

The Peripheralization of the Urban Poor in the Local Manifestations of the Global Economy

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1. Introduction

The purpose of this paper is to critically assess efforts on the part of the urban poor in Africa to address their lack of adequate access to local potable water and sanitation resources. In some instances, communities of the local poor have collectively successfully mobilized to exert pressure on public governance structures to address such issues, but in other situations they have failed to act as effective pressure groups. What explains success or failure in such situations? The ultimate aim of the study is to situate the activities of impoverished urban residents in the developing world in efforts to overcome their peripheralization within a broader discussion of globalization and the provision of public goods.

Saskia Sassen (2003) has argued that the best level of analysis for the “decoding” of globalization is at the local level. Assuming this is a correct perspective, it logically follows that the condition of the urban poor with respect to access to basic water and sanitation services in Africa’s recent rapid urbanization provides a key indicator of the global division of wealth and power. The local and most visible manifestation of this division in the international economic order is the rapidly growing population of poor urban slum dwellers in formal and informal settlements who lack adequate housing and who must cope with an inequitable distribution of basic services of sufficient quality such as water, sanitation, transportation, electricity, etc. (Tipping 2005; Hicks 1998).

In many parts of Sub-Saharan Africa there is steady growth in population, and this strains local food and water supplies. In addition, in the countryside, there tends to be a lack of jobs and other forms of economic opportunity. Consequently, people are being “pushed” out of rural areas and “pulled” into urban areas in expectation of a better life. Instead, more often than not, the cities they migrate to are congested and bereft of adequate public services (e.g. environmental sanitation and public health services, a dearth of formal employment and affordable and livable housing, etc.). In this context, rural to urban migration compounds the problems associated with high density and low basic services. In fact, from 1970-2000 average African urban growth rates were the highest in the world at nearly five percent, while these countries experienced an average decline in GDP during most of that same period. (Hicks 1998).

Much of the research on urbanization and slums in low and middle income countries has focused on either the effects of slum life on the poor in terms of health outcomes, economic losses, and the like, or problems and solutions of formal governance and finance at the local, national and international levels (UNECA 2003). However, faced with limitations in water supply and sanitation services the poor use various methods to compensate, often in ways that adversely impact public health and that are destructive to the surrounding infrastructure (e.g. the proliferation of hand dug wells in cities like Lagos, Nigeria creates health hazards from contaminants in the water that can also affect the piped water supply) (Abiodun 1997). The overuse of open wells in cities can also deplete groundwater supplies and affect land subsidence and infrastructure damage to the water and sewerage pipes that exist (Briscoe 1993.)

Specific historical determinants in developing countries, such as the legacy of land use patterns and residential segregation or differentiation under colonialism, have laid the

foundations for the spatial differences in service distribution that correlate with other demographic characteristics, such as ethnicity and race. The gender dimension of the problem results from traditional methods of water gathering, done by women in areas without access to the piped supply, who must devote hours out of each day collecting water, while simultaneously engaged in activities such as attending to household chores, farming, attending school, and perhaps even being involved in income generating activities in the local economy.

Because of these varied contextual factors and the added factor of the particular hydrology of surface and groundwater supplies in a given area, the consequences of water scarcity can look similar across the globe, but the underlying causes can be very different. There is a difference between the absolute lack of water in, say, drought prone areas, and the relative lack of water due to inadequate infrastructure, residential special characteristics, pricing policies or poor governance that may afflict water treatment and equitable distribution in relatively “wet” areas. There may also be differences across municipal areas with an absolute lack of resources to provide water and sanitation for all (this may or may not be accompanied by a dearth of capital or regulatory freedom for private actors to step in and fill the breach) and areas with sufficient material and financial resources but where the water and sanitation sectors have not been prioritized by national or local governments.

Methods of governance in various circumstances, a combination of history, politics and the hierarchies of social and cultural relations can facilitate or inhibit democratic participation in the governance and equitable distribution of public goods. For this reason, the results of inadequate water and sanitation may look the same in terms of aggregate statistics across metropolitan areas, but in actuality are manifestations of very different problems that produce specific responses by different actors and require differentiated solutions. Accordingly, some research has begun to problematize inadequate water and sanitation provision in different ways. These include distinguishing the unserved by poverty status and residence in a low or high income country (Tipping 2005); or the capacity of different societies or localities to adapt to scarcity (Turton 1999); or indexing water by poverty status and residence in a dry or humid area (Feitelson and Chenoweth 2002). In addition, there is research showing that the demand for public services is a critical art of urban policy analysis, although supply is better understood, which is reflected in the near universal use of descriptive statistics to evaluate public service provision (Crane and Daniere 1996: 19.)

Delving beneath aggregate statistics for metropolitan areas reveals the dynamics of intra-metropolitan differences in the demand for and access to water and sanitation services and uncovers the use of social networks to obtain services or goods, reliance on the local private market (which often results in the paradox of the poor paying more for basic services such as vendor-supplied water than the better off who are privileged with connection to the water mains, drainage networks or electric grids that reduce the cost of services in comparison with the poor) or community mobilization, often with assistance from international actors (e.g. non-governmental organizations, bilateral and multilateral aid agencies), to successfully demand services from the public and/or private sector or the mobilization of the affected community itself to provide improved water and sanitation for itself.

What lessons can be learned from case studies of how local communities have recently addressed this serious problem of poor access to potable water and sanitation services in contemporary Africa? The remainder of this essay highlights the experiences of community based groups in urban areas of Senegal and Rwanda in attempting to address water and sanitation problems. Particular attention is paid to the opportunities and constraints that presented

themselves to the affected communities. The findings from these cases will form the basis for some theoretical insights and policy implications which emanate from the cases.

2. Profiles of Case Studies

Although water and sanitation are traditionally considered to be goods with positive externalities whose provision should fall under the responsibility of government, the public sector in low and middle income countries has not been able to meet the water and sanitation needs of the urban poor. While World Health Organization figures of improved water and sanitation coverage between 1990 and 2002 do show aggregate improvements in the percentage of those with improved global water and sanitation coverage, millions remain without access.¹ For example, in terms of access to “improved drinking water” (household connections, public standpipes, protected wells and rainwater) in sub-Saharan Africa, coverage has improved by 9% between 1990 and 2002 and by 4% for improved sanitation (connection to public sewers or septic systems, pour-flush and pit latrines). These figures reflect 280 million without access to improved drinking water (41%) and 437 million without access to improved sanitation (64 %) (WHO 2004).

In terms of urban coverage, there has been no change in the percentage of people served in urban areas, although the absolute number of those served has risen along with the absolute number of unserved, attributable to both demographic growth and rural to urban migration, which has increased the population in Africa’s towns and cities by 100 million people. As mentioned earlier, statistics computed in this way do not reveal intra-metropolitan variation in access to improved water and sanitation services. Moreover, there are levels of improved service, such that while a community standpipe may provide access to improved drinking water quality, it does not guarantee access to sufficient quantities of drinking water needed for healthy populations. Additionally, the drudgery and opportunity cost involved in water collection from public sources adds an economic burden to the worst off, and falls the hardest on women and girls. Similar issues arise with differentiation in improved sanitation sources. In a study of 12 informal urban settlements in Harare, Zambia and South Africa, Manase et al (2001) found that “access” can mask gross overcrowding of communal sanitation facilities (as is the case of Mbare, a high density section of Harare, where 1,300 people share a communal toilet with six squatting holes.)

According to the World Bank (2002), although most of the urban poor depend on non-state providers for water and sanitation, who sustain themselves without government resources and survive only by offering services which customers want and are willing to pay for, relatively little research has been done on these actors and they are seldom included in larger projects. Each case highlighted in this study is an example of non-state intervention in the water and sanitation sector. Non-state providers include small-scale enterprises such as community groups and water vendors that provide water for the urban poor lacking access to the piped water supply or formal sanitation systems (Nickson 2002).² The cases in this study are drawn from the West and Central regions of sub-Saharan Africa:

- The *Eau Populaire* (Popular Water) Program, Dakar, Senegal.
- The SAM Muhima Women’s Group, Kigali, Rwanda.

¹ The WHO/UNICEF Joint Monitoring Programme define “access” in terms of distance to source and usage.

² The term “non-state provider” is also used to refer to a very different subsector--global transnational corporations involved in private and public-private partnerships in water service provision.

Dakar, Senegal *Eau Populaire* (Popular Water) program

A decade ago, the Government of Senegal inaugurated sweeping reforms in the urban water sector. The reforms involved dissolving the state-run water company and creating a new asset-holding company that owned all fixed assets in the government's name and had a mandate to manage the sector. The production and distribution of potable water was assigned to a separate private entity. The private company was to act as an intermediary between consumers and the state. The reforms had been encouraged by the World Bank because the state-owned water service was inefficient, expensive and consistently operated in "the red".

This reform program has been implemented in urban / peri-urban areas, installing metered standposts to serve poor households who previously used polluted well water. The program is demand-responsive rather than relying on supply-side targeting of the poor. Implementation is through a partnership between the government water agency *Societe Nationale d'Exploitation des Eaux du Senegal* (SONES), the state asset holding company which owns the infrastructure, *Senegalaise des Eaux* (SdE)—a private water operating company, and *Environnement et Developpement du Tiers Monde* (ENDA)—an international NGO with local roots. Other project actors are *Office National de l'Assainissement du Senegal* (the state organization responsible for sanitation), neighborhood associations, municipalities, the national government and ENDA's mostly foreign donors.

The policy of the Government is to provide water services to all households not matter what their social or economic status. At the same time the impetus for the reforms in the first place was the perception of policy makers and the World Bank that the water sector needed to grow in order to both meet the immediate needs of the urban populations---which continues to grow rapidly---and for the state water company to operate as a solvent economic enterprise. In the process the latter objective has largely been met, but the former objective has not. The reason is that the policy is flawed and needs serious attention.

The government's policy is to subsidize the water supply of the poor. It promotes three types of subsidies (Debomy *et al* 2005):

- *Bornes fontaines* (standposts, aimed at the newest and poorest households in urban areas.
- So-called, "social connections," for more-established households.
- Progressive (lifeline) tariffs, for households with private connections.

Bornes fontaines are designed to meet water needs where pipe networks do not yet exist, and they are also supposed to provide a choice for poor families who find it too expensive to connect to an existing network. The most acute needs among the urban poor are in *quartiers spontanés*, informal settlements of recent poor migrants. As mentioned above, just over half of Senegal's population is classified as poor. Most of these reside in the countryside, but many are also in the cities, and the poorest of the poor tend to be the residents of *quartiers spontanés*.

Even though the government's water policy is claimed to be "pro-poor", the poorest of the poor are not benefiting much from the program. One of the main reasons is that in order to qualify for subsidies, families must hold a deed to the land on which they live and there must be a house on the land. While some poor can meet these criteria, a large number cannot. They do not live in established settlements, and must share standpipes. By 2002 the number of standpipes in Dakar had grown from 940 in 1995 to 1424 (Brocklehurst *et al* 2004).

SDE and SONES work with a variety of community groups and NGO's that assist them. The NGOs provide assistance to community groups in requesting, installing and managing standposts. The community chooses the standpost operator, and ENDA provides it with assistance in establishing a local water council. This type of community participation in the policy process is laudable, but the problem comes with the way in which the system of water purchase and delivers operates. The poorest households which depend on standposts for their water are precluded from having their access to water subsidized because the social connection programs are for those who live in established neighborhoods. In the poorest neighborhoods connections are few, and if there is a standpost it must be shared by several families, not a single household. The result is that the most destitute populations are forced to pay the highest tariff of anyone in the country. The system involves a graded cost-recovery that is regressive, and because of the volume of water used by the customers' standposts they actually subsidize the water of more well-to-do families.

The government of Senegal can be complemented for realizing that the State has to go beyond simply subsidizing consumption, but by not targeting the poorest of the poor with access to subsidies, a key objective of the water reforms are not being realized. The State water company is operating more efficiently, but its "pro-poor" strategy must be significantly reformed before it is to have the desired effect of providing safe water to the entire urban population and to empower the urban poor.

SAM Muhima Women Group in Kigali, Rwanda

In the wake of the human and physical devastation left by the 1994 genocide, water supply systems feeding Rwanda's principal cities were disrupted by the violent conflict, also impacting water quality. Rwanda was able to restore its urban water supply infrastructure with the help of international NGOs such as engineering personnel from the International Committee of the Red Cross and the efforts of local volunteers, which were able to restore prewar levels of water distribution (with inherent problems of fuel and power shortages) by October of 1994. (Nembrini 1995). By early 1995, Rwanda's administrative structure was operating again and water supply distribution was restored to prewar levels (Nembrini 1995). However, the sanitation infrastructure was and remains much less developed. While 91% of urban Rwandans have access to improved water supply (and 32% with household connections), only 55% have access to improved sanitation with no existent sewerage connections in the country (WHO 2004). Unimproved sanitation includes shared, open-pit and bucket latrines. Inadequate household refuse collection (i.e. the use of open refuse pits or irregular city solid waste management services) exacerbates problems of urban sanitation if waste is dumped indiscriminately. For example, in the presence of uneven latrine coverage, refuse pits can be the site of defecation and breeding grounds for mosquitoes and flies increasing the potential for disease outbreaks, particularly in urban areas (Manase et al 2001). Trash collection also alleviates the environmental health problems in conjunction with sewerage and drainage systems, for example, by preventing drainage systems from becoming blocked after heavy rainfall leading to floods and potential cholera outbreaks and other vector-borne diseases (Manase et al 2001; Wright 1997).

In the Rwandan capital of Kigali, solid waste management is largely the province of development associations, usually run by women, who combine traditional waste management practices with the latest biomass processing technologies to manage community waste and

household garbage (Kithome 2005). The SAM Muhima Women's group in Kigali³ is an example of such a development association. Founded by Séraphine Hagenimana as an emotional and financial support group for women who were widowed by the genocide, the group attempted to earn money through income generating projects such as garbage collection and processing and selling vegetables (Kithome 2005). However, the activities of the group began to become much more profitable upon receiving seed money of \$73,000 from USAID in partnership with U.S.-based Associates in Rural Development, Inc. The infusion of funding for salaries, equipment and technical support allowed the project to expand garbage collecting activities to 5,000 households. The garbage is then transformed into briquettes for industrial and household fuel uses and fertilizer for agriculture. Demand has outpaced supply and the organization is now comprised of 142 full and part-time workers, most of whom are women with little formal education. (Kithome 2005). Effects of the program are financial and environmental. On the financial side, SAM Muhima now has over \$9,000 USD in operating funds and all the workers have bank accounts. In addition, the local government has reduced its expenditures for waste management by 50%, since there is less waste to transport and manage in the landfill. On the environmental side, reportedly less deforestation is occurring (98% of Rwandans use wood or charcoal for fuel) with the availability of an alternative fuel source. (Kithome 2005) and the project is contributing to the improved environmental health of Kigali.

A list of factors contributing to the successful growth of the SAM Muhima project would have to include the fact that the concept of waste recycling is a traditional practice with community buy-in (there was no formal education campaign needed to "promote" waste recycling) and the fact that the project builds on existing community activities (i.e. people were already paying private actors to collect garbage); the project goes beyond removing household waste and dumping, transforming waste into sustainable usage; and the project provides an income generating opportunity for local residents, making this an attractive sanitation project (Manase et al 2001). Nearly 90% of the project participants are women, who have gone from having to beg, according to project founder Hagenimana, to a steady income and established bank accounts. The fact that the project's services have significantly impacted the budget of the local sanitation authority and that demand is growing for SAM Muhima briquettes and organic fertilizer are positive signs of the project's sustainability (if cash flow does not become a problem) and its potential for empowering the individuals involved over the long term.

3. Theoretical Insights

The UN declared the 1980s to be the International Drinking Water Supply and Sanitation Decade, which was reaffirmed in 1990 at the New Delhi Global Conference on Safe Water and Sanitation. Briscoe (1993) cites the two standards of unsuccessful initiatives emerging from these world forums: the first standard being some for all versus more for some (because water must be supplied by the government and the poor cannot pay, the policy decision is made to spread resources thinly), and the second standard being cost recovery, based on research showing that people will pay 3-5% of their income for improved water services. For the urban poor in developing countries, most of whom are supplied by water vendors and not the formal system, distance and cost are significant constraints to obtaining adequate access to water resources (Cairncross 1990). The case study of Dakar, Senegal reveals the importance of targeting the

³ Information about the SAM Muhima Women's group is from an article written by Mussolini Kithole, Director of the Kigali recycling project for the U.S. based Associates for Rural Development, Inc., which provided the funding for SAM Muhima.

poorest of the poor in government water policies. Key to accurate targeting will be understanding all of the dynamic involved in access to water (and sanitation) supply for the urban poor and redefining access along these lines.

Public health is impacted by both water scarcity and inadequate sanitation in high population areas, discussed in the literature on urban service delivery. Effects of inadequate supply include water pollution (from poor sewerage and sanitation—deVilliers 2000; Young 1986; Cairncross 1990; Crane and Daniere 1996) and adverse environmental impact and health outcomes, such as water borne disease, deforestation and air pollution caused by city residents having to use wood fuel and coal to boil poor quality water (Briscoe 1993). Although population density and development in cities can lead to water contamination and disease, Crane and Daniere (1996) note that the literature on water access reveals that water quality is not the most serious health hazard for urban poor, but the lack of access to enough water to provide for hygiene, which promotes disease transmission. In addition, costly water means less money for food and increased risk of poor nutrition and health (Crane and Daniere 1996; Cairncross 1990).

There are dynamic linkages between water supply, sewerage, drainage and environmental sanitation that impact both poverty and public health. The fact that more than half of the urban poor in developing countries are served by non-state providers in the water and sanitation sector demands greater attention within the competing emphases on governance reform and privatization of urban service delivery systems. Independent providers are more flexible than the public sector in meeting the needs of the urban poor; yet the ad hoc approach to service delivery represented by the composition of the non-state sector mean that government remains a key player in meeting environmental health needs. Given the fact that the urban poor are already engaged in meeting their own needs (the most positive of which are when activities are linked to the finance and technical support structures afforded by NGOs and/or in public-private partnerships), new thinking must be done around the regulatory frameworks, mechanisms for coordination and public accountability that can allow for greater flexibility and participation in the water and sanitation sector in the face of inadequate provision and underfunded and strained public governance systems.

4. Policy Implications

As Manase et al (2001: 4) point out, “[f]inancing of sanitation services and cost recovery are among the key issues that affect project sustainability.” Indeed, in both case study examples, seed funding is provided by outside organizations, and while the SAM Muhima project is earning revenue, it will be a while before it is financially self-sufficient. Given that the project’s activities have reduced the fiscal burden on municipal waste management services by 50%, funding for new technologies, additional training and technical support, new employees, etc. will still need outside funding, at least in the short term. Cairncross (1990) identifies the major policy approaches that have emerged to improve water supply for the poor in the developing country context as privatization, metering, and water demand management with the attractiveness of other approaches decreasing “in proportion to the degree of creativity they demand from the engineers and administrators responsible for the sector” (p. 121). Briscoe (1993) agrees, noting that when it comes to providing adequate supply and quality of water, the emphasis has been supply driven, ignoring the importance of demand and preference of consumers in selection of appropriate policies. Because of inequitable access to water for the poor, the movement towards the commodification of water and privatization of water delivery deserves special scrutiny (Gleick et al 2002).

Access is another key issue, both in terms of how it is defined and what role it truly plays in decisionmaking in the water supply and sanitation sector. The history of the sector has been driven by supply-side solutions, without regard for consumer preference, practice or affordability (in case or in time), and this problem becomes acute for the urban and peri-urban poor, who are often disregarded by the public governance structure and whose living spaces are regarded as temporary or illegitimate and subject to slum clearance. The literature defines access in a variety of ways, which Crane and Daniere (1996) summarize as exposure to service (distance to source or number of piped connections) and the geography and transportation literatures, which have mixed distance to source with the attractiveness of sites, other mix variable for access that are actually policy choices with other variables that reflect the behavior created in part by the policy. Different policy options have emerged in the literature on willingness to pay (WTP) for water services, using methods to determine WTP such as indirect (revealed preference) and direct (contingent valuation) to study how households make choices about water sources (Whittington et al 2002; Briscoe 1993). However, although studies show there is demand for improved sanitation and water supply services, Menase et al (2001) note that often there “are no institutional means through which this demand can be expressed” (pg. 3) given income, the perceived benefits to improved water or sanitation, lack of trust in local authorities, and land tenure.

The links between water quality and supply and environmental sanitation and their effects on health and poverty alleviation are documented in the literature and yet, the coordination between water supply and sanitation is inadequate. Crook (2002: 5) points out that particular types of sanitary and solid waste collection systems can “generate a cross-over or interconnection between human and other wastes which have serious public health consequences, although this interconnection is not often recognized in the literature. The problem derives basically from the interaction between uncollected solid waste, drainage systems (storm drains, ditches and streams) and sanitary technology.” If non-state actors are to become more involved in service delivery, the need for coordination will become paramount. Given the ad-hoc nature of non-state providers in terms of organization, project orientation and goals (e.g. increased sanitation coverage, health education, or poverty alleviation), funding and revenue sources, and technical capacity, harmonizing goals and coordinating efforts will be a principal challenge and may require a new types of state intervention that go beyond direct service provision (e.g. enforced regulation, the creation of quasi-governmental authorities such as special districts or boards, and mechanisms for non-state providers to be publicly accountable) that would enable governments to respond to environmental crises in the face of limited direct involvement.

5. Conclusion

Approaches to addressing specific urban challenges or water and sanitation services require both broad institutional and organizational changes in the water and sanitation sector. This means building upward from the community level work of non-state providers and down from national and municipal policy environments. The need for a supportive enabling environment to permit reforms to work is foundational. There remain serious questions about determining the nature of reforms in a given context, and different reform approaches require assessing the municipal and national political economy, within the wider global context.

The variety of perspectives on these issues involves differences about the causes of the failures of water supply and sanitation services as well as the location of responsibilities for the

financing of infrastructure and maintenance. Debates about financing, user charges and cost recovery in water or sanitation systems will not be resolved by technical information alone, and decisions about specific technical approaches are inherently affected by and interact with complex dynamics of political economy. For example, while it has been accepted in many dialogues with civil society organizations that some forms of sustainable cost recovery are required for improved outcomes, determining systems for cost allocation and recovery is not easy.

This paper has given a wider context to the debates about water and sanitation services in urban Africa, locating them within the peripheralization of much of the continent within the global economy. It has explored both immediate and longer term factors that affect human well being in terms of water and sanitation systems. It has identified the importance of bringing together questions of political economy, local communities and technical approaches into one framework for devising new approaches to water and sanitation systems.

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