When utilities muddle through: pro-poor governance in Bangalore's public water sector

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This is a condensed version of a paper entitled *Pro-Poor Water Governance in Bangalore: A City in Transition*, prepared for UN–Habitat as part of a programme to develop a framework for assessing pro-poor governance regimes in urban water supply and sanitation.

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Acknowledgements
The author would like to thank staff at the Bangalore Water Supply and Sewerage Board for allowing her in and for sharing their insights with her. In particular, thanks are due to Salma Sadhika of the Social Development Unit for her endless time, research support and infectious enthusiasm. Thanks are also due to Gordon McGranahan of IIED for comments on an earlier draft.

SUMMARY: The aim of this paper is to show how messy and slow paths to reform can have useful lessons for public-sector water utilities in developing countries, most of which continue to operate in a climate of muddling through. Using the case of the Bangalore Water Supply and Sewerage Board (BWSSB), this paper analyzes the shifts in policy and operations behind the BWSSB's innovative work to connect the city's slum dwellers to the piped water supply. Rather than routinely criticize public utilities for their failure to reach the poor, this paper argues that local successes that start small and are slow to diffuse should be recognized and disseminated across organizations. This is particularly important in the wake of the targets set in the Millennium Development Goals, which run the risk of masking both the importance of how public agencies learn and the factors driving genuine changes in organizational behaviour and urban governance.

I. INTRODUCTION

PUBLIC WATER UTILITIES in developing countries are routinely criticized for failing to provide adequate water services to the urban poor. Often large and inefficient, they struggle as institutions to remedy failed state-led planning models. In the literature on service delivery and best practice, most of the attention paid to efforts to alter governance structures and improve performance for the urban poor has been directed at innovative programmes based on public–private partnerships, private sector participation and deliberate public sector reform.(1) For many water and sanitation utilities, however, innovation is never so dramatic – most never get a moment in the policy process when such changes can be negotiated, developed and implemented. The reforms described in this literature seem like a distant prospect for reformers in utilities that continue to "muddle through", hoping to alter the trajectories to which their organizations have so long adhered.(2) The reality for most public sector utilities is quite different. Paths to reform are often slow, messy and resisted at every turn, and quite frequently are the result of initially unintentional or external drivers of change. The outcomes, however, can be decidedly pro-poor. The lessons from this process are never neat – but public sector utilities in political climates unlikely to foster the kinds of sudden political opportunities needed for deliberate reform have a lot to learn from the experience of those currently muddling through.

This is particularly important because of the recent international policy

attention given to "scaling up" slum upgrading programmes and improved domestic water supply connections in the wake of time-constrained targets set by the Millennium Development Goals.[3] While they are important, such targets run the risk of masking both the importance of how organizations learn and the factors which drive genuine changes in governance. To reach these targets and maintain them sustainably, many public sector utilities will have to undertake difficult and often slow paths to reform before water governance can ever truly be characterized as pro-poor.

This paper tells the story of one such public utility in the Indian city of Bangalore, and the changes afoot in water governance in a city that is truly in transition. The term "water governance" is used in reference to "*…the range of political, social, economic and administrative systems in place to develop and manage water resources and the delivery of water services at different levels of society.*"[4] The term "pro-poor water governance" is used to describe the direction such systems take to deliver water at the poorest level of society. Using this framework, this paper focuses deliberately on a public sector water utility and its recent efforts both to direct service delivery to the poor and to make those services more effectual.

The ultimate aims of good governance are effectiveness and equity. City governance of this kind is best achieved in the presence of a dynamic civil society to press the case of the poor and hold the state to account, a city government with the capacity to deliver, and a political system in which the votes of the poor count, bringing decisions on resource allocation closer to actual users.[5] In Bangalore, only the first of these conditions genuinely holds, and then only very recently. Local government has failed to provide any clear vision or policy directives for the urban poor, and responsibility for slums has fallen between the cracks created by the division of responsibility for service provision between state and local powers occupying and competing in the same urban space. The city's political system has fostered the support of the growing corporate economy, leaving poor groups to operate in a system where their political representation has little real power.[6]

Despite these odds, Bangalore's public water utility presents an unlikely success story for pro-poor water governance. Due to a series of unrelated, unexpected external policy decisions, the Bangalore Water Supply and Sewerage Board (BWSSB) was jolted out of its longstanding complacency towards slums. In particular, the implications of multiplying non-revenue sources such as public taps and illegal connections forced the management to rethink its approach to service provision in slums. In a climate of increasing participatory governance, the utility found itself subject to the demands of local groups for improved performance and accountability. Building on a precedent for slum development work set by donor-funded pilot projects, the utility embarked upon a path of organizational learning, which is slowly and haltingly transforming the BWSSB's relationship with slums, and improving the connection rate of residents to a legal domestic supply.

II. BANGALORE'S URBAN POOR

a. Explosive urban growth

BANGALORE, THE CAPITAL of the southern state of Karnataka, is one of India's fastest-growing cities. Its extraordinary transformation since the early 1990s from a sleepy and leafy green city into a global technology centre known as the "Silicon Valley of India" brought with it migration from

1. See, for example, Davis, J et al. (2002), *In Search of Good Governance: Experiments from South Asia's Water and Sanitation Sector*, Water and Sanitation Programme, New Delhi; also Caseley, J (2003), "Blocked drains and open minds: multiple accountability relationships and improved service delivery in an Indian city", IDS Working Paper No 11, Institute for Development Studies, Brighton.

2. The classic text on muddling through is Lindblom, C (1959), "The science of muddling through", *Public Administration Review* No 19, pages 79–88.

3. Goal 7 of the Millennium Development Goals is to ensure environmental sustainability. One of its three targets is to halve the proportion of people without sustainable access to safe drinking water and sanitation, and another is to achieve a significant improvement in the lives of at least 100 million slum dwellers.

4. Definition used by the Global Water Partnership as in Rogers, P and A W Hall (2003), "Effective water governance", TEC Background Paper No 7, Global Water Partnership, Stockholm.

5. Devas, N (2001), "Does city governance matter for the urban poor?", *International Planning Studies* Vol 6, No 4, pages 393–408.

6. Benjamin, S (2000), "Governance, economic settings and poverty in Bangalore", *Environment and Urbanization* Vol 12, No 1, April, pages 35–56.

all socioeconomic groups. Census data from 2001 put the total number of inhabitants of the Bangalore municipal corporation at 4.3 million, with the population for the entire urban agglomeration at 6.5 million.[7] In metro terms, it is the fifth largest city in India, just ahead of its great IT rival, Hyderabad. Between 1951 and 1971, the city more than doubled its population, almost doubling again in the subsequent decade to emerge as one of India's prime metropolitan regions. Bangalore has grown within a planning framework that is ill-equipped to respond to the explosive change. Rapid growth has taken its toll, and many of the negative effects of urbanization – traffic, congestion, pollution, inadequate infrastructure and loss of open space – are being felt acutely by residents and officials alike.[8] In particular, this growth has had a major impact on the city-wide demand for water, and on the formation of new slums.

b. Extent of poverty and slums

While Bangalore has relatively few slums compared to India's major cities, the numbers are relative. Approximately 15 to 20 per cent of metro Bangalore's residents are slum dwellers, compared to more than 30 per cent in Kolkata and Mumbai.[9] One of the reasons the proportion of the population living in slums is comparatively low is that the number of urban poor living in non-slums is about equal to the number living in slums. A 2000 baseline survey conducted by AusAID indicates that while 16 per cent of the population in the corporation area lives in slums, about 37 per cent of the population can be classified as urban poor.[10] Yet most interventions aimed at improving service levels for the poor, including the interventions described in this paper, are targeted at slum areas specifically, thus bypassing a large share of the urban poor in the process.

Accurate and consistent numbers for slum dwellers are notoriously difficult to come by. For example, the 2001 census of India estimates that only 345,200 slum dwellers, or 8 per cent of the population, live within Bangalore corporation limits, while the Karnataka Slum Clearance Board (KSCB) puts that figure closer to 12 per cent. Its most recent data indicate that close to 600,000 slum dwellers live within city municipal boundaries in 367 slums, of which 209 are "declared slums".[11] Other surveys indicate that there are approximately 1 million slum dwellers in the entire urban agglomeration, although the distinction between slum dwellers residing within the corporation area and those outside it is important in terms of institutional responsibility for service delivery.[12] Non-governmental organizations and independent researchers consistently estimate an even greater number.[13]

Many slum dwellers initially come to the city from the neighbouring states of Andhra Pradesh, Tamil Nadu and Kerala, as well as from the rural areas of Karnataka. Slums are a mirror image of these migration patterns, reflecting many linguistic, professional and caste groups. Most slum residents are employed in low-status occupations, and include rag pickers, sweepers, cleaners, construction workers and unskilled manual labourers. A large proportion of Bangalore's slums are populated by scheduled castes and, in most cases, they are in the majority.

About 50 per cent of the city's slums are at least 30 years old, and only about 30 per cent are less than 20 years old. Most slums are small- to medium-sized pockets of poverty scattered throughout the city, and mostly in the western parts. More than 40 per cent of Bangalore's slums have fewer than 1,000 inhabitants, although a few big slums bring the city average to 2,500 inhabitants per slum.[14] Slums on the periphery tend to be larger, and

7. The Bangalore Metropolitan Area consists of the core area of Bangalore City Corporation, eight surrounding urban local bodies and a further belt that demarcates the limits of the Bangalore Development Authority (BDA). The Bangalore urban agglomeration covers an area only slightly larger than the official metro area. Here, "corporation" and "municipal" are used interchangeably solely with reference to the corporation, which is known locally as the Bangalore Mahanagara Palike (BMP).

8. Ravindra, A (2000), "Management of large and small cities: the case of Bangalore", mimeo.

9. In India, "slums" are defined under Section 3 of the Slum Areas (Improvement and Clearance) Act 1956 as areas where buildings are unfit for human habitation or where there is "*…dilapidation, overcrowding, faulty arrangement and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light, sanitation facilities or any combination of these factors which are detrimental to safety, health and morals*."

10. AusAID Bangalore Masterplan Project (2002a), "Overview report on services to the urban poor. Stage 2", AusAID, Australia.

11. "Slum declaration" or "notification" is a lengthy and complex procedure to formalize the status of slums. Slums go through a series of stages as part of the process until they are fully declared. Declared slums are entitled to certain benefits and land rights, so "declared slum" status is coveted. Declared status, however, is not representative of actual development or of the assets and infrastructure in

Table 1: Land ownership of slums in Bangalore, 2000

Land ownership	Number of slums	Percentage
Private	141	40.8
City corporation	70	20.2
BDA	68	19.7
Government	47	13.6
KSCB (including shared land)	11	3.2
Other	9	2.6
Total	346	100.1

SOURCE: Karnataka Slum Clearance Board 2000 data in AusAID Bangalore Masterplan Project (2000), "Overview report on services to the urban poor. Stage 1", AusAID, Australia.

they tend to be more densely populated on private than on government land.[15] Although land ownership rights are rarely clearly demarcated for an entire slum, they play an important role in determining service provision levels and the governance processes available to a particular slum's residents. In Bangalore, 40 per cent of slums are located on private land, and a further 20 per cent each are located on land owned by the Bangalore Development Authority (BDA) and the Bangalore City Corporation (Table 1).

III. GOVERNMENT AS SERVICE PROVIDER

a. Institutional overview

BANGALORE IS A typical example of a city where government has traditionally held a "…*monopoly on the orchestration of governance*".[16] Yet monopoly is perhaps a misnomer here, given the number of government actors involved. Although the water utility is formally charged with water and sanitation provision in the city of Bangalore, many government organizations are involved in services for the urban poor. Water is formally the responsibility of one organization, but slums are formally the responsibility of several organizations, including the Karnataka Slum Clearance Board (KSCB) and the city corporation, both of which own land on which slums are located. The responsibility for water provision *in* slums is therefore blurred, perhaps an important contributory factor as to why the service levels of domestic water supply to the urban poor have been of such poor quality. The intersection of the slum and water sectors has created a web of relations among government actors that defies a simple vision of a public utility as sole provider.

The KSCB is the nodal agency for slum improvement throughout the state. It was established in 1975 under the Karnataka Slum Areas (Improvement and Clearance) Act, 1973. Its budget is allocated annually by the state government of Karnataka, although it receives further loan finance from national housing agencies. The KSCB is staffed by engineers, and no social development experts work in the organization. Staff interaction with slum dwellers is limited to field visits, when technical assessments are prepared for identifying, declaring, improving or clearing a slum. The Act authorizes the KSCB to declare an area a slum, to execute improvement works, to recover expenses and interest, to recover maintenance costs, to demolish buildings, to clear an entire slum and to acquire land for rehabilitation. Improvement activities are restricted to declared slums only. After the KSCB provides basic amenities, the slum is, in theory, handed over to Bangalore City Corporation for regular maintenance and further development.

a given slum.

12. Most areas in the surrounding urban local bodies have yet to be networked by the BWSSB, which supplies in bulk to only some of these areas. This case study focuses on the municipal corporation area where the BWSSB's responsibility is clear – the delivery model for the peripheral areas is still evolving.

13. Schenk, H (2001), *Living in India's Slums: A Case Study of Bangalore,* Manohar, New Delhi.

14. See reference 13.

15. AusAID Bangalore Masterplan Project (2000), "Overview report on services to the urban poor. Stage 1", AusAID, Australia.

16. See reference 4, Rogers and Hall (2003).

Table 2: Distribution of slums across BWSSB operating divisions

Division	Number of slums	Number of households	Population
Central	43	8,988	45,457
West	79	30,720	196,218
South	101	32,703	180,126
North	80	18,187	104,022
East	58	11,402	65,177
Total	361	102,000	591,000

SOURCE: BWSSB Proposal for the Urban Poor, from Karnataka Slum Clearance Board 1999 survey and AusAID Bangalore Masterplan Project (2000), "Overview report on services to the urban poor. Stage 1", AusAID, Australia.

At the municipal level, Bangalore City Corporation, known locally as Bangalore Mahanagara Palike (BMP), is the city's local body, and consists of both an executive and a legislative branch. The city council has 100 elected representatives, known as councillors or corporators, one from each of the 100 wards. They are elected for a five-year term, and each year a new councillor is elected mayor by the city council. On paper, many urban functions are the responsibility of city government, as advised in the 12th Schedule of the Indian Constitution. In practice, however, decentralization has not been warmly embraced by most states, following the 74th Constitutional Amendment.(17) Whereas the legislative council members are directly elected, the executive branch of the BMP still consists of senior civil servants headed by a commissioner appointed by the state and drawn from the ranks of the elite Indian administrative service. On balance, the appointed commissioner is more powerful than the elected mayor.

With respect to services, the BMP is in charge of stormwater drains, solid waste management, street lighting and public footpaths, and its Health Department implements sanitation works such as the cleaning of drains throughout the city. Thus, the BMP is in charge of many functions pertaining to slum improvement, and is responsible for maintaining the slums the KSCB has supposedly notified and improved, although the BMP does not have any dedicated slum division. Slum maintenance work is carried out by ward-level engineers, alongside routine works for a given area.

The Bangalore Water Supply and Sewerage Board (BWSSB) is a traditional, publicly owned water utility struggling to cope with insufficient funds, rotating leadership, explosive population growth, expanding urban boundaries, hiring and promotion constraints, high water costs, and political interference, primarily in the setting of tariffs. It was created in 1964, at a time when parastatals were a fashionable form of government, and took over formal government responsibility for water and sewerage provision from the BMP, which had previously been in charge. Although it is responsible for providing for the city of Bangalore, the chairman of the board is appointed by and reports directly to the state government of Karnataka. Slum dwellers as a constituency have no direct say in matters governing parastatals, and their only local vote is cast in favour of a ward councillor who may or may not have any real power.(18) Given the current climate of half-hearted decentralization of state powers to local bodies, this government structure continues to create friction, as well as opportunities to shirk responsibility for the provision of water to slums.

The BWSSB is divided into five geographically discrete maintenance divisions (Table 2). Corporate planning, capital works, auditing, water source development and finance are considered separately from maintenance. The five maintenance divisions are further sub-divided into 17 sub-

17. The Constitution (74th) Amendment Act was passed in 1992 and came into full effect in 1993. The amendment serves as the urban counterpart to the 73rd Amendment, which promotes decentralization in rural areas. The aim of the amendment is to increase the effectiveness of urban local bodies as democratic units of self-government, and it makes provision for the devolution by the state legislature to the municipalities of powers and responsibilities with respect to economic development and social justice. States retain a great deal of power concerning the degree to which they actually implement the suggested provisions, and retain the right to keep representation in local government, to monitor the election of the chairman of the municipality, etc.

18. Slum dwellers also cast their vote in state and national elections. Their state representatives are the members of the legislative assembly, from whose ranks the chief minister of the state appoints his cabinet. Depending on their portfolios and political experience, members of the legislative assembly can also hold considerable political sway over both the governance and the employees of parastatals.

divisions, each with about three or four service stations reporting back. The service stations, the lowest field unit in the chain of command, supervise daily maintenance, water flow and bill collection for the entire city. Each is headed by an assistant engineer who works with a team of junior engineers, water inspectors, valve men, meter readers, contractors and plumbers. These frontline workers also supervise new connections, including those to slums.

The BWSSB derives its annual revenues from water supply and sewerage operations in the form of sanitary charges and water tariffs for bulk, industrial, non-domestic and domestic consumption. In addition, it receives loans from donors and agencies such as the Karnataka Urban Infrastructure Development and Finance Corporation (KUIDFC). Its primary responsibilities are to provide water supply, sewerage networks and sewage disposal, to ensure a sufficient domestic water supply to the required standards, and to levy and collect water charges on a no-loss–no-profit basis.[19]

A critical point is that the BWSSB does not pay for any capital investment associated with new street-level infrastructure out of its own budget, including new distribution mains to previously unserved neighbourhoods. It does pay for minor rehabilitation works to its existing network and assets.[20] Its capital works division handles the cost of new infrastructure through direct "deposit contribution" of funds from third parties, such as the Bangalore Development Authority (BDA), the BMP or the KSCB. It will, therefore, never initiate an expansion programme without the required funds in hand. All neighbourhoods are connected by distribution pipes that have been paid for by a third party, while residents pay the materials and labour costs for connecting their individual homes to the distribution network. For example, the sale price of new layouts developed by the BDA includes an "infrastructure cess" (i.e. a tax on the value of the land), which covers the cost of laying the new mains. In older neighbourhoods, these pipes have been funded through various historical infrastructure investment patterns, but in large part by the municipality. Thus, the central question is which third party will pay for slums?

19. See reference 15.

20. The BWSSB does pay for some capital works on water source development and major rehabilitation works through a dedicated capital account, but not for street-level infrastructure.

b. Water supply and the existing network

The lack of pro-poor water governance is felt particularly acutely in Bangalore, as the city is not located near any perennial water source and consequently suffers from a very high unit cost of water and a sinking groundwater table. The current demand for water in Bangalore is estimated to be 850 million litres of water per day (mld), increasing to 870 mld in the summer months. Estimates for the quantity of water currently available range from about 830 to 995 mld. Considering the requirements for industrial use, and the amount of unaccounted-for water (at least 30 per cent), the water available for domestic consumption is roughly 100 litres per capita per day. Piped water supply comes from two primary sources; a small proportion comes from the Arkavathy reservoir, but most of the supply is pumped at great cost from the Cauvery River, 100 kilometres away and 500 metres below city level.

The BWSSB network is expanding rapidly. In 1995, the city municipal boundaries were extended, increasing the number of wards from 73 to 100. Most of the newly added wards were minimally, if at all, connected to the piped network. Some of the old wards were themselves only partially connected, leaving large swathes of the city with no access to the BWSSB

supply. Between 1991 and 2003, domestic metered connections increased from 213,000 to 400,000, an increase in the percentage of households with connections from 25 to 35 per cent. But the supply is very unbalanced. The southern and the western parts of the city, closest to where the massive pipelines from the Cauvery River enter the city, get the best access to the system, while the north remains the least served.

In 2003, approximately 6,000 borewells and 15,000 public taps were maintained by the BWSSB, quite apart from the private water market which also pumps groundwater for profitable sale to domestic and commercial users. Close to one-third of households still use public taps inside the corporation area. Of those who use public taps, 7 per cent have no other source of water, while the remainder use the taps, along with BWSSB connections and groundwater. More than half of households say that they have access to BWSSB water only three days per week on average. A day's supply is about seven hours during the rainy season and four hours during the dry season, but this varies greatly throughout the city.[21]

c. Access for the poor

Historically, the existing piped network has not served the slums well. Declared slums are eligible for individual connections to the BWSSB network, but only if they have proof of land title. Most slums cannot meet this stringent requirement. Thus, until very recently, most slum dwellers in Bangalore relied on public taps, tankers, borewells and illegal connections for their water supply. Public taps were provided, either legally by public agencies, or illegally by politicians, usually on the eve of an election. Illegal connections were common in the city-centre slums and the older wards, where it was fairly easy to tap the water mains, often with the blessing of local ward-level politicians and even employees of the water utility.[22] Because there was (and still is) no ring-fencing of the utility's maintenance divisions' operations, no direct connection was ever made between the total water supplied and the metered demand. Wasted water simply fell into the convenient category of unaccounted-for water.

Moreover, there have been no funds forthcoming nor legal obligations from third party agencies ostensibly in charge of slums to connect them to the BWSSB network. Because slums are the responsibility of various agencies, depending on land ownership, location and declared status, they have tended to fall through the cracks in this delivery model – responsibility is eagerly passed around. This problem has been compounded by the striking lack of social development professionals in any of these government agencies, or mandates from the top to improve the lives of the urban poor.

As groundwater has dried up, most slum dwellers have had to rely on their own informal access measures and coping mechanisms, such as water purchase and illegal tapping of the lines. A survey of slum residents, part of the "report card on urban services" exercise undertaken by a prominent local NGO, revealed that irregular supply, long distances from taps and insufficient water were the central problems faced by slum dwellers.[23] Slums in Bangalore's newly added wards have no access to the BWSSB supply, and residents use borewells and buy their potable supply from vendors. The cost of water in these private water markets is significantly higher than the per litre cost of water supplied by the BWSSB.[24] In the city centre, slum dwellers are more likely to have access to public taps and illegal connections.

21. AusAID Bangalore Masterplan Project (2001), "Study report on willingness to pay of households in Bangalore city", AusAID, Australia.

22. When BWSSB employees explicitly take payments from slum dwellers or politicians for allowing illegal connections, they might be considered "corrupt". However, when they simply knowingly turn a blind eye, they might more aptly be termed "negligent" with respect to their duties and the long-term health of the utility, but perhaps "loyal" to local allegiances, or even "sympathetic" to the needs of the poor. In many instances, the engineers allow illegal connections unknowingly, a behaviour pattern which reflects their general unwillingness to go into slums. For an analysis of corruption in the water and sanitation sectors, see Davis, J (2004), "Corruption in public service delivery: experience from South Asia's water and sanitation sector", *World Development* Vol 32, No 1, pages 53–71.

23. Paul, S and S Sekhar (2000), "Benchmarking urban services: the second report card on Bangalore", Public Affairs Centre, Bangalore.

24. Most water vendors are private operators who deliver water as a business either through tankers or in pots mounted on bicycles. The BWSSB also sends tankers to slums, supposedly free of cost, but the drivers and operators frequently charge for the water upon delivery.

IV. WATER POLICY SHIFTS

a. A confluence of events

THREE MAJOR EVENTS since the year 2000 have prompted a change in the BWSSB's approach to slums. First, three excellent pilot projects funded by a large donor programme demonstrated that water could be piped to slums legally, that residents were willing to pay for household connections and water supply, that the traditional stumbling block of insecure tenure status could be managed, and that systems could be designed to meet the needs of specific typologies of tenure and density. Second, a decision made by the BMP to end funding for public taps forced a realization at the BWSSB that it would, over time, have to shut down all public taps, a politically impossible solution. Third, the legislative and executive branches of the BMP agreed to pay, as a lump sum contract, for the complete extension of the BWSSB's piped network to the city's new and partially added wards, in view of its responsibility to fund basic infrastructure within municipal boundaries. Slums previously in the periphery would suddenly have the opportunity to connect to the network, and the BWSSB could expect either a surge in illegal connections or the possibility of more revenue.

Together, these events have stimulated a change in the nature of water governance for the urban poor in Bangalore. Notably, these events were all prompted by decisions external to the BWSSB. Although changes in governance would never have taken place without a willingness to innovate on the part of BWSSB staff of all ranks, in particular under the leadership of a new and dynamic chairman, the initial impetus to change the status quo was externally driven, accelerating the BWSSB's willingness to tackle and experiment with water supply in slums. This pattern of reform, whereby a series of external reforms can drive a change in policy within a government organization, has been well documented elsewhere.[25]

25. See World Bank (2003), *World Development Report 2004: Making Services Work for Poor People*, The World Bank, Washington DC.

b. The AusAID pilot projects

In 2000, the Australian aid agency AusAID began a large project to provide the BWSSB with a comprehensive master plan for the city's future water and sewerage network. Over two years, this study team, headed by Australian consultants, conducted a master planning exercise to reform the BWSSB, including its water sources, treatment plants, unaccounted-for water, tariff structure and human resources. One relatively small component of the exercise was a series of three pilot projects in slums. The pilots were included because of pro-poor conditionalities of Australian aid, and they were taken very seriously by the AusAID project team and the BWSSB staff. The aim of the pilots was to show how water and sanitation services could be delivered by a utility to slum households. Two of the central issues were: first, the ability and willingness of households to pay for metered water connections; and, second, the longstanding constraint of tenure status in slums.

First, a detailed willingness-to-pay study found that slum dwellers were willing to pay for improvements, within reasonable limits.[26] About 80 per cent were willing to pay for shared connections, between Rs 16 and Rs 29 per household per month.[27] The very low-income households in slum areas were not willing to pay more than 1 per cent of their household income for a BWSSB water supply. This is low, given that the current

26. See reference 21.

27. The current exchange rate is Rs 45 = US$ 1.00.

minimum fee for a water and sanitary connection is Rs115 per month. One of the central aims of the pilot projects, threfore, was to test willingness-to-pay in practice, for individual and group connections.

Second, in the old system, residents needed to show the BWSSB both land title documentation and a recent property tax receipt in order to qualify for individual water and sanitation connections. Most slum dwellers could not meet this requirement. The AusAID project team recognized that it would have to address this issue in the design of the pilots if they were ever to be scaled up. The master plan project submitted a proposal to the BWSSB, which adopted a resolution to consider lease documents and other "proof of occupation" as an adequate basis for granting individual connections. Ration cards, identity cards, election cards or even electricity bills were considered sufficient proof of residence because they stated where people lived. Group connections were sanctioned for clusters of families where tenure status was highly unstable, no documentation was available, and the ability to pay was low. A distinct water tariff was created for group connections, so that residents would not be penalized by the existing increasing block tariff structure.

Three slum areas were deliberately chosen for their different characteristics. The first, Cement Huts, is a preliminarily declared slum on a small pocket of land in the city centre. About 600 people live there, in 106 households. It is a highly congested slum, whose very poor residents work primarily as rag pickers. It was selected in order to address the challenges of insecure tenure, high congestion, low ability to pay and the need for shared infrastructure. The second slum, Sudamnagar, is not a recognized slum, although the land belongs to a trust which leased the land to residents for decades, giving them secure tenure but no land titles. It is a planned layout on gently sloping land. About 1,600 people live there, in 299 households. Residents work primarily as casual labour and in the service industry. Challenges here include the absence of formal land title and severe water shortages. The third slum, Chandranagar, is a fully declared slum with a partially planned layout on the steeply sloped edge of a valley. This large slum houses 3,600 people, or more than 900 households living in 550 houses. Income range is highest here, with residents employed as artisans, labourers and household servants. The central challenge here was the steep incline of the settlement and the concomitant high soil erosion and drainage problems. It was also chosen to elicit the kinds of problems associated with diverse socioeconomic composition.[28]

The overall experience of the pilots was very positive. In total, more than 1,000 households, or almost 6,000 people, were reached. In Cement Huts, three public taps were replaced by nine metered connections, each shared among 10–12 households; community toilet blocks were restored, drains were improved and the roads paved with concrete. In Sudamnagar, water supply and sewer lines were provided and 200 individual metered connections (66 per cent of houses) were provided. In Chandranagar, water supply lines were extended, 400 individual connections (73 per cent of houses) were established, sewerage networks were installed, new drains were constructed, roads were improved with stone slab and concrete, and solid waste management systems were put in place. In all three slums, a local water and sanitation committee was established.

Financially, the pilots did not try to prove that full cost-recovery is possible in slums. For a start, the interventions were not restricted to the water and sanitation sectors. The cost of street-level infrastructure was borne by AusAID, and residents simply had to pay for individual connections to the

28. AusAID Bangalore Masterplan Project (2002b), "Project proposal extension of services to the poor: Kaveri Agamana", AusAID, Australia.

street-level pipes and monthly water charges.[29] This was not envisaged as a major problem in terms of replicability, as third parties pay for street-level pipes while residents pay only connection fees and for associated materials and plumbing charges. The majority of residents were willing to pay for these connection costs, particularly because the connection fee for slums was significantly reduced.[30] Slum dwellers who opted for individual connections then paid the full monthly charge of Rs 115 to the BWSSB. Even the poorest households in Cement Huts, among the most vulnerable residents in the city, were willing to pay between Rs 20 and Rs 30 per month for shared water connections, and Rs 15 per month for the toilet facility.

The pilots set several important precedents for connecting slums sustainably to the piped network. They demonstrated that slum dwellers were willing to pay, that group connections in dense, insecure and poor slums were a viable option, and that contractors were willing to work in slums under good supervision and with adequate compensation. More importantly, the tenure stumbling block was removed. Community participation was a central component of the pilots, and it showed how involvement with residents and NGOs active in slum areas could rally slum dwellers to work with BWSSB engineers, rather than against them. Many progressive measures were formally adopted and absorbed by the BWSSB. The many lessons garnered by the experience of the three pilots created a potential platform for learning within the BWSSB and expanding the scale of operations in slums – if the BWSSB chose to use the precedents in this way.

c. The "problem" of public taps

Many of Bangalore's slums are connected to the BWSSB network through a system of public taps, which vary in their quality, reliability and accessibility. Public taps are prominent in the old wards of the city, but less so in the newly added wards. After responsibility for water supply in Bangalore was transferred to the BWSSB in 1965, the utility also assumed responsibility for the management of public taps; however, it was not responsible for meeting the costs of this water, supplied to residents free of charge. According to the 1964 Bangalore Water Supply and Sewerage Act, "…*the Board may, subject to the payment by the Corporation of such charges as the Board may determine, provide gratuitous supply of wholesome water to the public within the City of Bangalore and may, for that purpose, erect public hydrants or other conveniences*."[31] In 2002, there were approximately 15,000 of these public taps, of which 7,000 were authorized and billed for.[32]

For years, this arrangement persisted, and the BMP did foot most of the bill from its municipal revenues, through a pricing structure based on joint gauging of the water flow undertaken by the utility and the city every few years. The last gauging exercise took place in 1997, when they estimated that the average public tap supplied 22,000 litres of water per day at a cost of Rs 3,000 (circa US$ 66) per tap per month. After years of mounting arrears, the BMP announced in 2002 that it would stop paying the bill altogether for this public supply, and a one-off debt settlement was agreed. The reasons for this decision are not entirely clear, but interviews suggest that the decision was taken in the belief that city revenue was insufficient, that the BWSSB had the social responsibility to provide for slum dwellers and could fund taps using its own cross-subsidies, and that increasingly erratic water supply throughout the city altered the original terms of agreement.

The consequences of this decision, taken to their logical conclusion, are extreme. Initially, the BMP nodded its approval to the BWSSB that, over

29. Water tariffs do not allow for full cost-recovery of water supplied either. The total production cost of water in Bangalore is Rs 16 per kilo-litre (kL), but the tariff for the lowest domestic slab is Rs 6 per kL. Water is therefore highly cross-subsidized – tariffs for non-domestic consumption greatly exceed the production costs, with an industrial tariff of Rs 60 per kL.

30. A house with an area of 150 square feet is now required to pay only the meter cost of Rs 550; houses measuring between 151 and 600 square feet pay Rs 800; and houses larger than 600 square feet pay the regular fee of Rs 1,800.

31. The Bangalore Water Supply and Sewerage Act, 1964, Chapter 38, "Public water supply".

32. There are in fact about 21,000 known public taps, of which 6,000 have been disconnected or plugged. About 15,000 known taps are still operational, of which just under 7,000 are legally connected with the express permission of the BWSSB. The remaining taps are connected illegally.

time, the public taps would have to be disconnected. It agreed to leave the matter to the BWSSB and not get in the way of future disconnections. Water supplied by the utility to public taps amounts to more than 30 per cent of accounted-for water and 20 per cent of all water going into the distribution system, and is thus a very important source of lost revenue, if no one covers the cost.(33) With more than 15,000 known taps scattered across the city, the BWSSB was faced with a dilemma. On the one hand, according to its no-loss–no-profit mandate, it could not afford to continue the practice of supplying water free of cost. On the other hand, disconnection drives to date had met with an expected degree of political resistance, and a city-wide disconnection drive would only incite large-scale opposition from the community, most likely with the support of the very councillors who had voted in favour of abandoning payment for public taps in the first place.(34) The BWSSB had to begin thinking through how to curb this loss of water and revenue, ideally transferring all users of public taps to paid domestic connections in the near future.

33. The BWSSB lets 25,000 million litres per month (mlm) of water into the system. Roughly 65 per cent, or 16,000 mlm, is accounted for. Of the accounted-for water, public taps consume 5,000 mlm (30 per cent), while domestic consumption totals 8,900 mlm (55 per cent). Defence, non-domestic uses, industry and railways consume the remaining 15 per cent.

34. In May 2003, the state federation of slum dwellers, KKNSS, organized a protest outside the BWSSB when they feared that the Board would actually shut down all public taps. It called on the Board to measure the impact on slum dwellers before shutting them down, and asked what size the revenue loss for ongoing public taps would really be, compared to high levels of corruption surrounding contracts and tenders.

d. The "package programme"

In 2002, the city council agreed to pay the BWSSB for a series of investments in new infrastructure in the water and sanitation sectors for wards without a distribution network. Although 27 new wards had been added to the official corporation roster in 1995, only the original 73 wards were supplied with feeder mains and street-level distribution pipes, of which 28 wards were only partially supplied. The BMP and the BWSSB eventually realized that it would require a large number of tenders and contracts to link the new and partially added wards to the existing network. This would be a lengthy process, open to frequent delays and siphoning of government funds. The BMP voted to foot the bill for the entire network, financed in part through loans, and agreed with the BWSSB's capital investments division to divide the work into three major contracts, involving nine wards at a time. These three bundled contracts, known as "packages", were put to tender separately, with a fourth contract designated for the "missing bits" of the partially added wards.(35)

35. The three packages were awarded to three separate contractors for a total sum of approximately Rs 1,200 million, or US$ 26 million. The fourth package, for the partially added wards, was worth just under US$ 4 million.

Through this initiative, which was due for completion in late 2004, the newly added wards of the city will have been provided with supply, feeder and distribution pipes, so that every house can have a domestic connection. The effect of this decision is important in terms of potential future access by the urban poor. Whereas piecemeal projects to extend the pipes would have been slow and unlikely ever to have reached large slum areas of the city, this "package programme", as it came to be known, promised to deliver pipes to every street in the city. Even if slum households could not afford to connect through individual connections, their future chances of securing access to water through other means, such as public taps, political interference or illegal connections, increased exponentially. The BWSSB was thus mobilized in part to avoid a rush on such non-revenue connections.

The actual policy directives with regard to connecting slums under the package programme are unclear. BWSSB engineers in the capital works division claim slums should be connected, and some have worked very hard to ensure that contractors and sub-contractors fulfil their obligations to do this. Members of the BMP also insist that all slum areas will be covered. However, not all slums were included in the quick and rough costing exercise that preceded the tendering process. Although a clause for cost overruns was deliberately worked into the contracts, in part to account

for the extra slum work, to date, some slums have been connected with street-level pipes, while others appear to have lost out. Almost as a tacit acknowledgment of the uncertain fate of slums, a few particularly large slums have been given special packages under express directives from local politicians and the BMP, to ensure that they are really covered. Residents in the slums that have benefited, and who used to get water from tankers or from groundwater, are now eligible for household connections. Many are quite likely to connect illegally to the street-level pipes if the BWSSB does not get there first. The BWSSB, already under pressure from citizen watchdog groups, foreign donors and its own executive board for the low quality of service, high volumes of unaccounted-for water and the potential for severe water scarcity in coming years, now has a whole new set of reasons to pay attention to slums.

V. GOVERNANCE IN TRANSITION

a. A utility's embrace in context

AS A RESULT of these policy changes and unexpected side-effects, the BWSSB has begun a slow process of reform, ceding its traditional unwillingness to deliver water to slums. It is important, however, to understand the wider context of changes in governance in Bangalore. Three very specific events prompted the BWSSB to think anew about slums, but much broader processes of social and political change are forcing organizational reform and creating new patterns of governance for service delivery more generally. It is important that the case of slums be viewed against this city-wide backdrop of governance in transition.

While Bangalore has not benefited particularly from a more assertive sub-national democracy through local government, the rise of a civic movement has challenged significantly the monopoly on governance that prevailed in the city for decades. Important local NGOs such as Civic Bangalore, Janaagraha and the Public Affairs Centre have worked hard to promote participatory governance in city affairs, rallying citizens to their cause, issuing report cards on public agencies, reducing asymmetries of information, and generally encouraging citizens to get involved with their government and hold it to account.[36] Drawing on the language of new public management and participatory action, this "third force" has showcased the concept of good governance to Bangalore since the mid-1990s.[37] Participation in ward-level meetings has increased, as has the number of complaints entered into government agency systems. While none of these NGOs focuses solely on slums, all have made efforts to include slum dwellers in participatory governance and to raise their profile in everyday political discourse. These high-level NGOs are routinely part of public hearings, are in direct contact with the senior management of most government agencies, feed information to an active local press, and garner a great deal of public support for their efforts both locally and internationally. Bangalore's third force has radically altered the landscape of governance by increasing the leverage that outside players have on government agencies, and obligating them to respond to calls for more inclusive decision-making and greater accountability.

In this context, the BWSSB has made a concerted effort of its own to improve water governance for current consumers, the vast majority of whom are not slum dwellers. It has embarked on many new ventures to

36. See, for example, Paul, S (2002), *Holding the State to Account: Citizen Monitoring in Action*, Books for Change, Bangalore.

37. Heitzman, J (2004), *Network City: Planning the Information Society in Bangalore*, Oxford University Press, New Delhi.

work with citizens, including, for example, new phone and on-line complaint monitoring systems, with heavy penalties for engineers in the event that complaints are not addressed. Another prized innovation has been the series of monthly water *adalats*, or fora, held at the maintenance sub-division level, where citizens meet face-to-face with engineers, air their grievances in person, discuss water problems as a community, and generally assert their voice. The BWSSB receives almost daily attention in the local press, which has given it both pride of place in the city's eyes and has opened it up to routine investigation. It remains, of course, a state-owned public utility, full of the bureaucratic hurdles residents routinely decry; but its progress towards being an organization open to complaints, suggestions and information-sharing is both significant and substantive.

b. Social development in the slums

The AusAID pilot projects, the implications of future water losses through non-revenue sources, and wider changes in governance have all forced the BWSSB's management to rethink its approach to service provision in slums. The pilots in particular have led to a very concrete outcome, namely the creation of a social development unit (SDU) at the BWSSB. One of the requirements of the AusAID project was to appoint a senior social development expert to the BWSSB to work as an in-house counterpart to the project team. Prior to that, the BWSSB had been composed almost entirely of engineers, with the exception of the chairman, financial and public relations staff, and the more junior secretarial and administrative staff. After the AusAID project team left in 2002, management agreed to retain the social development expert on an extended contract to head the new SDU, with the sole responsibility of connecting slum dwellers to the piped supply. The SDU consists, at present, of this one senior officer; it remains severely understaffed and has no budget. But the officer has been given a free rein, and has embarked on an ambitious programme to scale up the work of the original three pilots. By the end of 2004, two years after the AusAID pilots, the SDU had targeted approximately 45 more slums.

In the absence of specific directives from above, the SDU has shaped the procedures for targeting and intervening in slums. Currently, it selects slums in an ad hoc manner, depending on various circumstances such as slum-dweller-initiated demands, the presence of cooperative engineers, and the capacity of local NGOs. After selecting a slum, the SDU follows a series of steps that, together, form a sort of "supply chain" of procedures necessary for the provision of water to slums. The BWSSB meets with local groups and residents, elicits local preferences in community meetings, conducts site visits with locally stationed engineers, ensures that street-level infrastructure improvements are provided, issues application forms, collects application files and connection charges,[38] issues meters, orders plumbing work for house connections, conducts trial runs of water supply, and ensures ongoing operations.

The approach is participatory in spirit, although there are, in effect, only four potential outcomes for slum dwellers, namely shared metered connections, individual metered connections, disconnection of illegal supply, or no improvement. Given these choices, most residents prefer some form of legal, metered connection, and generally cooperate, although political interference has led to stiff resistance in some areas. Despite this limitation to participation, the SDU does work closely with slum dwellers and commu-

38. A complete application file consists of: a BWSSB application form with photograph; a photocopy of an acceptable ID card; a floor plan of the house with an address; a road-cutting exemption form; and a cash payment of Rs 550 or Rs 800 depending on the size of the house.

nity leaders to ensure that connections are actually installed and are satisfactory – the utility has genuinely transformed the way in which it negotiates with and listens to residents.

To date, approximately 15 slums have actually received water through this process. The remainder are slowly working their way towards a test run of water through new pipes, or the conversion of illegal connections to existing pipes. While this is low in terms of the number of slums actually served, the intervention is building momentum over time, particularly in terms of organizational learning. It took a while for the SDU to gain its footing after the departure of a large and supportive AusAID project team. Moreover, the SDU had to build credibility with engineers, in order to be taken seriously and to establish a methodology for working as an intermediary between slum dwellers and the BWSSB. Most of these slums have been targeted in the past year alone, and if the SDU were to be expanded, the scale would increase exponentially.

The SDU begins working with new slums using local NGOs as entry points. These organizations are vitally important if water connections are to be improved. The SDU officer alone cannot rally hundreds of residents in a given slum, ensure their files are complete, collect cash payments and coordinate demands for domestic connections with the maintenance division engineers who ultimately sanction them. The SDU officer's time is already spread very thinly, both across the city and down the water supply chain. In contrast, NGOs provide a local space to work, community point persons whom slum dwellers trust, information on households and existing infrastructure, and a constant presence in the slum to hold all parties accountable, including the SDU.

Given this prominent role, it is fortunate that Bangalore has an active group of local NGOs operating in slums, including such organizations as AVAS, Fedina, Mythri Sarva Seva Samithi and World Vision. The state federation of slum dwellers, the KKNSS, is directly involved in day-to-day water governance with the BWSSB in only a few of the slums. However, many of the local link persons appointed by NGOs to liaise between the NGO and a given community are members of the KKNSS themselves. Moreover, the community-based organizations of slum dwellers are usually affiliated with the KKNSS in some way, and most NGOs also have close ties with it. It thus serves as a kind of umbrella advocacy body for organizations engaged in slum work, and it protested when there was a strong threat to disconnect public taps.

During the pilots, each slum was associated with one NGO, which was paid to organize the community and represent its interests vis-à-vis the BWSSB. This model was continued, although NGOs are no longer paid for their efforts. This has increased the strength of the community voice in the presence of a strong and dedicated NGO. But because the current approach of the SDU places a great deal of faith in NGOs to help organize connections, it can leave slum dwellers at the mercy of the private interests and capacity of whichever NGO happens to work in their area.(39) Although, at times, slum dwellers can have a direct line of communication with engineers through independent collective action, they are more likely to be heard through prominent intermediaries such as the SDU and NGOs, to whom engineers relate more readily. This weakness is particularly important for slums with uneven access patterns – residents with a good supply are unlikely to join in collective action and rally for those without.

39. The NGOs do not present a united front either, particularly with respect to acceptable water pricing.

c. Frontline engineers

The Bangalore case does not so much reveal how pilots can rapidly be scaled up but, rather, how water governance can evolve from within the confines of a public sector organization to embrace new forms of governance and adopt new patterns of working with the poor. Indeed, one of the more interesting features of pro-poor governance is the evolution of new working relationships between agency staff, residents and NGO workers, which mitigate the impact of poverty and exclusion for the poor.[40] As the BWSSB increasingly penetrates the city's slums, the nature of the relationship between engineers and the world of slums has altered.

Maintenance engineers must organize site visits, meet with communities, ensure street-level infrastructure, order meters, sanction connections, and ensure consistent billing and payment. Despite this added workload, some engineers have responded because of new pressures and incentive structures at the BWSSB. For example, frontline engineers cooperate with the SDU in response to hierarchical mandates. The SDU has the strong support of senior management, a vital element in a supremely hierarchical organization. Once the SDU targets a new slum area, local maintenance engineers are obliged to cooperate with the social development officer. Certainly, some engineers respond more enthusiastically than others, and some stall progress in their service station but, ultimately, the management supports the SDU's efforts in the event of serious non-compliance on the part of maintenance engineers. Frontline action is a direct response to the seriousness with which senior management has embraced the idea of slum work and the SDU as a permanent fixture.

New internal mandates have also had the unintended consequence of encouraging engineers to explore new relationships with the slums, breaking down the apathy which prevailed. Unlike previous heads, the chairman during these years was very committed to increasing revenue collection and turning the finances of the BWSSB around. While the official line was always that unaccounted-for water should be minimized, he introduced a new management style to this public sector organization long-accustomed to ongoing high debt and low revenue collection. For example, management set monthly revenue targets for each of the sub-divisions and service stations. Viewed in this light, slums present a source of untapped revenue. If their targets are high, sub-division heads may even be eager to cooperate with the SDU in order to collect the additional revenue that accrues to them from both initial connection fees and monthly tariffs paid by slum dwellers. Although strong hierarchy and changes in management style have exerted pressure on frontline engineers to respond, intra-organizational variations in outcome are high. For example, the SDU has struggled to make headway in the BWSSB's South Division – because water is plentiful and a high concentration of industry ensures consistently high revenues, the division has not required the slums to meet its new targets.

Financially, the BWSSB has been open to innovation in the slums because of the low costs of any slum improvements. The financial implications of the plan to extend services to slums are minimal. The costs of extending water mains to partially newly added wards and newly added wards have been covered by the BMP through the package programme. Slums in older wards are already near water mains, to which they may even already be connected. Area engineers only have to draw on discretionary maintenance funds to build linkage pipes or improve water mains and underground drainage in other minor ways. Moreover, because area

40. Dove, L (2004), "Providing environmental urban services to the poor in Andhra Pradesh", *Environment and Urbanization* Vol 16, No 1, April, pages 95–106.

budgets are not ring-fenced, revenue from slums does not need to cover any costs directly associated with slum work. The package programme has thus created an unusual funding climate and the opportunity for the BWSSB to connect slum dwellers to the piped supply with very little investment or financial risk.

d. The future of reform?

The combined efforts of all these actors have transformed the way in which slums are treated by the public utility. The process, however, is very long, and it can easily take up to six months to connect a single slum. Residents can wait months between the initial deposit for their connection fee and the delivery of the meter, or even the actual supply of water. Perhaps in response to this laborious participatory approach, the BWSSB recently put forward a new proposal to connect all of the city's slum dwellers over a three-year period. Initiated in 2003 by the head of the maintenance division, the proposal aimed to connect the urban poor to the piped supply all at once, with individual connections funded entirely through grants, and without the time-consuming task of community mobilization. Moreover, instead of asking slum dwellers to pay for the connection charge, the household piping materials and the monthly tariffs, the proposal scrapped the first two – slum dwellers would pay only monthly tariffs, which were further reduced to Rs 60 per month, or half the current charges, by lowering the minimum consumption slab. Taking the 102,000 households scattered across five operating divisions (see Table 2), total project costs would have been Rs 270 million (US$ 6 million), which the BWSSB proposed to raise through grants from the BMP, the state, and donors.

This proposal was a mixed blessing. On the one hand, it basically ignored four years of learning from the pilots and social development. It was a purely supply-driven approach, without any of the nuances emphasized through participatory action and NGO involvement. Because the authors of the proposal were not directly involved in the pilots or the ongoing work of the SDU, there appears to be no cognizance of the importance of managing slum improvement as a process. Community members, NGOs and the SDU are in constant demand, even after water is supplied. Yet this proposal makes no mention of the kind of maintenance required in slums, a classic problem widely discussed in the infrastructure literature, whereby initial investments receive all the attention to the detriment of ongoing maintenance.[41] For example, the proposal explicitly states that "…*individual household connections will have to be encouraged* ***in all cases****, as they are easier to manage since responsibility for payments rests with the user*."[42] The precedent set by the pilot project in Cement Huts, and ongoing efforts to promote shared connections, were conveniently ignored. On the other hand, the proposal did aim to improve the water supply for the city's slums at a much faster pace and at a lower cost to them than currently possible. It is clear proof that the package programme and the problem of public taps have at the very least motivated the BWSSB to work on behalf of the urban poor, if not directly with them.

More recently, donors who have expressed an interest in funding this proposal have requested a return to the approach developed by the AusAID pilots and refined by the SDU. The key question for pro-poor water governance in Bangalore is which of these two approaches will prevail in the future. Will slums be connected through ongoing efforts of a BWSSB staffed

41. See, for example, World Bank (1994), *World Development Report 1994: Infrastructure for Development*, The World Bank, Washington DC.

42. Internal memorandum of the BWSSB, emphasis added.

by social development specialists working with NGOs and community leaders? Or will large-scale, fast-paced programmes dominate the treatment of slums by the utility? If the SDU is dismantled in favour of the latter approach, it is not clear what role, if any, social development specialists will be allowed. Who will ensure that, once connections are made, slum dwellers will receive a genuinely improved service with reliable water supply and consistent billing? Each approach has very different implications for the future framework of water governance in Bangalore.

VI. CONCLUSION

OVER APPROXIMATELY A five-year period, the political, social, economic and administrative systems put in place in Bangalore to deliver water services have turned decidedly more pro-poor. In a system of splintered government responsibility for slums, the BWSSB has opted to take some definitive responsibility and provide water to slum areas. Undoubtedly, efforts are slow, piecemeal and perhaps inconsistent. Slum dwellers are not being given a genuinely participatory place, and the utility appears unsure as to how it will approach slums in the future. Moreover, the current slum connection rate is heavily dependent on the enthusiasm of individual engineers, revenue shortfalls relative to targets, the SDU's capacity, and both the willingness to participate and the ability to pay of slum dwellers themselves. But for the first time, slums are being serviced as a distinct category by the water utility, and new working relationships are being forged between the utility, NGOs and residents, as they learn to cooperate and bargain with each other.

Although Bangalore's new water governance patterns are not altogether "good" in the sense of being inclusive, accountable, transparent and predictable, they are moving in that direction. It is important to build on local instances of success within an organization, and to disseminate the patterns that led to such positive outcomes across the organization, rather than routinely viewing public sector organizations as monolithic entities and judging them by their failures. Privatization in the water sector, and wholesale public sector reform, are not likely to happen in the near future in much of South Asia anyway. The international community would be in a much better position to achieve the Millennium Development Goals if it worked with local instances of what works, rather than routinely decrying poorly functioning public sector organizations and throwing the baby out with the bath water.