

**STRENGTHENING CAPACITY OF WATER UTILITIES TO
PROVIDE WATER SUPPLY AND SANITATION SERVICES,
ENVIRONMENTAL AND HYGIENE EDUCATION IN A
SUSTAINABLE WAY TO LOW INCOME URBAN AREAS**

CASE STUDY OF LUSAKA WATER AND SEWERAGE COMPANY

Practice Number 2

**LWSC's Institutional Arrangements for Dealing
with Peri-Urban Areas**

Authors:

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DESCRIPTION

Context for the practice

The LWSC, formed under the Companies Act in 1990 is wholly owned by the Lusaka City Council. Established to manage the provision of water and sanitation services within the City, it has the following objectives:

- *To provide and distribute a constant supply of clean and fresh water to all commercial, industrial and domestic premises in the area of Lusaka Urban District Council.*
- *To be responsible for the provision, control and maintenance of sewerage for all commercial, industrial and domestic premises in the area of Lusaka.*
- *To be responsible for the treatment and disposal of sewage in the area of Lusaka Urban District Council by such means and at such time and locations as the Company may deem appropriate.*

among others.

Since its establishment the company has been challenged with the maintenance and continuation of existing services. A variety of water supply systems installed in formal and informal low income settlements prior to the formation of the LWS have created problems in ensuring cost recovery of water in these areas. In addition many of these systems were extensively damaged and vandalised and the Company has had to repair such sections to reduce the amount of unaccounted for water.

Since the formation of the company many new water schemes have been installed in the low income areas by Non Government agencies and others. Some of these are independent borehole systems and others are connected to the main reticulation system of the LWSC. In most cases the LWSC is expected to take over or assist in the management of the systems once operational. LWSC distinguishes between support and ownership of schemes owned by CBO's. Replacement costs are the responsibility of LCC and not LWSC. Recognising the importance of addressing the issue of services in the low income, high density settlements of Lusaka in the context of effective management of the utility, the LWSC have prepared a policy document on Water Supplies and Sanitation in peri-urban areas. The basic purpose of the document was stated as: "to clarify the respective roles of the various agencies undertaking activities in the water and sanitation sector."

What is the practice described in this report

LWSC's strategy for addressing service provision to low income communities through the development of a policy and establishment of a specialised unit to deal with peri-urban areas. The policy outlines agreements between LWSC and other service providers in delivering services to the low income urban areas.

What is the purpose of this practise

The primary purpose of introducing this practice was to improve cost efficiency, give limited budgets when compared to challenges of service delivery in peri-urban areas. The multiplicity of public, private agencies, donors and NGOs. A second purpose was to improve co-ordination of the provision of water and sanitation services in low income communities is complex and requires a different approach from planned settlements. The establishment of a special strategy for these areas is also intended to facilitate dialogue with the community and enhance the communication between the company and the beneficiaries. From the perspective of the LWSC a fourth reason was to enhance viability of the service to low income communities. In the past the Lusaka City Council had not been charging consumers for services and special programmes were necessary in order to bring these areas into its cost recovery programme.

Thus the continual growth of the peri-urban areas, the lack of safe drinking water and sanitation in some of the areas, the lack of good co-ordination in provision of services and poor revenue collection by LWSC have all necessitated action to deal with the deteriorating situation.

Who initiated it /manages it

Organogram needed

The LWSC developed the policy and established the peri – urban unit. The policy went through several drafts and was circulated amongst stakeholders, especially the Lusaka City Council, before adoption. The peri-urban unit staff report to ????? (see Organogram). The units work programme is derived from the LWSC Corporate plan for 1998 – 2000.

The policy was initially focused on the 4 peri urban communities that LWSC was working with: (George, Chipata, Kamanga, and Jack). This has been extended to 12 more peri urban communities in the Corporate Plan for the Company for the period 1998 – 2002.

PROCESS AND APPROACH

What are the tools and methods used

The LWSC has formed a peri urban section comprising the acting head of the section who is an engineer by profession and below him a community development officer who possesses a degree in Social Work and Development Studies. There are no job descriptions or work plans for the section. Their terms of reference are based on the company’s objectives set out in the corporate plan for the period 1998 to 2002.

Table : (Source: LWSC corporate plan 1998- 2002)

Objective:	Responsibility	Start date	Completion date
Consolidate the peri-urban policy on water supply to peri-urban areas with emphasis on cost recovery and reduction of unaccounted for water due to provision of social water.			
4.1 Identify at least 12 peri-urban water supply areas to be targeted for cost recovery and reduction of UFW.	MWS/Head Peri-urban	01/98	01/98
4.2 Undertake field activities to put in place and register one vending /concession scheme for cost recovery in the identified peri-urban water supply areas.	MWS/Head peri-urban	01/98	12/98
4.3 Organise quarterly workshops with vendors concessionaires, co-operating NGO and RDC’s to sensitise all stake holders on the need for recovery and self sustainability of water supply schemes.	MWS/Head peri-urban/TM/PRM	01/98	12/98

MWS- Manager of water supplies

TM- Training Manager

PRM - Public relations manager

The focus of the Peri-Urban section is clearly the reduction of unaccounted for water and improved revenue collection. This is to be achieved by sensitising people on the need for full cost recovery. The strategies employed by the section have this objective in mind and use a variety of approaches to improve management of these services. The section work with other agencies such as NGOs and the Lusaka City Council to train community organisations, hold workshops with vendors and concessionaires, and promote community participation through drama.

The policy also states that LWSC will endeavour to continue supplying water to areas that already have a distribution system or boreholes in place. It is silent on how new water services will be delivered to unserved communities.

Service will be provided in the following two ways:

1. *Supply water up to the bulk meter at the periphery of the area, in which case LWSC's responsibility ends at the meter and the community undertakes the management of the system after the meter. The community then pays for the water consumed as metered at the periphery meter.*
2. *In areas where a combination of individual water connections and standpipes exist the company will manage the distribution network but will enlist support from the community to look after the standpipes and to protect the infrastructure against vandalism. The community will pay for water delivered to the standpipes based on the meter readings at the standpipes. Individual connection will be paid for according to water bills presented by LWSC. (Vendors may be employed under this system)*

(Source, Peri Urban Policy)

The operation of the water distribution facilities in Lusaka is the responsibility of the Water Distribution Section of the Water Supply Department (MEW) of LWSC. LWSC may from time to time undertake to provide training to ward plumbers on attachment basis to enable members of the local Residents Development Committee (RDC) to undertake the local management of the water distribution. The RDC constitutes the main administrative committee for each Ward and it undertakes a range of activities including liaison with the LWSC. It is expected that as part of its activities the RDC will levy the community for water supplied and retain some money to hire local plumbers to maintain the facilities. The LWSC endeavours to promote community participation by actively getting involved in community development activities through the peri-urban unit.

The policy provides guidelines for contracts between LWSC and the water vendors as an additional mechanism for service delivery. The LWSC supplies bulk water to the standpost and the vendor is responsible for collecting money for this. An agreed level of profit may be reached. The contract documents specify roles and responsibilities of each party, state the kind of reports the vendor has to give LWSC, the period in between reports, methods LWSC should use to charge the vendor on the water consumed, duration of the contract period, penalties and roles and responsibilities of each party pertaining to water supply infrastructure. (See annex 1)

How is it being implemented

The Peri-urban unit had only one staff member, an engineer, until late 1997 when a social worker was recruited. The existence of the section enables dialogue between LWSC and the community and they form the entry point for dealing with all peri urban issues. However, because the unit is so small they usually operate with other staff from the LWSC or with partners such as NGOs or the Lusaka City Council.

Using the corporate plans the peri-urban section of LWSC identifies areas to introduce vending schemes or other mechanisms of cost recovery. Awareness creation has been made easier by the existence of RDCs who take the lead role as the link between the Company and the community and if necessary, the Company will work with the LCC or an NGO to form and train the RDC.

In **Chipata Compound** which has a population of 45 000 people, Care (Zambia) funded a US\$ 600 000 water supply project.

The project started with planning meetings between the key stakeholders including the Assistant Director and Chief Housing Officer of LCC, the Peri-urban officer from LWSC and members of the community. This was followed by compound wide meetings of over 50 key organisations and leaders to give broad assent to how the water project should proceed. CARE played a lead role in the development of the community participation concept and its implementation but in close collaboration with the peri urban section of LWSC.

The area RDC signed a contract to manage the whole project. They consult or hire LWSC on maintenance problems they cannot attend to themselves. The RDC has been operating on their own for more than a year now and their financial management is on a sound footing.

Examples of how this policy has actually been implemented are given for George Compound and Chipata Compound in the Boxes.

In all cases the LWSC remains flexible on how the community and itself will co-operate under the different management systems proposed in the Peri – urban Policy.

Registering of vending schemes started in September 1996. By the end of 1997 a total of 21 vending/community concession schemes had been registered. (LWSC Annual Report 1997).

In the compounds of Chipata, Jack, and Kamanga all decisions and management are made by the Residents Development Committees with the LWSC providing agreed technical assistance and receiving payment for bulk water supplied. In George compound a complex borehole system is in place and managed by the LWSC however the community are responsible for management at the communal standposts and for the collection of family fixed charges.

George Compound is one of the largest peri-urban areas with a population of 120 000. In the past George compound had a few house connections and communal taps. These facilities were limited in capacity and extensively vandalised with no cost recovery. This made people resort to unprotected hand-dug shallow wells as their source of water. In the 1991-1992 wet season there was a serious outbreak of cholera in George Compound. The main cause of the disease outbreak was identified as the shallow wells. Government of Zambia sourced aid from the government of Japan to embark on a potable water project for the compound. The project is now more than half way complete. LWSC is the implementation agency. LCC and LWSC are also involved in planning and implementation of the community participation social and institutional aspects with technical assistance from CARE. The LWSC reached agreement with CARE to provide the training necessary to build capacity of community based organisations in the water supply areas of the project. This large project saw the LWSC establish a division under the Water Supply Department specifically for George. There is a Service Section in the Division responsible for the facilitation of community participation, and consultation to community based organisations. The staff of the Service Section are seconded from the LCC.

The Practice describing the Residents Development Committee provides useful additional information on community structures.

Why was it set up this way

The LWSC is under pressure to address the peri urban communities both from an economic viewpoint as it is losing revenue and from a social viewpoint as a large proportion of the population are without reliable service. As a water utility, LWSC is primarily engineering based with no skills in dealing with social and community issues. The establishment of the peri urban unit recognised that the approach for these areas had to be different from the conventional engineering approach. The management solutions have to meet the needs of the people while also satisfying the requirements of the Company for cost recovery. The LWSC therefore established a small unit as the minimum required to effect its policy and is planning to expand the unit as it proves necessary.

ANALYSIS

Utility

The Memorandum of Association for LWSC clearly state the responsibility of the Company for service provision in the “area of Lusaka Urban District Council”. It is not surprising given the operational difficulties that the LWSC have tried to limit this by interpreting it as “the *planned* areas of *Metropolitan Lusaka*” in the peri-urban policy document. Most water utilities are strictly engineering and deal with the mechanical aspects of water and sanitation service provision. Ventures into community dynamics are relatively recent and often only by successful utilities trying to improve further their service and image. LWSC have recognised however that the peri-urban areas are a significant part of the city, 60% of the population, and that they already deliver a considerable amount of water to these communities. It is therefore in the interests of the Company to try to address the issue of cost recovery in the peri-urban areas and the development of the strategy and policy on peri-urban areas has assisted considerably in this.

The Policy document itself is a combination of a situation analysis with some policy statements and strategy. It would be beneficial for all parties if LWSC separated the policy statements from the strategy and adopted a clear position toward service provision for all peri urban communities on both sanitation and water.

LWSC has a very small unit for dealing with the low income high density settlements. It could be said that it is too small but in this era of focusing on core business and contracting out, LWSC have been prudent and performed very efficiently. The use of NGOs and the LCC to carry out most of the community work with the LWSC peri-urban staff as link persons is probably a very cost effective and efficient strategy for the LWSC whilst at the same time achieving the objective of better co-ordination. The peri urban unit within LWSC is therefore a significant step forward and has clearly resulted in benefits of a closer relationship with communities as well as a better understanding of their problems. The work plan of the unit based on the corporate plan could be better focused and more result oriented but this is a problem related more to the overall management of the utility rather than peculiar to the unit.

In terms of performance the LWSC has benefited considerably in that it is now progressively addressing the peri-urban settlements. Cost recovery, not investment, is the purpose however at the same time the linkages with donors and NGOs has resulted in these settlements having improved water supply systems. The strong role of the community in management of the local reticulation system relieves considerable burden from the LWSC and instils more responsibility towards the system on the part of the community thus reducing vandalism. The cost recovery from these peri-urban settlements has increased from less than 1% in 1990 to over 25% in 1997. (Table 1). Alongside this has been a progressive improvement in the billing of twelfefold for 1997. Besides the fact that people are generally not willing to pay for water, the other reason for poor revenue recovery could be lack of capacity within LWSC. In the 1998-2002 corporate plan, LWSC identifies operation problems with meter readers, revenue collectors, and accounts clerks as contributing to poor revenue collection.

Weaknesses in the collection system are continually being addressed however the water vendor system is favoured by the LWSC as they enter into contractual arrangements which can be more easily policed than when dealing with the RDC. The RDC’s vary considerably in their ability to collect money from users and often do not pay tap attendants resulting in poor motivation.

The peri-urban section registered 9 new vending schemes in 1997 bring to 21 the number operating in areas where the LWSC had previously been supplying water for free. The monthly report from the peri-urban unit for March 1998 typically analysed the performance of billing systems for registered water schemes in 15 compounds and recommended disconnection for five who were persistent defaulters.

Overall from the perspective of the utility the policy and strategy has resulted in increased income, better operation and maintenance and improved reliability and access of service to the targeted communities.

Table 1

PERI-URBAN REVENUE STATUS FOR 1997				
Month	Billing	Amount Paid	Debt	% Paid (Revenue Recovery)
January	1,288,726	192,210	1,096,516	14.9
February	2,769,134	580,900	2,188,234	20.9
March	3,929,248	752,780	3,176,468	19.1
April	4,180,654	782,100	3,398,554	18.7
May	9,696,350	990,900	8,705,450	10.2
June	5,549,630	1,292,500	4,257,130	23.3
July	4,660,300	3,795,300	865,000	81.4
August	4,236,850	1,500,300	2,736,550	35.4
September	7,135,300	1,651,600	5,483,700	23.1
October	8,224,260	1,592,500	6,631,760	19.4
November	10,416,770	1,953,400	8,463,370	18.7
December	12,233,110	2,092,000	10,141,110	17.1
Total	74,320,332	17,176,490	57,143,842	23.1
Average	6,193,361	1,431,374	4,761,987	25.2

Consumer

The community of the target compounds have benefited in several respects but primarily in that they have a more reliable water service. The community have varied perspectives on payment for the water however have accepted that they have to pay something. The cost of water varies considerably from compound to compound and usually less than the LWSC suggested K3,000 as the cost recovery level. The varied way in which the LWSC implement the programme and weaknesses in their billing of RDCs probably account a good deal for the poor revenue collection. The linkage of the water programmes with donor inputs has usually meant that the introduction of water charges is linked to a general improvement in the water supply system increasing accessibility and reliability. This will bring broader benefits to the community and increase their willingness to pay.

At the same time as the improvement of the water supply, a major input is made into the strengthening of the community organisational structures. The capacity building provided here and the resulting responsibility of the RDC and its subcommittees for water supply, must bring extended social and developmental opportunities to the community. The community is much better placed to engage in dialogue with the utility and the LCC and represent the community interests in other form. Concerns exist over the sustainability of the RDC system as there are threats of politicisation and it is a risk, as in any democratic system, that a successful RDC may be replaced through elections by one less effective.

A problem in the RDC managed systems has been the use of unpaid tap operators. Payment may be extracted in other ways and revenue collection at community level may not be high. The efficiency and effectiveness of the management at tap level therefore requires continued attention and is the subject of ongoing debate.

Sanitation

The policy document lays the framework for the company to deal with water but it is virtually silent on the role of the company in sanitation. The objects of the Company do not refer to sanitation and the LWSC is only obliged to deal with sewerage. As the high density settlements are not sewered the LWSC is not very interested in the sanitation issue. The Company may promote sanitation solutions with on site systems but given the small size of the peri urban section they would have little impact. Sanitation in peri urban communities is not seen as a Company responsibility and this is in common with most other Utilities who only deal with community managed rather than household services. The development of a peri urban sanitation strategy is currently underway at national level and this may lead to a redefinition of responsibilities. However the commercial nature of utilities should be taken into account when assigning responsibilities for sanitation.

Replicability

The LWSC is continuing to extend the programme into new areas, targeting 12 for the next 4 years, and it is to be expected that with experience the problems encountered in community organisation, vendor systems and payment systems will gradually be reduced. The experience of the peri-urban unit is being used successfully in these new areas where LWSC is actively involved with the community structures in addressing cost recovery.

Sustainability

The key issue on sustainability is the ability of the LWSC to establish and maintain a full cost recovery programme. This is not yet being achieved and will require considerable more effort on behalf of the Company to address the collection system at community and vendor levels. At the present time the programme implementation is heavily subsidised through NGO and LCC activities and not sustainable in the long term.

OUTSTANDING ISSUES

To date water projects in peri-urban areas are often approached in isolation of health interventions. There is a growing need to focus more on sanitation and health education interventions alongside water in a more integrated approach.

LESSONS LEARNED/ CONCLUSIONS

- 1? A policy and strategy toward low income, high density settlements provides valuable evidence of commitment of the utility, allows discussion on feasible options and approaches, and guides implementation. Given the pressure to deliver services in a cost effective way the process of development of the policy helps to focus the utility management on the poorly served areas and to clarify the relationship with other service providers working with these communities.
- 2? The creation of a special unit with a community participation focus is unusual for a water utility and could be expensive. Keeping it small, emphasising the collaboration with other players, and sharing responsibility allows a lot to be achieved with a small staff.
- 3? The community can play a very effective and important role in the day to day management of a reticulated water supply but need to be consulted throughout the process and be supported in the strengthening of community organisational structures.
- 4? Cost recovery mechanisms in low income, high density communities, require exploration to find the most effective and acceptable to both the community and the utility. This may take time and may result in several management options being implemented.
- 5? Sanitation can be neglected in low income communities unless the utility has a clear responsibility for all types of sanitation services. There is no authority responsible for on site sanitation systems and attendant problems and this could be difficult for a commercial utility to address.
- 6? Co-ordination between NGOs, local authorities and utilities bring clear benefits to all and can result in improved service provision and management where there is a need for extensive community involvement in the planning and implementation.

References

LWSC, 1996. Policy Document on water supplies and sanitation in peri-urban areas of Lusaka.
LWSC Corporate plan