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Mechanisms to Ensure Pro-Poor Water Service Delivery in Peri-Urban and Urban areas

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The TPP project

The Tripartite Partnership Project (TPP) aims to strengthen sector capacity for planning and delivery of pro-poor Water, Sanitation and Hygiene (WASH) services in Ghana, through the generation, packaging and dissemination of knowledge, especially with regard to sustainable and equitable management models, based on the partnership between public, private and civil actors.

Within the framework of this project, a number of sector studies have been executed. This included a review of global literature on pro-poor urban and small town WASH services, an institutional mapping of the small town and urban WASH sector in Ghana, and a GIS mapping of small town and urban management models in Ghana. A number of these management models identified in Ghana, was selected for further study through the documentation of case studies. The sector review and case studies have been published under the TPP Working Document series. TPP Working Documents should be considered work-in-progress. Comments and suggestions for improving the documents and enhancing understanding and further refinement of pro-poor urban management models are very welcome.

The first phase of the TPP Project, which concentrated on the sector review studies and the documentation of interesting models and best practices, was funded by members of the Netherlands Water Partnership NGO-Group: ICCO, Aqua for All and SIMAVI.

The best practices gleaned from these studies will be applied in the design of tools and guidelines for replication within the Ghanaian WASH sector. In order to learn from real experiences and to fine-tune methods and tools, a number of pilot projects will be implemented in (peri-)urban areas and small towns. Three of these pilot projects are funded through an Africa Water Facility grant from the African Development Bank. The knowledge components continue to be supported by ICCO, Aqua for All and SIMAVI.

The project is coordinated by TREND Group, in a close collaboration with CONIWAS, CWSA, PRUSPA and IRC International Water and Sanitation centre.

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1. INTRODUCTION

This report presents an overview of mechanisms for ensuring access to safe and affordable water services for the urban poor, as found in global literature. After presenting the main issues related to access to water services for the (peri-) urban poor in section 2, the report presents a number of options for improving utility-related water services to the poor in section 3, and options going beyond the utility in section 4. Finally, the conclusions of this report are presented in section 5.

2. THE ISSUES

In this section, an overview is given of the main issues related to access to water services for the urban poor, as identified in global literature.

While the Joint Monitoring Programme (JMP) of UNICEF/WHO reports that the number of people still requiring access to safe water is by far the greatest in rural areas, it also shows that progress is being made in these areas. This is not the case for urban areas. The percentage of the urban populations in Sub-Sahara Africa with access to safe water has actually declined marginally between 1990 (the reference year for the MDGs) and 2006. This is almost entirely due to the fact that increased coverage has not kept pace with the increased in population, as urbanisation has gathered pace (JMP 2008).

The 2008 JMP report presents drinking water coverage as a three-step ladder of people using:

- unimproved drinking water sources
- improved drinking water sources other than piped water (public taps, stand posts, boreholes etc)
- water piped into a dwelling, plot or yard

Piped water supply with a connection into a dwelling, plot or yard is the highest step on the ladder. Although the percentage of people with access to this level of water services has increased globally in the period 1990-2006, this has not been the case in Sub-Sahara Africa, where it has remained stagnant (JMP 2008).

Poor urban communities face various barriers in accessing piped water services, many of which are related to the utilities' perceptions (Franceys and Gerlach 2008), but also to the utilities' ability to provide these services. Many utilities lack the autonomy the financial and human resources and the incentives to provide services to the urban poor (McIntosh, et al 2009). Extension of services to new beneficiaries is either not in the mandate of utilities or, when it is, this is most likely to take place to serve the relatively well-off, who are likely to be more vocal and organised, and live in areas that are technically easier to serve.

Technically, the densely populated, unplanned areas, where many of the urban poor reside, often located at some distance from the network, are the most difficult areas to connect. Katakura and Bakalian (1998) describe the chaotic and highly densely populated areas

usually occupied by the urban poor as a “water engineer’s nightmare”¹. Physical and technical challenges and the high investment cost of conventional technologies make extending formal piped water supply (and sewerage networks) into these unplanned, and often informal settlements more difficult (McIntosh, et al 2009). In addition to the physical and technical difficulties, perceived problems of affordability and fear of non-payment of water fees prevent utilities from extending services to the poor (Almansi et al 2003). The issue of land tenure, which lies outside the water sector, can also have a fundamental impact on the ability and willingness of authorities to serve the poor. Many city authorities simply can or will not countenance diverting energy and resources to ensure services for people living on land zoned for other activities, or in settlements which are considered “illegal”. Utilities will be reluctant to extend the system to these areas, because of the lack security guarantees for the water infrastructure (Almansi et al 2003).

In areas which are served by the piped network of the utility, the poor face different barriers to getting connected to this network. One of these barriers is land ownership and tenure issues (McIntosh, et al 2009). Utilities generally require proof of landownership in order to connect people to the piped network. For the many middle income and poor people in developing countries renting properties from landlords, this poses a barrier to get connected. There are likely to be little incentives for the landlord to invest their money in infrastructures for their tenants. In addition, high connection costs tend to preclude the poor from getting access to pipes water services. This was shown by data analysis from four countries within the framework of the study “Charging to enter the water shop”, which found an average cost of 295 US\$ to acquire a functioning piped water connection, which was regarded as unaffordable for the poor (Franceys, 2005). Also, cumbersome administrative procedures pose a major barrier for getting connected to the piped network. The poor may be unaware of the administrative and legal requirements, or find it difficult to understand and comply with these. (Almansi et al 2003 ; McIntosh, et al 2009).

When the poor do manage to get connected to the piped system, it does not necessarily mean they have access to reliable and high quality services. As Franceys and Gerlach (2008) note, these services, generally delivered by monopoly utilities under public ownership and management, are often of poor quality, only available for limited periods during the day, at a price well below the actual cost. In contrast to the richer strata of the urban population, the poor connected to the piped system usually do not have the resources to put in place measures to mitigate the low level of services, like water storage tanks or water filters. In addition, tariff systems like increasing block tariffs penalize clusters of households that share a single connection (McIntosh, et al 2009; Castro, 2009) as they will fall in a higher tariff block because of the higher level of consumption from the water point, which means they pay more per unit water than households with a private tap.

In the absence of (access to) an effective utility providing high quality and reliable services, the poor seek service through a host of alternative water service providers. These, often small scale, providers serve about 25% of the urban population in Latin America and East Asia, and

¹ Katakura and Bakalian specifically refer to the situation in the crowded and chaotic Brazilian favelas, but the same could easily be said for most of the often unplanned and densely populated areas populated by the urban poor all over the world.

an estimated 50% (BMGF 2006) to 80% (Collignon and Vézina, 2000) of the urban population in Africa.

These alternative providers will be the subject of section 4. First we will have a closer look at options to overcome the many challenges the urban poor have to face related obtaining good quality reliable water services from the utility in section 3.

3. OPTIONS FOR IMPROVING (ACCES TO) UTILITY WATER SERVICE TO THE POOR

The (peri-) urban poor that seek access to piped water services provided by water utilities face the following main constraints:

- Lack of access to utility water services, due to limited networked provision;
- Lack of access to the utility water services through household connections due to financial or other barriers;

In this section, some options to overcome these main barriers will be reviewed.

3.1. Improving utility performance and coverage

Many utilities struggle in providing good quality and reliable water services to their customers in a (cost) effective way, making it near to impossible to extend services to unserved areas, even when this is within the mandate of the utility (which it often is not). Utilities can set targets for coverage expansion, so that the currently unserved are progressively covered. However, as mentioned by Schaub-Jones (2007), the setting of targets itself is unlikely to yield tangible benefits to the poor, as they are almost certain to be unenforceable, unless measures are put in place that cater for shortcomings in the utility's human and financial resources.

Water utility reforms can help improving utility performance, improving the services provided by the utility and clearing the way for expansion of services. A snapshot of the steps necessary for a **utility reform** was presented by Van Ginneken and Kingdom (2004) when they set out their view of what constitute the necessary elements of a sound public sector utility reform process. These were:

- Get the finances right: Increase net income, improve financial management and access alternative financial sources
- Get the institutional set-up right: Separate policy making and regulation from utility functions, separate utility functions and establish utility as a government-owned company
- Improve service and information flows for customers: Improve information flows to customers, make officials answerable to customers, improve service to individual customers, use collective customer information to improve policies
- Increase efficiency within the utility: Hire, retain, motivate and develop staff and develop technical and managerial capacity of utility, decentralize responsibilities, authority and resources within utility, and introduce competition

The experience of the Phnom Penh Water Supply Authority (PPWSA) is touted as an example of how to do a utility reform, as the following box illustrates.

Box 1: Phnom Penh Water Supply Authority (PPWSA) reform

The reform of the Phnom Penh Water Supply Authority (PPWSA) was carried out as follows:

- Improving collection levels: installing meters for all connections, computerizing the billing system, updating the consumer base, confronting high ranking non-payers and cutting off their water if they refused to pay
- Minimizing illegal connections and unaccounted for water: setting up inspection teams to stop illegal connections, penalizing those with illegal connections, giving incentives to the public to report illegal connections.
- Increasing water tariffs to cover maintenance and operating costs: proposing a three-step increase in tariffs over seven years, although the third step was not necessary as revenues already covered the costs by then.
- Streamlining the organization’s workforce: giving more responsibility to higher management, promoting promising staff, giving higher salary and incentives to staff, fostering the spirit of teamwork.
- Rehabilitating the whole distribution network and treatment plants: hiring locals instead of international consultants for the job, manually looking for the pipes as all blueprints were destroyed during the civil war, mobilizing the communities to report leaks, etc.

The table below shows that the utility reform has led to a significant increase in the performance of the utility, which has in turn contributed to a dramatic increase in connections and covered area.

Indicators	1993 (before reform)	2006 (after reform)
Coverage area	25%	90%
Total connections	26,881	147,000
Metered coverage	13%	100%
Supply Duration	10 hours/day	24 hours/day
Production Capacity	65,000 m ³ /day	235,000 m ³ /day
Non Revenue Water	72%	6%
Total revenue	0.7billion riels (about 0.15 million Euro)	34 billion riels (about 7.5 million euro)
Financial situation	Heavy subsidy	Full cost recovery
Staff per 1,000/connections	22	4

The utility lists these factors as being the driving forces of the post war transformation:

- Water Doesn’t Have To Be Free. The urban poor are considerably better-off paying for safe, piped water than they would be buying water of questionable quality from private vendors.
- Cost Recovery is Vital. By developing a tariff structure where the utility fully recovers its cost of water production and transmission, the utility has become financially viable and is now able to invest in the water infrastructure.
- Water Champion at the Helm Drives Reforms.
- Investing in Staff Yields Radical Results. PPWSA professionalized its workforce, building its technical capacity and instilling in its employees a work ethic of discipline, competence and teamwork.
- Government Support is Crucial. The tariff restructuring would not have been possible without government support. PPWSA would also not have the freedom to innovate if the government had not declared the utility an autonomous body in 1986, although it remains government-owned.
- Civil Society Must Be Involved. The remarkable increase in bill collection and reduction in illegal connections has highlighted the importance of involving users and civil society in a service that they want and are willing to pay for. The key has been to develop a utility-customer relationship, based on long-term community building rather than short-term contractual relationships. Effective awareness campaigns also enabled PPWSA to increase tariffs with broad public support (ADB 2007).

The experience of the Kampala utility (National Water and Sewerage Corporation) in undergoing an extensive and successful programme of reforms, is also widely admired and is held to be a model to follow. The reforms in Kampala took a very similar path to those of Pnom Penn, driven by factors that were also strikingly similar. Documentation of the key issues encountered in that process is available from the NWSC website².

However, even if system performance is improved and the system is expanded, reaching the poor remains a challenge. Provision of 24-hour service through household connections may be too expensive or otherwise impractical in some locations.

Coverage, especially to the poor, can be expanded by **allowing differentiated service levels**, so that in some locations a lower but still acceptable service level can be allowed (Baker and Trémolet 2000). A lower service level may be acceptable, as long as it is reliable and the subject of agreement with consumers. Examples of diversified service levels can be found in the box below.

Box 1: Examples of differentiated service levels

In **Lusaka, Zambia**, the formal service provider, the Lusaka Water and Sewerage Company (LWSC) offers a range of options, differentiated in tariff structure, which does not only include individual household connections, but also yard connections, communal standpipes and bulk water for household tanks.

The utility in **Ouagadougou, Burkina Faso**, distributes a third of its water by standpipes. They supply 60 percent of the city's residents, with 27 percent more receiving water directly from household connections, bringing the total coverage to 86%. Network coverage was found much lower (below 35%) in cities like Cotonou, Benin, and Conakry, Guinea, where few standpipes are in service (Collignon and Vézina 2000).

In **Ethiopia**, the utility has managed to extend services to an estimated 90% of the population through a combination of service options including standpipes, yard and house connections. However, this was only possible because the fact that most households have secure tenure. This ensures that the utility is not restricted in its provision of services by tenure issues, as most households have secure tenure. Many of the structures occupied by poor households are owned by the Ethiopian Government and as a result poor households are tenants of the government and eligible for a service. The utility is not restricted by building codes or unachievable standards. (Simie, 2000, referred to in WUP 2003)

The box below gives a different example of acceptable lower service levels: an experiment in Durban, South Africa, with lower bore, low pressure, and small scale systems as alternatives to conventional piped water supply with household connections.

Box 2: Semi-pressure system with ground tanks in Durban, South Africa

In order to reach the poor, the utility in the South African city Durban, Durban Metro Water (DMW), has expanded the range of service options to include conventional full-pressure system, semi-pressure system with ground tanks, semi-pressure roof tank system, and standposts (Brocklehurst, 2001, in WUP 2003).

In case of the semi-pressure system with ground tanks, piped water supply is provided by DMW, though small diameter plastic pipes. At suitable intervals, metered manifold boxes are installed, from which some 20 households can be connected. The households pay for the feeder pipes themselves, which delivers water to a 200 litre tank. Durban Metro Water provides each household with 200 litres a day for free, which is in line with South Africa's free basic water policy (Schaub-Jones, 2007)³.

² See <http://www.nwsc.co.ug>

³ For more information, see also <http://web.mit.edu/urbanupgrading/waterandsanitation/resources/pdf-files/DurbanSAExample.pdf>

3.2. Overcoming barriers in connecting to the utility network

Even when piped water services are physically within the reach of the urban poor, they often face financial and legal barriers in order to have access to the services. As mentioned in section 2, one of the main barriers for the poor to connect to the utility network in areas where this network is available, is the **connection costs**. Franceys (2005) suggests that water utilities need to adjust their connection policies, reducing official charges with costs amortised over several years or over the entire customer base. Mara (2005) suggests that water utilities should recoup connection costs through an increasing tariff structure, rather than charging connection costs. The increasing tariff structure could be based on a portion of the wages of the households, rather than on amount of water consumed. The first tariff block would then not be priced at all or would be provided at a very low price. In this way, non-poor households would subsidize poor and very poor households (Mara 2005).

In Côte d'Ivoire, connections to the poor are cross subsidised by surcharging household connections (see box below).

Box 3: Cross-subsidising connections to the poor in Côte d'Ivoire

In Côte d'Ivoire, a Water Development Fund was created by the Government to fund connections and other activities, with a mandate to extend and improve service delivery to the poor. This has brought the connection costs for the urban poor down from a full cost rate of US\$ 150 to US\$ 40 (Kouassi-Komlan 2007). The creation of the Fund was enabled by the introduction of a sliding tariff. The tariff includes a basic charge and a surtax that contributes to the Fund (WUP 2003).

Cross-subsidising can also take place within communities, as it was the case in the construction of water supply infrastructure in the slums of Dhaka, Bangladesh, described in box 4.

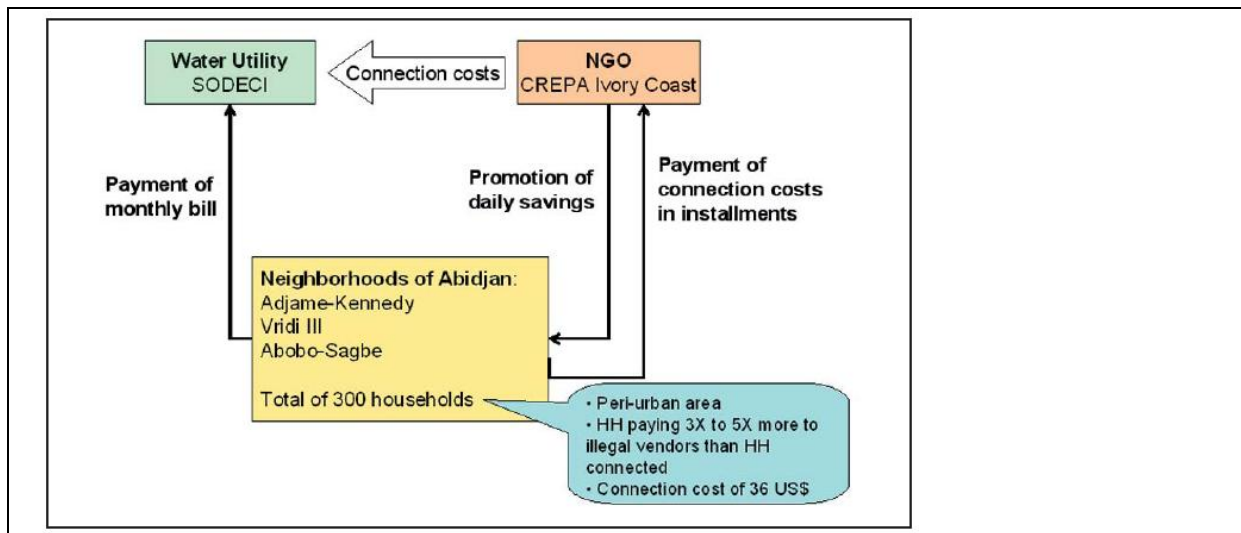
Box 4: Cross-subsidizing construction costs in Dhaka

In Dhaka, the NGO Dushtha Shasthya Kendra (DSK) which supports slum dwellers in the construction of water supply systems linked to the city's utility, has been applying an equitable cost-sharing approach since 2005: user families share a percentage of construction cost in cash as per their ability. At the beginning of the programme each cluster of families within the slum identifies the economic ability of each household using PRA tools such as wealth ranking, focus group discussions and observations, following a participatory process which is facilitated by NGO workers/community leaders. Families that are able to pay are motivated to pay 100% of their share and poor families pay 5% to 70% according to their income (Ahmed 2007).

Furthermore, **innovative financing mechanism** can play a role in assisting the poor to get access to piped water services. An example of such a financial mechanism, which is applied in Côte d'Ivoire, can be found in box 5.

Box 5: The financing of piped water systems at household level in Côte d'Ivoire

Virdi III is a poor sector of Abidjan, where 67% of people used to depend on small independent providers for their water supply, 22% on unprotected wells and 11% on boreholes. A project by the NGO CREPA Côte d'Ivoire assisted those who take water from the small independent providers to get household connections. People participating in the project were stimulated to save 'daily water money' in a box called a 'tirelire'. At the end of the month, the person responsible for the project would collect the money from the population and pay this money back to the water company and to CREPA-Côte d'Ivoire, who had pre-financed the connection fee. After 6 months, 80% of the 244 household beneficiaries had already reimbursed the loan and were paying their water bills on time. (Kouassi-Komlan, and Gnagne. 2005)



As illustrated by the case in the box above, NGOs can play an important role in mediating between utilities and people who would normally not have access to utility services. The box below illustrates an example from Bangladesh, in which mediation of an NGO helped overcoming **legal barriers** (tenure issues) for connecting to the utility main.

Box 6: NGO mediation to provide access to water services to slum dwellers in Dhaka, Bangladesh

Ninety-seven per cent of poor households in Dhaka do not own the plot on which they live (Islam et al 1997). The utility, Dhaka Water Supply and Sewerage Authority (DWASA), only provides connections to land owners, on presentation of a 'holding number' related to their plot. Faced with this problem, the local NGO Dushtha Shasthya Kendra (DSK) organised the community to build, manage and maintain shared water points and mediated between slum dwellers and DWASA. DSK applied to DWASA on the community's behalf to obtain a legal connection. International donors provided financial and technical support. This mediation model was tested and scaled up with the help of donors and other local NGOs. This mediation model has proved to be very effective for the medium term, and has benefited around 99,500 people in Dhaka. (Ahmed 2007)

Another approach to get around the lack of legal documentation needed to connect the network is to make a single bulk water connection at the border of the community and allow communities or small-scale service providers to operate services (McIntosh, et al, 2009). This option will be further discussed in section 4.

However, what is ultimately needed is a policy change on the part of the utility. If the utility is to recognise rights to water irrespective of land tenure, this would remove an important institutional barrier that currently prevents many residents of slum and squatter settlements from gaining access to water services. Authorities need to be encouraged to consider that the issue of slum development is soluble.

While not in any way disagreeing with the long term vision of utility water services for all, it has to be realised that this is unlikely to be achieved in the majority of high density urban areas in the foreseeable future. The following chapter will focus on service providers beyond the utility.

4. OPTIONS FOR IMPROVING WATER SERVICES TO THE POOR BEYOND THE UTILITY: ALTERNATIVE WATER SERVICE PROVIDERS

People without access to piped water services, generally rely on alternative, often informal, water providers. These include water carriers, fountain owners, tanker operators, etc. In spite of the fact that a large percentage of the urban poor depend on these alternative service providers, as mentioned in sector 2, literature has for a long time mainly focused on utilities and their shortcomings. In the late 1990s, alternative providers were “rediscovered”, as mentioned by Franceys and Gerlach (2008). A literature review done by Kariuki and Schwartz (2005), found that the existing documentation on alternative service providers, though abundant, is strongly oriented toward opinion and advice, and is frequently based on case studies rather than data collection. Much of the work that has been carried out in this regard is based on the work on Small Scale Providers carried out by the Water and Sanitation Program in Africa, East Asia and Latin America (Collignon and Vézina 2000 ; McIntosh, et al 2009) and the work done by the Water Utility Partnership for Capacity Building (WUP) AFRICA (WUP 2003).

This section will start by giving an overview of different alternative water service providers (4.1). This will be followed by a description of the main issues related to these alternative service providers (4.2). In order to ensure alternative water service providers can provide good and affordable services, a supportive and regulating environment has to be in place, which will be discussed in section 4.3.

4.1. Alternative water providers

Alternative service providers are generally divided into two distinct types (Plummer, 2003; WUP 2003; Moran and Batley, 2004; Sansom, 2006; Franceys and Gerlach, 2008):

- Independent Water Service Providers, providing services from their own source, not connected to the utility pipe network.
- Intermediate Water Service Providers: obtaining water, directly or indirectly, from the utility piped network.

In addition to the classification of alternative service providers into independent and intermediate service providers, Kariuki and Schwartz (2005) classify alternative service providers⁴ according to the kind of technology used, as can be seen in the table below.

Kariuki and Schwartz (2005) observe that while some small scale service providers are community-based, not-for-profit organizations, the majority are small private vendors, with a significant share of capital financing coming from private sources, selling water on a commercial basis.

⁴ Kariuki and Schwartz (2005) actually use this classification for small private water providers, but the same classification could be used for alternative service providers in general

Table 1: Alternative providers

		Relationship to source	
		Independent (Independent provider)	Dependent (Intermediate provider)
Technology employed	Grid or network	Integrated production / generation with transmission / distribution	Purchasing water or electricity and on-selling through mini-grid / network
	Point source	Own source, fixed location vendor	Connected to utility fixed location vendor
	Mobile distribution	Own source, mobile vendor	Purchase from utility mobile vendor

Source: Kariuki and Schwartz (2005)

The box below gives an example of community-based and private intermediate point source service providers, from Kisumu, Kenya.

Box 7: Utility partnership with CBO and private service providers in Kisumu, Kenya

In Kisumu, the utility, Kisumu Water and Sewerage Company (KIWASCO), sells bulk water to service providers contracted to operate and manage parts of the network in an informal settlement. KIWASCO selects and recruits these service providers through a publicly-advertised and competitive process. These service providers can either be private entrepreneurs or community-based organizations (CBOs). Rather than the fact whether the service provider is a CBO or an individual, the entrepreneurial spirit of the service provider, the business acumen, strong community relations, and remuneration of personnel (volunteerism is not sustainable) are more important factors for the success of the alternative service provider. While CBOs may add another layer of bureaucracy, they often offer a wide support network for tasks such as patrolling the network. The service providers under contract with the utility bill customers, collect revenues and perform minor maintenance in a certain area. After paying the utility the bulk rate for the amount of water consumed, the service providers can retain any surplus revenue. This involvement of alternative service providers reduces the utility's administrative costs and brings services closer to the customer. The tariffs that the service providers can charge are clearly specified in the contract they have with the utility, which may be revoked if violated. Also, these tariffs are posted in the service provider's office. (WSP 2006)

The box below gives an example of an independent networked service provider in Chipata, an area in peri-urban Lusaka, where a formal community organised water system which is not connected to the utility, provides water services to the population.

Box 8: Formal community based independent service provider in Chipata, Lusaka

About 1 million of the 3 million inhabitants of Lusaka, Zambia, live in the peri-urban areas. About 600,000 people in these peri-urban areas are served by community-based water supply service providers, called Water trusts. The city council is a signatory to the trust accounts, it facilitates the recruitment and appointment of board members and management staff, audits the books and provides legal advice. Each water trust is governed by a board of trustees that provides policy direction, develops service strategies, and employs a scheme manager. The manager hires and supervises staff, including water vendors/tap attendants, plumbers, and cashiers. Each water vendor/tap attendant signs a contract for the operation and maintenance of a water point and receives a percentage of monthly sales. Residents can either buy water on a daily basis, or can choose to make monthly prepayments. In some schemes, people are offered the option of household connections as well. Tariffs and connection charges are regulated by the National Water and Sewerage Commission, which is also supposed to regulate service quality, though in fact the trusts are not subject to effective scrutiny (Lidonde., 2008).

An example is the water system in Chipata, a peri-urban area of Lusaka, which is wholly owned and managed by the Residents' Development Committee (RDC) on behalf of the residents of Chipata, with support from the Lusaka City Council. The (RDC based) community management system which serves a broader function than just water supply was introduced to the Chipata community by an INGO (Care International), in consultation with the utility (LWSC) and Lusaka City Council. The water supply system consists of a groundwater supply to overhead tanks which is then reticulated to 39 community taps. The system only serves Chipata and does not draw from the main Lusaka Water and Sewerage Company (LWSC) supply. Care International strengthened community management arrangements and developed community capacity for participating actively in the development activities. The project involved extensive contributions from community based organisations in terms of organising and educating residents as well as contributing to the design of construction, operations and maintenance (WUP 2007).

The LWSC has since encompassed the results of this initiative in their peri-urban policy and established a peri-urban unit to work with communities and NGOs in other areas of Lusaka. (WUP 2007)

References to additional case studies can be found in Annex 1.

4.2. Issues related to alternative providers

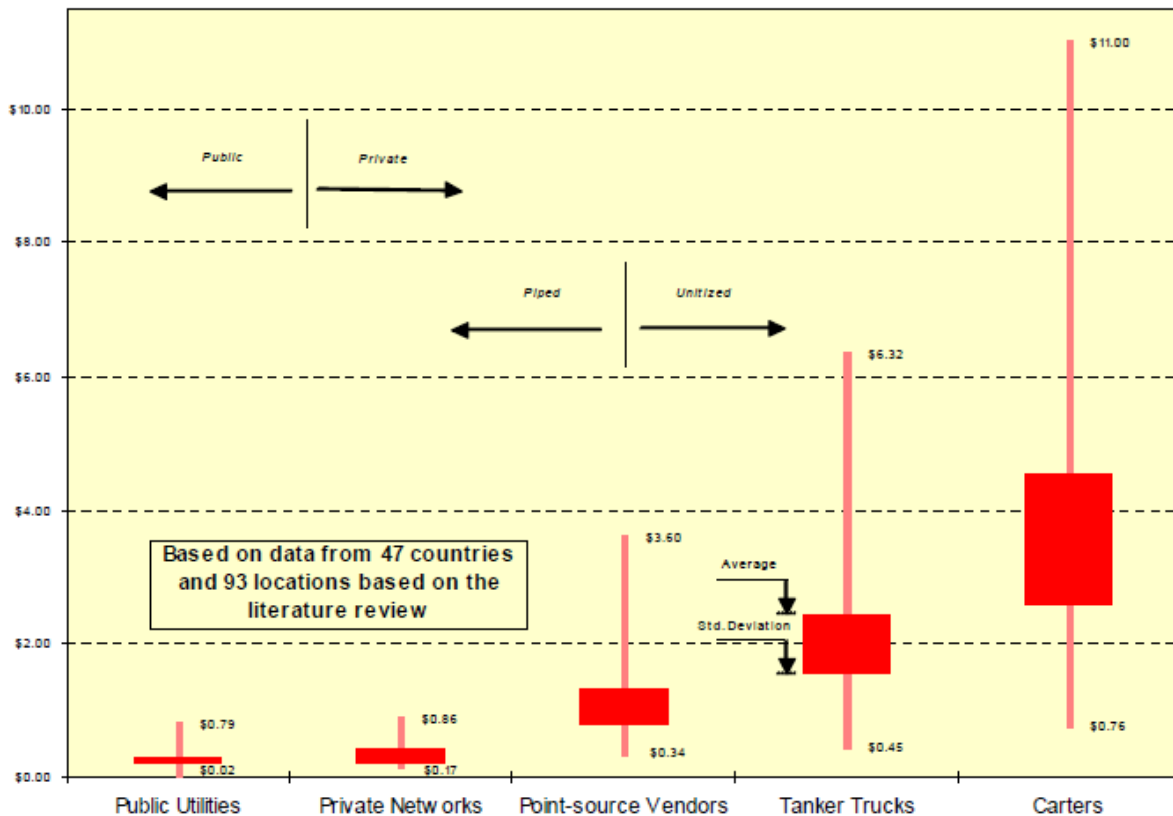
In many places, especially before the 1990s, alternative service providers were considered a transitory and temporary phenomenon (Kariuki and Schwartz, 2005), to be ignored rather than supported, as they ran counter to the monopoly service provision model, preferred and desired by both governments and utilities. Their performance was considered inferior compared with an ideal of a utility-provided mains service providing 24 hour a-day safe water into the home. In the beginning of the new millennium, interest in alternative providers was on the rise and they were being considered more and more as providing useful services, valued by their customers (Collignon and Vézina, 2000; Njiru and Albu, 2004). Besides the fact that alternative service providers can supply water in areas not covered by the conventional piped system, these alternative services might even be more convenient for poor households than convention services, especially in terms of accessibility, reliability, payment options, etc (Njiru2005).

However, it remains a fact that the services provided by alternative providers are often **not recognized, encouraged, authorised or regulated** (McIntosh, et al, 2009 ; Sansom, 2006). The lack of official recognition of alternative providers' functions and their ambiguous legal status are core problems (Plummer, 2002). Furthermore, there are concerns related to the regulation of quality and prices of services provided by alternative service providers.

Alternative providers are often viewed as providing services which are of “**poor quality**”, that does not meet technical and water quality standards (Kariuki and Schwartz, 2005). Some independent service providers obtain water from unsafe sources such as unprotected springs and wells, which can present health risks for costumers (Sansom 2006)

The **price per unit water** from alternative providers is often extremely high compared to (often artificially low) utility prices. Reports of the poor paying multiples of the cost of those who are connected to the mains are standard, even paying more than those in the rich cities of the north. Franceys and Gerlach (2008) for example state that the unconnected poor pay five, ten or even up to one hundred times more for water than the connected “rich” on a volumetric basis. This is illustrated as well by the figure below from Kariuki and Schwartz (2005), which gives an overview of water prices from different service providers.

Figure 1: Water prices from different service providers



Source: Kariuki and Schwartz (2005)

However, this does not mean that alternative water providers, including small water enterprises, are necessarily uncompetitive or exploitative of their customers. Often, alternative water providers charge prices that reflect the real business costs of the service provider (Njiru 2005), with limited profit margins (Collignon and Vézina 2000).

4.3. Dealing with alternative providers: Recognition, regularisation and regulation

There is wide agreement on the fact that the lack of legal recognition of (informal) alternative service providers. Indeed, needs have to be addressed and steps have to be taken to facilitate legal standing (Plummer 2002; Schaub-Jones 2007). Institutional arrangements and legal reforms that incorporate informal service providers into the formal solution reduce opposition and improve transparency. Such arrangements benefit both parties: the informal providers gain security and legitimacy and the utility can take advantage of the knowledge and skills of the alternative providers. Regularization of alternative (informal) service providers can help utilities to reduce illegal connections and corrupt practices by staff, lower water prices, and improve the reliability of services, especially if adequate oversight or regulatory arrangements are introduced (McIntosh, et al 2009).

Regulation should ideally cover both the formal utility as well as the alternative providers (Francey and Gerlach, 2005). The role of the conventional regulator needs to change or be expanded in order to regulate quality of services provided by alternative providers. Spot checks on water quality and on other hygiene parameters are necessary. In addition, an element of regulation of pricing is required. This regulation and policing of resale prices and

quality issues of alternative providers should allow quality increases at prices that are comparable to that being charged by the utility to connected customers. (Schaub-Jones (2007)).

According to Sansom (2005) however, economic regulation of smaller informal alternative providers is unlikely to be an efficient use of resources because of the diverse, small and informal nature of the alternative service providers. He considers it impractical for a regulator to take into account the varying costs of a wide range of alternative service providers in a city and then regulate them on a fair basis. He suggests other forms of regulation that he considers to be more effective:

- The regulating effects of informed choice: making data on prices and service performance available in a transparent way (Tremolet and Browning 2002), as it was done in Kisumu (see box 8).
- The formation of professional and trade associations, like tanker and vendor associations. This can help alternative providers to start dialogue with utilities. These kind of associations can improve professionalism and capacity building in the sector, by:
 - Establishing common rules and procedures (and by promoting their acceptance);
 - Recognising and protecting private investments; and
 - Creating a forum for dialogue (and collaboration) between the authorities, the utilities and the alternative providers (who are too numerous to be handled on an individual basis). (WUP, 2003)
- Promote competition and encourage new entrants to the market (WUP, 2003; Valfrey-Visser et al (2006)).

The box below gives an example of a case where the utility moved from seeing alternative service providers (water kiosks in this case) as a problem towards seeing them as part of the solution.

Box 9: Regularising Water Kiosk Operators in Kenya

Until recently, the utility in Nairobi, Kenya considered the 650 informal local water kiosks in the informal settlement of Kibera, serving a total of more than half-a-million poor people, to be contributing to the problem of high levels of non revenue water. Driving them out of business was seen as an effective measure to counter this. In May 2004, kiosk operators decided to form an association, which they called Maji Bora Kibera (MBK) (Swahili for ‘better water services for Kibera’). They drafted a constitution, formed an executive committee, and applied for official registration. A taskforce was formed with members from the utility, MBK, and WSP, who supported the establishment of the kiosk operator association. MBK identified the problems its members were facing and offered to the utility to cooperate with the regularization of their connections, pay bills regularly, stop paying bribes, report leakages, and expand services to unserved areas. In return the utility should provide a regular supply of water, adopt better billing and collection practices, and provide engineering advice for the improvements of the network (Brocklehurst, 2005)

5. CONCLUSIONS

A large part of the urban poor lives in high-density formal, informal or illegal urban settlements. Often, these areas are not served by the piped network of the utility and might never be served, especially in case of informal and illegal settlements. Even when the poor live in an area served by the utility, they face financial and legal barriers in order to get access to the pipes water services. And even when they are connected, there is no guarantee that the utility is able to provide them with good quality and reliable water services.

Mechanisms to improve water supply services to the urban poor include:

- Extension and rehabilitation of the utility network (possibly through utility reform)
- Diversifying permitted service levels
- Supporting the poor in obtaining legal connections to the utility network
- Changing the rules of tenure
- Changing rules and administrative procedures for obtaining access to the utility network
- Cross-subsidising connection costs and microfinance mechanisms for financing connection costs

A large part of the urban poor get their water from alternative water service providers. The role of these alternative providers needs to be recognised. These alternative water providers include

- Small scale independent producers
- Intermediate providers, including community-based or private service providers, receiving bulk water supply from the utility

The alternative water providers do not operate in a vacuum. Partnerships between alternative providers and utilities have proved mutually beneficial. The role of NGOs in these partnerships can take different shapes, including being a mediator and / or process facilitator.

In order to improve services for the urban poor, some things need to change. First of all, utilities and regulators need to accept different levels of services (ranging from household connections to public standpipes), and different models of service delivery (ranging from utilities to independent service providers). This would mean that policies, legislation and regulation will have to change to end the monopoly rights of utilities and to legislate other models. In addition, in order to ensure high quality, affordable services, the role of the regulator has to be extended beyond the utility.

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ANNEX: ADDITIONAL EXAMPLES OF CASE STUDIES

The Water Utility Partnership (WUP)⁵ Website contains a great number of useful cases, which provide insights for strategic project and program planning and implementation. The following tables give an overview of these cases, which are largely drawn from experiences of the Water Utility Partnership (WUP), SSIP, BPD, and PSEAU.

Utility reform related case

Case and reference	City and country
Transitory Regime Water Supply	Conakry, Guinea

Cases of private intermediate providers

Case and reference	City and country	Service providers	Source of water	Service level	Level of formality
Standpipe Operators	Burkina Faso	Stand pipe manager	Utility	Standpipes	Formal
Truck Vendors of City Water	Nouakchott, Mauritania	Water tankers	Utility	Delivery by water tankers	Formal
Resellers of Household Tap Water	Cotonou, Benin	Household	Utility	Collect from private household connection	Informal
Resellers of Household Tap Water	Abidjan, Ivory Coast	Water sellers	Utility	Collect from private household connection	Informal to formal
Manager of Handcarts for Water Resale	Conakry, Guinea	Hand cart owner	Utility	Delivery by handcart	Informal
Pushcart Vendors for Water Resale	Vingunguti, Tanzania	Vendor	Utility	Delivered by push card	Informal
An Association Operating Standpipe Concession	Conakry, Guinea	Association	Utility	Network with 9 standpipes	Formal

⁵ <http://web.mit.edu/urbanupgrading/waterandsanitation/resources/case-examples.html>

Cases of community-based intermediate service providers

Case and reference	City and country	Service providers	Source of water	Service level	Formal or informal
Public Kiosks and Standposts,	Arusha, Tanzania	Various local administrative units acting through street chairpersons	Bulk supply from utility	kiosk	Formal
Piped Supply for Small Communities,	Malawi	Local water committee	?	Communal water points	formal

Cases of private Small Scale Independent Providers (SSIP)

Case and reference	City and country	Service providers	Source of water	Service level	Level of formality
Concessionaire of a Small Town Water Network	Guerou, Mauritania	Private concessionaire	Own source	Household connections and standpipes	Formal
Private Operator of a Simplified Water System	Bamako, Mali	Association (with delegating management to private operator)	Own source	8 simple water distribution systems	Formal

Cases of community-based independent service providers

Monthly Card Water Payment System,	Lusaka, Zambia	Resident development committee	Own source	Standposts	Formal
Resident Development Committees,	Lusaka, Zambia	Resident development committee	Own source	Standposts	Formal

List of TPP Working Documents

Sector review papers:

Mechanisms to Ensure Pro Poor Water Service Delivery in Urban and Peri-Urban Areas

Global Best Practise in the Management of Small Town Water Supplies

Institutional Mapping of Water and Sanitation Services in Small Towns and Peri-Urban Areas in Ghana

Management Models in the Urban and Small Town Water Sector in Ghana

Case studies:

Direct Water and Sanitation Development Board (WSDB) Management without Watsans: The Cases of Small Town Water Supply in Asesewa and Asiakwa in Eastern Region

Direct Water and Sanitation Development Board (WSDB) Management with Watsans: The Cases of Small Town Water Supply in Abokobi and Pantang in the Greater Accra Region

Community – Utility Bulk Water Supply in Savelugu in the Northern Region of Ghana

Management Contract for Water Delivery in Tumu in the Upper West Region of Ghana

Tanker Services as an Alternative Model for Delivering water to the Urban Poor: a case from Accra

Public-Private Partnership (PPP) in Small Towns: the Case of Operation and Maintenance Contracts in Bekwai, Atebubu and Wassa Akropong

Community-Public-Private Partnership (CPPP) Model for the Management of a Multi-Town Scheme: The Case of Operation and Maintenance Contract in Three Districts Water Supply Scheme

Franchise Management of Sanitation in Kumasi

