize another group within the same water system. This happens, for instance, when everyone pays the same tariff even though some consumers are harder (and more expensive) to serve because they live in outlying or hilly areas. It also happens when the tariff is set so large that consumers pay more per liter than small consumers. Cross-subsidization of this type is normal in water systems throughout the world, and is a practical way for water authorities to ensure service to all their clients, especially the poor.

obvious that a great many facilities have not been properly maintained, so that by the government's own 1994 figures, in rural areas 4,60,000 handpumps (22 percent of the total) required repair or rehabilitation, and 2,50,000 (12 percent) were completely defunct. The status of rural piped schemes is somewhat better, but in 1994 there were still 45,000 schemes (26 percent of the total) and 2,80,000 standposts, requiring repair or rehabilitation. It is commonly asserted that at any one time at least one-third of all public handpumps are out of order. No doubt a large share of these cases of facilities 'out of order' is due to inadequate maintenance and repair programs, a responsibility of the authorities. But the figures also suggest that the communities served have no great stake in the handpumps or standposts provided, probably because they were not much involved in the planning and decisions leading to their installation. It appears that 'coverage', meaning number of communities served by new installations, was a more important consideration than 'sustainability', meaning ensuring that installations would keep functioning indefinitely.

At the same time, there is widespread scepticism about the accuracy of government figures on coverage. The definitions in use tend to be static, so that once a community has been 'served' it is considered covered, regardless of later population growth or the current conditions of the facilities or water table. And, of course, the use of coverage targets inevitably leads to some overstatement of accomplishments. For these reasons, even the sad picture painted by the government survey overestimates the coverage and understates the gaps in rural areas.

The status of municipal systems is no better. Virtually all are in a parlous financial condition. In only a few cases are revenues sufficient to cover operating costs, much less depreciation and borrowing charges. The combination of inadequate revenues and poor procurement, construction and maintenance practices has led to low operating efficiencies. In most urban areas, large areas (usually slums) receive no or very little service, and even in the formal residential areas, water supply is intermittent. This is so common that it is taken as the normal state of affairs. But intermittent supply is not merely an inconvenience for consumers, it also provides opportunities for contamination of

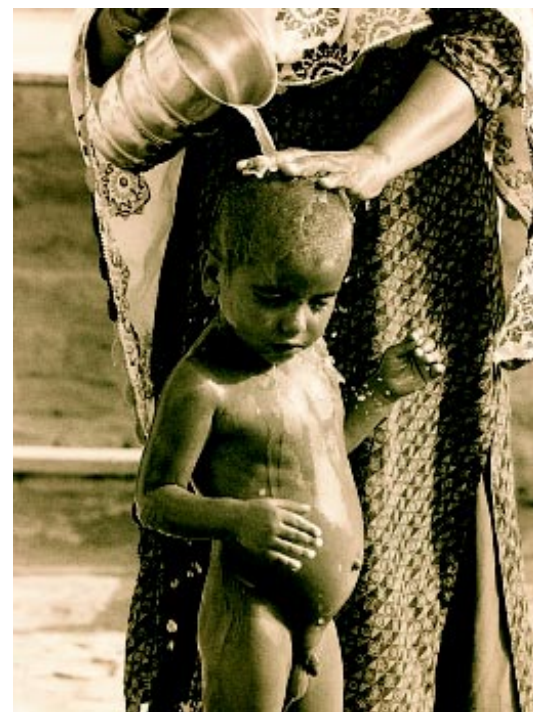
drinking water, such as that which led to the outbreaks of cholera in Lucknow in 1987¹³ and in Chennai in 1993¹⁴.

A recent joint review of water resources management by the Government of India and the World Bank noted that urban water systems:

"deliver on average 50 to 60 percent of their capacity to end users, compared with 80 to 85 percent in other countries. Poor, and sometimes non-existent, management leads to waste and inefficiency, with the resultant large claim on resources that could be redeployed for service improvements. The lack of human resource development and personnel policies tailored to meet organizational needs has led to both widespread overstaffing and labor misallocations. Overstaffing is endemic, the ratio of staff per 1,000 service connections, an accepted measure of efficiency of water utilities, ranges from 40 to 60 staff per 1,000 connections in India." A footnote adds that the regional average is around 10 staff per 1,000 connections; international best practice is around two to three staff per 1,000 connections¹⁵.

As if all these problems were not enough, India faces one more enormous problem with its drinking water – deteriorating quality. One can argue about how much responsibility the government bears for regulatory inaction in the past, but it is clear that the government will have to play a major role in the future. According to one government estimate, 44 million people suffer from such water quality problems as excessive fluoride, iron, nitrate, arsenic and salinity. And in many places where quality is still good, irrigation pumping has caused water tables to fall below levels reachable by low-cost technology.

The better-off contrive to overcome all these problems in one way or another. In rural areas, rich farmers can sometimes use agriculture programs to develop wells so as to assure their own drinking water and sell it to others by tanker. In urban areas, they juggle with their plumbing and instal booster pumps to



¹³See Binnie et al, *Urban Environmental Services Master Plan for Lucknow, 1996-2021*, DFID, New Delhi, 1996.

¹⁴See World Bank, *Urban Water Supply and Sanitation Report*, 1995.

¹⁵Ibid.

compensate for low pressure, and put in storage tanks and boreholes to deal with intermittent supply. To safeguard quality, they instal filters, boil water, and nowadays increasingly buy it in bottles (sales of bottled water have increased 30 percent every year for the past several years). No one has estimated the total 'supplementary' investment of this type, but the countrywide amounts must be enormous (see Box 7 for evidence from Baroda).

The better-off find the money, and these expenses serve to justify their view that water charges (if they are paid at all) should be kept at very low current levels. The poor cannot afford large lump sum investments. With a few exceptions of the type noted earlier (see Boxes 3-6), the poor bear the main burden of these problems by waiting in line for inadequate amounts of poor quality water.

Public Provision is too Expensive

It was noted earlier that the government spends huge amounts on water, to the order of Rs 40 billion a year currently – about Rs 25 billion for rural and about Rs 16 billion for urban water. During the period 1951-97, total Plan outlays for rural water (including very modest amounts for sanitation) were Rs 202 billion, and for urban water (also including sanitation) about Rs 136 billion.

Not all this money had been well managed or well spent. In rural areas, for example, calculations show that the weighted average per capita investment requirement is Rs 630, whereas the actual investment cost per capita has been Rs 760 in recent years. The 20 percent difference is at least partially attributable to inefficient procurement practices. Huge amounts are spent on staff rather than facilities or equipment – for example, in Uttar Pradesh, Jal Nigam spends nearly 40 percent of its Rs 4 billion annual budget on its 20,000 strong staff.

The situation of urban utilities is no better:

"Most are in financial disarray. A recent survey reported by MOUAE suggests that out of 17 local bodies, seven were able to meet their O&M costs whereas only two covered also their debt servicing costs. Analysis of other recent studies suggests that out of the 15 for which information was available, only four cities cover their O&M costs completely, and another four cover more than 80 percent of these costs. Information on the coverage of debt servicing (capital costs) was available for only six cities, of which three almost fully covered these costs."¹⁶

16. World Bank, *Urban Water Supply and Sanitation Report*, 1998.

Even if questions about how well financial resources are being spent currently are set aside, it is clear that huge additional outlays will be needed to make good the gaps and deficiencies listed above. The recent joint review of water resources management by the Government of India and the World Bank arrived at rough estimates of recurrent expenditure and investment needs for water and sanitation separately. For water in rural areas, the annual requirement just for adequate operations and maintenance is estimated at Rs 29 billion. The investment requirement is over Rs 200 billion to rehabilitate and repair all existing schemes and fill in gaps where necessary, and an additional Rs 450 billion to bring the whole rural population to the 'full coverage' standard of 40 liters per capita per day within a distance of 1,600 meters.

For urban areas, the report assumed heroically that operations and maintenance costs would be covered by appropriately increased tariffs, and included an estimated investment requirement for water supply schemes of Rs 284 billion over five years. Another estimate, by the Indian Expert Group on Commercialization of Infrastructure, was much larger – Rs 845 billion. And a third party observed that both estimates were probably on the low side, since neither took into account a characteristic feature of urban systems, namely the rising real cost per cubic meter of accessing the 'next' remote water source, typically two to three times the current costs.

How much public funds are likely to be available to cover these needs? Certainly, nothing even approaching the gigantic sums just cited. The same report that estimated rural operations and maintenance needs at Rs 29 billion a year noted that current and prospective funding for this purpose was to the order of Rs 2.5 billion a year, less than one-tenth of the requirement. And the urban report projected that about Rs 30 billion would be available annually for both water and sanitation – following past patterns, that would mean about Rs 15 billion a year for water supply. Even the lowest estimate of requirements is four times this amount.

Given the myriad other problems which India faces, and the keen competition for public funds, it is simply not realistic to assume any large increase in government funding for the sector. In fact, the initial promises about the poor and water have been turned on their head: *it is now the government that cannot afford to pay for water.*

Conclusion

In summary, it emerges that:

- Very large numbers of poor people, supposedly unable to afford safe water, still do not receive it, and have to pay if they do receive it.
- The huge subsidies allocated to the sector primarily benefit the better-off.
- The public authorities responsible for services are generally ineffective.
- The recurrent financial and investment requirements of the sector vastly exceed the public funds likely to be available.

This harsh set of realities stands in sharp contrast to the poverty of action to embrace significant changes to conventional thinking or to alter the continuing false promises by politicians and the government, at various levels, to continue to provide free water services. Analysis of the approaches by all the leading parties going into the September 1999 elections indicates little political mandate by any party other than more free services. Political will to change the frame of present approaches is vital.

Successful experiences by governments, NGOs, civil society and private sector organizations suggest several common themes that would need to be embraced if India is to realize its hope of serving its poor citizens by significantly increasing sustainable access to safe and reliable services:

1. People, including poor people, can afford and are willing to pay for safe water: if they get a reliable supply; if they get the service levels and other features they want; and if they are sure other people are paying their fair share too.

2. Sustainability is more important than

coverage. It requires the active involvement of water users in planning facilities in making informed choices about service levels, which in turn facilitates their willingness to pay.

3. Subsidies are always troublesome, and are best avoided, since they invariably end up benefiting mainly those outside the original target group. Any subsidies should, therefore, be limited and tightly focused. On the other hand, cross-subsidies can play a useful role.

4. Private sector and civil society organizations (including NGOs) are much more effective at delivering services than governments. Government's resources are best focused in facilitating and regulating other parties' contributions than continuing to attempt to provide services for all.

5. There are sources other than government for the funds required for operations and investment, including increased revenue from water charges and the mobilization of private savings.



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October 1999

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