



## Water and Sanitation Program

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

# Setting the Stage: The Process of Preparing for Pro-poor Water Sector Reforms in Kathmandu



This paper is part of a research and dissemination initiative which the Water and Sanitation Program is carrying out into private sector participation and the poor in the urban water sector. Proposals to involve the private sector in water supply and sanitation sometimes raise fears that the poor will be priced out through higher tariffs and costly connection fees or overlooked because they live in hard-to-reach locations. The reality is that the private sector has the capacity and the interest to serve the poor, is willing to experiment with low-cost options and different levels of service, and with greater efficiency, can benefit all consumers. There are examples of this in many parts of the world. This series will document best practices and show how service to the poor can be addressed by the skillful design of private sector contracts; by strengthening the regulatory system and making sure it protects the interests of the poor; and by creating partnerships between civil society, local authorities and private operators.

The series also analyzes lessons learnt and explores how international experiences can be adapted to various regions.



## Context

In 1997 His Majesty's Government of Nepal (HMGN), working with the World Bank, began preparing for wide-reaching reform in the urban water supply sector. The World Bank had earlier financed an urban water project which provided management support to the national water utility, Nepal Water Supply Corporation (NWSC), through expatriate advisors. This project had failed to result in significant improvements, and the water supply and sanitation services operated by NWSC did not meet the standards set by HMGN in successive five-year programs and development plans. The government decided that a professional operator's skill was necessary to achieve progress in the sector, and that major element of reform should be the introduction of private sector participation.

The Kathmandu Valley houses a rapidly growing city, referred to as Kathmandu, which is composed of five separate municipalities; Kathmandu, Lalitpur, Thimi, Bhaktapur and Kirtipur. The population in 2001 was approximately 1.1 million, and is growing rapidly. Mounting water demand, combined with high leakage rates in the aging and poorly-maintained network, plus a poorly operated system means that few areas receive 24-hour service. In fact, many areas only have water a few hours a day, or even every other day. The utility needs to focus on leak detection and

repair programs, better billing and revenue collection methods, funds for system rehabilitation, and clear incentives to reduce leakage and improve service.

The form of contract chosen for private sector participation was a 10 year 'affermage', under which the assets remain in public hands, while the operator takes on operation and management of the system. The operator is remunerated by being paid by the government for each cubic meter of water sold (note that this is different from a lease, in which the operator pays a 'rent' to the government for the right to run the system and charge consumers for water). The tariffs are collected by the operator on the government's behalf, and remitted to the state (after the operator has deducted the amount owed to him). In the contract proposed for Kathmandu, the affermage was enhanced by adding financial incentives in the

remuneration formula for reducing the leaks in the system, and improving the billing and collection efficiency. The operator was to have some investment obligations, though these would be small and mostly related to system repair rather than expansion or new works, and most major investment would be financed by the state using a combination of loans and bilateral grant aid.

There were concerns on the part of both the government and the World Bank that, while a private operator would have ample incentive to improve the existing network and try to sell more water to customers already connected, this might not result in much improvement for the large number of poor people in Kathmandu. Little was known about the water supply and sanitation situation of the urban poor, and in fact there were conflicting opinions about both the number of poor people, and the nature of their problems in accessing water and sanitation services.



Many of the poor use traditional 'stone spouts' which are not part of the network, but are fed by spring sources.



## Initial Research on the Water and Sanitation Situation of the Urban Poor

In early 2000, the World Bank Task Manager approached the Water and Sanitation Program (WSP) and requested support in examining this issue. At that time, WSP had initiated a small study of the urban poor of Kathmandu in collaboration with three local NGOs, with the intention of increasing the knowledge in the region of water and sanitation issues in the urban sector. WSP proposed to design the study in such a way that the results would be of direct use to the transaction planners.

The research for the study of the water and sanitation situation of the urban poor was carried out by three locally-based NGOs – Lumanti Support Group for Shelter, Nepal Water for



**Frequent interruptions in supply create hardship for the poor, who have no water storage facilities in their homes, and must wait hours until water is available.**

Health (NEWAH) and WaterAid Nepal – with WSP financial and consultant support. Fieldwork was carried out in April 2000 and covered 14 communities from three of the five municipalities (Kathmandu, Lalitpur and Thimi); 140 households participated in the participatory research, which involved community consultations, meetings, and social mapping to provide information about their own situation and that of another 831 households in their communities.

The limitations of the study included the fact that the communities and households studied were not randomly selected, and a standard survey instrument was not used. Instead, the study used participatory techniques, and focused on slum and squatter communities in which the NGOs were already active – however since Lumanti worked primarily in squatter communities this resulted in a bias toward this type of settlement. Despite these limitations, the study provided some good indicative data and raised some issues that needed further study and analysis. The study was also very rapid, cost effective (costing about \$30,000), and helped start a relationship between those planning the transaction and the NGO community.

In the slum and squatter settlements studied, the situation study findings indicated that a wide variety of sources

were used by the urban poor, including tubewells, spring-fed stone spouts, river, public standposts, both metered and unmetered NWSC connections, dugwells, rain harvesting and illegal connections (though there were surprisingly few of these). Noticeably absent was any kind of water market among the poor – there were no vendors and water was not sold by one family to another. There were wide differences in sources among different communities. Shallow tubewells were the dominant source for most of the 14 communities surveyed — almost one-third used a private shallow tubewell and over one-quarter a shared tubewell. NWSC had only a modest presence; just 5.1 percent of all households surveyed in the 14 communities had NWSC connections. Only 33 percent of households in the slum and squatter communities studied had any kind of private latrine and only 15 percent of these were deemed by the research team to be sanitary (that is, they achieved isolation of faeces). The large number of unsanitary latrines suggested a high demand for privacy and convenience, but less appreciation of the importance of safe excreta disposal.

It was concluded that there were some significant issues regarding water and sanitation for the poor. Poor people





**Poor household without connections often rely on shallow groundwater supplied from tubewells they have constructed with their own funds.**

faced water stress (though this at the time was true for all residents of the valley) and were not accessing NWSC water to any great extent. The NWSC's stated policy of assisting the poor through subsidized consumption tariffs was not actually reaching most of the people who needed this help, and there were serious inequities. For instance, the cost of a NWSC household connection in poor communities (where tertiary networks are missing and households must lay significant lengths of half-inch galvanized iron pipe to connect to the secondary mains, creating a web of 'spaghetti connections') was found during the situation study to be in the order of Rs. 11,000 to 15,000 (US\$160 to \$210)<sup>1</sup>. It was clear from the research that many of the unconnected, even if they could technically obtain a connection, could not afford one at current prices. In addition, under NWSC rules those without land tenure could not have a water connection at all, so squatters remained unserved (even though there was some indication that this rule was interpreted in a flexible manner).

## Communicating the Issues


The initial findings were incorporated into a report presented to the Private Sector Participation Committee (PSPC), the World Bank and the transactions advisors in June 2000. This report urged the PSPC to address the needs of the poor in contract design, and pointed out that

expansion of the network, rather than consumption subsidies, was the urgent priority. It was also clear that more research was necessary in order to obtain a clearer idea of what the situation of the poor was – it was also necessary to build consensus on this issue, as there were disagreements about the severity of the problem. Some government and utility officials were not convinced that the poor were underserved, feeling that the heavily subsidized lifeline block of the water tariff and the system of public standposts adequately addressed the needs of the poor; others were concerned that it was not appropriate to try to single out the poor in a city such as Kathmandu where the poor and the rich often lived side by side.

At the time of the completion of the situation study, a participatory workshop was held in Kathmandu to present the results. This workshop, organized by the NGOs that carried out the study and supported by WSP, attracted NGOs, community members, government officials and the press. Small group discussions were held as part of the workshop, at which participants discussed issues relating to the proposed recruitment of a private sector operator, tariff reform and other issues. This workshop helped kick off a process of consultation and informed civil society participation which was to be a hallmark of the transaction design.

<sup>1</sup> This is partly because the cost of a connection was 'padded' with several significant additional costs, including the meter and meter box which must both be purchased by the householder, as well as a deposit of Rs.1,000 (which was in practice never recovered by the user), and pipe costs Rs.1,600 for the first 100 feet and Rs.16.5 per foot thereafter. The total cost of a connection within 100 feet of the mains was, in theory, Rs.4,300. In practice, however, the connection costs were much higher in poor areas as they tended to be further from the mains. A connection at 500 feet, for instance, would cost about Rs.11,000 (US\$160).

## Further Research

 Funds were made available through a combination of funding sources (the Water and Sanitation Program, a Norwegian Trust Fund – executed by the World Bank – specifically set up to assist in project preparation in Kathmandu, and the Project Preparation Fund for the World Bank project) for two more studies to be carried out. The first was a willingness-to-pay study to examine household characteristics, the affordability of water connections and tariffs, and the levels of service households wanted and were willing to pay for. The second was an institutional study to look at the way the operator would interact with the poor and how the regulator, NGOs, community-based organizations and users themselves would be involved.

Phase one of the study of the Institutional Interface to Serve the Urban Poor was initiated in early 2001, with a budget of about \$35,000, and a scope of work that included looking at the relationship between the operator and the poor consumers. A report entitled *Private Sector Participation in the Water Supply and Sanitation in the Kathmandu Valley: Advice on the nature of the institutional interface between the operator and low income consumers* was submitted by the consultants in March 2001. The WSP used the proposals in this report, plus suggestions from a number of other sources, to prepare a draft report entitled *Kathmandu Valley Water Supply and Sanitation: Proposals for Service to the Poor*, submitted to the PSPC in May 2001. This report proposed that the operator be given a


positive incentive to provide connections to the poor, and undertake community-level planning to determine the types of service to provide. However, information was lacking on what poor people actually wanted and would pay for.

The willingness-to-pay study was undertaken between March and June 2001, overlapping and coordinated with the institutional study. The basic objective of this study was to determine how much the people of Kathmandu were willing to pay for improved water supply. However the survey instrument was designed to collect a great deal of additional information including household characteristics, water source use, environmental priorities and support for private sector participation. It soon became apparent that it would be very difficult to create a sample consisting solely of poor households, so the decision was made to survey households across *all* socio-economic categories in all five Kathmandu municipalities. The willingness-to-pay study thus created a very valuable dataset of relevance to the transaction as a whole, not just the issue of service to the poor.

The study, costing about US\$120,000 including sampling, data collection, data entry, data analysis and report writing, used a rigorous sampling method to randomly select 1,500 households, each of whom participated in a one hour in-person interview. Approximately 34 percent of the sample, or 520 households, were categorized as poor using a multi-faceted definition of poverty, and this subset of the data was used to shed light on the situation of the poor.

The WTP study confirmed many of the findings of the earlier study of the 14 communities, in particular showing that 29 percent of the residents of the city were unconnected to the network, and that 63 percent of these unconnected households were poor. Overall, only 51 percent of poor households had a NWSC connection<sup>2</sup>. Of the poor households in the sample without a water connection, 88 percent relied on a combination of public sources such as stone taps, public wells, rainwater, ponds and streams.

## Consultations Continue

 At the same time that the research was continuing, the process of consultation with civil society was also ongoing. Several of the civil society organizations concerned about the planned reform of the urban water sector in Kathmandu organized a meeting on March 13, 2001, and invited the PSPC and WSP to attend and make presentations. At this meeting a list of issues of concern to the NGOs present was developed, and a decision was taken to form a coalition — The NGO Forum on Kathmandu Water Supply and Sanitation — and to seek further information and capacity building in order to define their position on the proposed lease contract. The formation of this coalition was a key event in determining the success of future consultations.

The NGO Forum immediately became very active, and between March 2001 and April 2002 it held more than 15 meetings, including

<sup>2</sup> This is higher than the number found in the earlier situation study, which focused on squatter settlements, where many households are legally barred from having legal connections. The two studies together show that there are wide variations in connection rates between localities in the same urban area.



several with members of the PSPC and other stakeholders such as the World Bank, the Asian Development Bank and municipalities. The Forum, using financial support provided by the British NGO WaterAid, hired a part-time research assistant. The Forum provided comments on the willingness-to-pay study, the institutional report, drafts of the Request for Proposals (RFP) to be sent out to bidders, and prepared a summary (translated into Nepali) of the planned reforms for NGOs and communities.

## Proposals for Service to the Poor are Developed

In early 2002 the PSPC commissioned the second phase of the institutional study, with a budget of \$25,000. The scope of work included preparing a draft report on service to the poor reflecting all the feedback and comment up to that point, holding a multi-stakeholder workshop in Kathmandu, preparing sections of the bidding documents relating to the poor, and advising the PSPC on capacity building needs.

In April 2002 a report on the institutional issues, with proposals for serving the poor and more specifically, suggestions for text for the RFP and private operator's contract, was presented to the PSPC. The contents were also shared with civil society and other stakeholders through a workshop held in Kathmandu. Feedback from this consultation influenced the development of a final set of proposals submitted to the PSPC in June 2002.

The proposals are summarized in Box 1.

### Box 1

#### Proposals for serving the poor in the context of private sector participation

- Use poverty mapping to identify high-priority geographical areas in which there are large numbers of unconnected poor, and use this as the basis for targeting assistance for the poor such as improvements in tertiary networks, new connections, and new or rehabilitated standposts.
- Make general provisions, such as improving the tertiary network and restructuring connection charges, to make private and shared water connections more affordable and accessible to the poor.
- Set as a long-term goal full connectivity of all households through private connections.
- Provide a system of metered, managed standposts until funds are available to connect all the poor through subsidized private connections.
- Require the operator to prepare an annual plan for improving service to the poor and disbursing the funds earmarked for this purpose.
- Require the operator to carry out community level, participatory planning in priority neighborhoods to determine the type and mix of services.
- Ensure entry to the market for small scale independent providers.
- When evaluating proposals, ensure that the operator's proposed service to the poor includes administrative arrangements such as frequent billing, decentralized service centers, easy fault reporting, and payment for connection charges in installments.
- Avoid consumption subsidies in the tariff, and introduce a flat volumetric tariff for private connections.
- Establish a bulk, discounted tariff for standposts and water vendors.
- Make the regulatory process more transparent by requiring the regulator to hold public hearings and publish the management/lease contract.
- Build the capacity of the regulator to interpret the contract and legislation in a way that benefits the poor, including the way small-scale independent providers and shallow tubewells are regulated.
- Ensure the concerns of the poor are brought to the attention of the regulator by establishing a forum of advocates for the poor which provides regular advice to the regulator, appointing dedicated staff within the regulatory body to deal with issues relating to the poor, and having the regulator commission an independent audit every three years of the operator's performance with respect to service to the poor.
- Develop a program of on-site sanitation and hygiene promotion, funded from government and donor sources, separate from the lease contract.
- Develop suitable designs for on-site sanitation options for the poor in Kathmandu.
- Design a program of NGO and local government capacity building as part of urban water sector reform, and provide funding.

At the time that the proposals were drafted, two years after the process of addressing the needs of the poor in the context of the water sector reform had begun, there was a well-informed group of stakeholders in Kathmandu who had taken an important role in developing them, and were ready to discuss them in a constructive atmosphere. These stakeholders had at their disposal high quality data, concrete advice, and a good understanding of the issues at stake – including the trade-offs between improving the situation of the poor and improving the water supply and sanitation system overall, the nature of the proposed contract, the role and limitations of the private operator, and the responsibilities of the government.

There is now clear potential for the transaction in Kathmandu to be beneficial to the poor, and for government and civil society to work together.

## Conclusion: Elements of Success

There are a number of reasons that this very desirable situation came about, which can be summarized as follows:

1. **Civil Society Engagement:** There was a group of interested and committed NGOs who were willing to put significant time and resources into participating in consultations, and in many cases were willing to put aside their skepticism of, or outright opposition to, private sector participation in order to do so. They were also willing to listen and learn, and to admit what they did not know about water sector reform and private sector participation, and to request help in understanding the issues. The creation of an NGO

Forum with its own identity meant that consultation was greatly facilitated, as this created single point of contact for other stakeholders – the NGO Forum convened meetings, distributed documents, prepared joint statements, and decided on membership (which was deliberately kept very open).

2. **Commitment by Government:** The Private Sector Participation Committee, with the support of the donor organizations and development banks involved, was committed to designing the reform so that the poor were better served,



Low pressure in the network means that standposts must be built below ground level.

and played its part by commissioning studies, channeling funds, collaborating with the consultants, and debating various options. At the same time, the PSPC made clear what issues were open to debate and consultation, and which (such as the basic decision to engage with the private sector) were not.

3. **Commitment by The World Bank:** The World Bank team, representing the financial agency taking the key role in the

introduction of the private sector and the improvement of the water and sanitation utility, took seriously its mandate of addressing the needs of the poor, and maintained a focus on this issue throughout.

4. **Money:** There were adequate funds to carry out the research in a rigorous and thorough way, and to hold meetings and consultations. It should be noted that the NGO Forum also had funds made available to it, through an international NGO, which they used to hire a part-time staff member and to pay for photocopying and meeting expenses, and that this was decisive in ensuring the Forum's effectiveness. Many local NGOs would not be able to engage in the review of documents needed for participation in consultations without assistance.

5. **Time:** Though at the beginning the timeframe was very tight, later delays in the transaction created an opportunity for the research, consultation and development of


proposals to be carried out in a systematic manner. The process took two years, and it is hard to imagine how it could have taken much less – an important lesson for others planning private sector participation.

6. **Expertise:** The process drew on the expertise of international and local consultants from a variety of backgrounds: contingent valuation methodology, statistics, civil society, engineering, slum upgrading, institutional design, etc. The support

of the Water and Sanitation Program in sourcing these consultants, many of them leaders in their fields, and writing terms of reference for them based on an understanding of the issues was very important.

7. **Coordination:** There was excellent coordination between the consultants working on the issues relating to the poor, and the other consultants (technical, institutional) working on issues relating to the reform as a whole. This manifested itself in joint meetings, sharing of data and lively debate.

## End Note



Since its initiation, various problems have plagued the transaction. At the time of writing, it appears that the affermage contract initially proposed is unlikely to go ahead in Kathmandu. Nepal has suffered security problems and political instability, and it has proved difficult to

find private operators willing to take on the risks associated with the affermage contract form. In addition, there have been disagreements between financiers and donors as to the water supply and sanitation investment priorities. This may mean that the reform which actually takes place in Kathmandu will differ from what was planned at the time this process of addressing the needs of the poor began. A missing element from the process is still that of public consultation, and the development of a wide-reaching communications strategy which will explain the issues surrounding water sector reform to ordinary citizens.

However, the learning about the poor, the capacity building of stakeholders, the establishment of civil society consultation and the development of consensus on the issues of importance will be valuable regardless of what the future holds in Kathmandu, and provide one of the first models of pro-poor transaction design in the urban water and sanitation sector.

### Building a successful process – lessons for other transactions

- Start early. Gathering information and starting a process of consultation is always valuable, even if it is not clear what shape reform will take.
- Determine the major issues relating to service to the urban poor through rapid assessment, review of secondary data and consultation, in partnership with civil society organizations and other actors.
- Build consensus that serving the poor is an important issue which needs special attention – ensure that all stakeholders ‘buy in’.
- Engage with advocates of the poor in a transparent manner; share reports, respond to requests for information, hold workshops and meetings.
- Ensure that invalidated assumptions regarding the lives of the poor are not used as the basis for making decisions.
- Commission-rigorous research using qualified practitioners; examine water use practices, household characteristics, willingness-to-pay, obstacles to obtaining service, and institutional aspects.
- Develop proposals for serving the poor through an iterative process of consultation and debate involving all stakeholders.

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This Field Note was prepared by Clarissa Brocklehurst. Thanks are due to Jan Janssens for his support in the preparation of this case study.

All pictures provided by WaterAid, Nepal

## September 2002

The Water and Sanitation Program is an international partnership to help the poor gain sustained access to improved water supply and sanitation services. The Program's main funding partners are the Governments of Australia, Belgium, Canada, Denmark, Germany, Italy, Japan, Luxembourg, the Netherlands, Norway, Sweden, Switzerland, and the United Kingdom; the United Nations Development Programme, and The World Bank.

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