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The effect of urbanisation on community-managed water supply: case study of Buea, Cameroon

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Abstract

Community-based projects play an important role in developing countries' efforts to meet the Millennium Development Goal of halving the population without access to improved water sources. Often associated with rural communities, they are increasingly being implemented in urban areas, where rural community-based management practices may be unsuitable. This research examines a small community-managed water supply scheme in Buea, a rapidly growing urban area in Cameroon. Stakeholder interviews and household questionnaires were used to better understand the implications of urbanisation on community-managed water supply projects. The urban context adds management and planning pressures because of larger, more diverse, populations and rapid population growth. Urban community-managed schemes require an institutional framework to encourage participation, which is at an increased risk of failure due to the urban context. Finally, urban community-managed schemes need to be implemented in an institutional context where they have legitimacy in the urban water supply framework, thereby allowing them to have access to the institutional and technical support they require to function sustainably. The consequence of failure is a return to "unimproved" water sources.

Keywords: participation, urbanisation, community-based water supply

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Introduction: community-managed water supply

The United Nations' Millennium Development Goal (MDG) Target 7C of halving the world's population without access to improved sources of water is set to be reached or exceeded in many parts of the world (United Nations, 2010), but progress may have been overstated due to inaccurate accounting of water supply 'improvements' (Clasen, 2012). Globally, high rates of urbanisation and large urban populations are projected for Sub-Saharan Africa and Asia (Montgomery, 2008; Potts, 2012) and thus many urban dwellers in developing areas continue to be faced with a lack of water supply and sanitation services (Kyessi, 2005; Clasen, 2012).

Efforts to meet this service deficit include various local, community and private sector initiatives, and combinations of the above (Spencer et al., 2008; Bakker, 2008). Privatization of water services in developing countries is driven by political trends, and raises questions of water as an economic good on the one hand, and as a human right on the other, and the concern that privatization will further marginalise low income groups' access to water, among other equality and environmental concerns (Ahlers, 2010). Hence, the public sector and community initiatives gain more relevance as viable options.

This paper focuses on community-managed water systems, small-scale water supply networks serving rural or urban communities, established by governmental or non-governmental organisations (NGO), individuals or community groups, that are operated and managed locally by members of the community who are neither highly trained nor professional water managers using situation and skill-appropriate technology. Systems described in the literature range from distribution system failures to successes (Folifac and Gaskin, 2011; Gaye and Diallo, 1997; Kaliba, 2002; Kleemeier, 2000; Kyessi, 2005; Njoh, 2003a; Sun, 2010; Whittington et al., 2009). Post-construction technical support, community ownership and self-sustaining motivation, and participatory management are all cited as factors that contribute to effective implementation. Community-based ventures are popular because they typically require fewer resources than their private or public counterparts, tend to be conceptually rooted more in participatory traditions and hence align with social justice and equity objectives, and can provide populist political capital to the parties who implement them, as discussed by Page (2003).

Community-managed projects have often been implemented in rural areas. However, particular challenges arise when the communities managing the projects are or become urbanised. This article seeks to add to this literature through a case study of Buea, an area undergoing urbanisation in the South West Region of Cameroon. Urbanisation is defined here as a shift in the economic and social character of a settlement towards non-agricultural income and ethnic heterogeneity. Potts (2012) argues that much urban growth in Sub-Saharan Africa is overstated because it is a result of rural settlements being redefined as 'urban', after having passed a population threshold even though residents remain largely agricultural. However, in the context of Cameroon, Buea is classified as an urban region because it demonstrates changes in its economic and social character, described below, that make it a typical example of a region with

population growth and increased political and social importance that is shifting from a rural to an urban character, to that of a secondary city.

It is important to study this context because community-managed projects are increasingly being explored as an alternative means for water service delivery in urban areas (Kyessi, 2005), and much future population growth is expected in small to medium cities in developing areas (Montgomery, 2008). The rise in secondary cities requires funding and management models appropriate for small towns because they tend to have lower ratios of fee-paying consumers to expensive, often international, staff, which would make them less profitable for the private sector.

The article will proceed by first describing the 'water crisis,' as it is known locally in Buea, how it developed, and the implications on community-based projects. The subsequent section describes the study methodology, followed by a description of the scheme. The fourth section discusses the specific planning and participation challenges faced by the urban community water scheme in question. The penultimate section draws from relevant experiences in other parts of Cameroon and Sub Saharan Africa to discuss the wider implications for the future of community-managed water in urban Cameroon, followed by a concluding section.

Background to the study

Buea's water crisis, sustainability and participation in community-based projects

Buea is in the South West Region of Cameroon, situated at the foot of Mount Cameroon at an elevation of 1000m. Buea, an administrative centre with a population of almost 200,000, is an agglomeration with several surrounding villages (Folifac et al., 2009). The climate is wet, tropical and equatorial, and precipitation is influenced by the rain shadow effect of the mountain, producing an annual average rainfall of 2,000 mm, mostly during the wet season from April to October (Fraser et al., 1998) and the natural relief allows for gravity-fed water supply. As a result, for much of the year Buea has relatively abundant water resources from rainwater collection, the municipal water network and community water schemes (both supplied by natural springs), and open streams, but in the dry season without rainfall people must rely on the community and municipal water supply networks from private connections or public taps, and on surface streams and unprotected springs. The water crisis is characterised by insufficient supply in the municipal distribution network, and irregular supply in the community schemes, and our research shows that this has curtailed essential household chores and forced people to rely more on unsafe sources of water such as open streams and unprotected springs. The growth in demand can largely be attributed to the town's growth of several thousand students and migrants per year since the University of Buea, the first Anglophone university in Cameroon, was established in 1993.

Two management issues compound the situation. First, water supply in Cameroon has been undergoing a restructuring process since 2005. The public water utility is being transformed into

a public-private partnership between the public institution Cameroon Water Utilities Corporation (CAMWATER) responsible for planning and investment for water-related infrastructure, and the privately operated Camerounaise Des Eaux (CDE), which is responsible for production, distribution, maintenance, and commercial activities of water supply (Republique du Cameroun, 2007). **CDE is currently managed by Moroccan engineering firms and interests, highlighting the international scope and nature of the entities involved in the privatization of municipal water supply.** At the local level personnel has not changed, and it is too early to say how this process of adjustment particularly at the upper levels is affecting the effectiveness and efficiency of water management in the country, but the slow rate of change is exemplified by the inaction of the CDE to expand its operations in Buea despite the demand. Second, several community water supply schemes were created using local spring water sources in the rural communities that lacked service provision by the water utility. Proponents of decentralisation may regard this positively, but in the absence of a clear framework for collaboration among these different actors, efforts to improve water supply in Buea remain rather haphazard and lacking of a wider vision, and give rise to tension between CDE and community water supply schemes. As an example, although the water sources exploited by the CDE network are used to full capacity, efforts by CDE to expand their supply are met with resistance because viable sources are already being exploited by community schemes. Furthermore, CDE has in the past complained to the authorities about community schemes on the basis that they are often providing untreated water and are therefore a public health concern.

Methodology

One of the community-managed water supply schemes in the villages of Buea, the Great Soppo, Wokoko, Molyko scheme (GWM) was used as a case study. The data were collected during a two-month period at the transition between the wet and the dry seasons. Qualitative data were collected using methods including participatory observation of behaviours of water collection and water use in Buea, and semi-structured interviews with water users, community members, people involved with the operation of the scheme, and the chairperson of the management committee. Questionnaires with both closed and open-ended questions were also administered to a random sample of households and hostels in the served neighborhoods using a random walk around the network. A sample of forty-six households and hostel residents was ultimately obtained (detailed in Table 1), out of an estimated population of 130 households and hostels.

The GWM scheme and context

The GWM was created in 2001 in a collaborative effort among residents of the local communities, the municipal council, a foreign private development organisation (Helvetas Cameroon), and a local NGO, to meet water demand in an area not served by the water utility and to reduce unsafe water sources. A participatory process including local consultations was carried out, and local inputs of labor and capital along with foreign aid were used. After construction, the scheme was handed over to the town council, who had helped to initiate the

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process and was given the authority to appoint the management committee. As per Helvetas Cameroon guidelines, the scheme was intended to be community-managed with a trained management committee in place, but with strong involvement of the municipal council. Operationally, the scheme harnesses part of the flow from an unprotected spring source (estimated at three litres/sec of a fifty litres/sec discharge) located in Great Soppo and accessible to its residents, a few kilometers uphill from the villages being served, as illustrated in Figure 1. The system is gravity fed; water from the spring is collected in a water tank, which supplies a pipe (75 mm) to a junction. From the junction one pipe serves higher elevation neighborhoods in Wokoko via public taps and private connections to individual households. A second pipeline originally served lower elevation neighborhoods in Molyko, but it is no longer functional because increased abstractions of water by consumers in the upper network leaves little discharge/pressure for the downstream pipes and taps to function properly. The maximum discharge of the system is 3 l/s (shared between all standtaps and individuals connections in use) and this would be sufficient to supply the population on the Wokoko line at 50l/day if only stand taps were used. However, with the increasing number of individual connections, pressure (and tap discharges) would reduce (by about a factor of 10) resulting in increased queue lengths at stand taps. This resulted in the decision to turn off the Molyko line, which had less taps and fewer users.

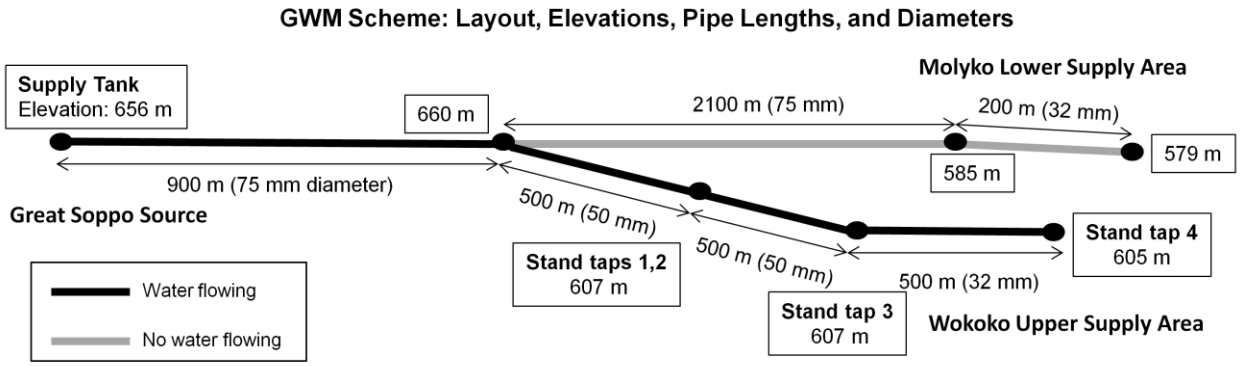

Figure 1 – Overview of the GWM Scheme

Water is supplied free of charge to users of public taps because of difficulties enforcing payment and controlling access. Users with private connections pay a one-off connection fee of 180,000 CFA to the management committee in addition to bearing the material and labour costs of their connection, and also pay a recurring monthly fee of 1,000 CFA for households and 5,000 CFA for hostels, amounts that were agreed upon in consultation with the community. When compared to the reported monthly incomes in Table 1, a private connection is a sizable investment and only higher income households and some student hostels are individually connected. When repairs are needed, collections are made on a voluntary basis and the economic burden of maintenance usually falls on a small group of households with household connections who contribute regularly. According to our estimate, the upper scheme provides water to a total population of

1,420 people across eighty to 100 households with a median household size of seven, and an estimated thirty multi-dwelling student hostels with an average size of twelve dwellings with a median occupancy of two (determined from questionnaire, presented in Table 1). This compares to, also, free stand pipe use from the municipal supply and for individual connections at a monthly fixed rate of 1,110 CFA and volumetric rate of 271 CFA / m^3 for the first 10 m^3 and 337 CFA/ m^3 for consumption above 10 m^3.

Challenges confronting the urban community-managed water scheme

The community's residents include mixed-income households, students in hostels, and senior citizens (Table 1). The median is chosen to indicate household size to eliminate the effect of a skewed range of household size, furthermore size is separated into households and hostels to show the relative magnitude of the student population. A large proportion are university educated, remaining in the area after attending the University of Buea (Table 1). Even though sixty percent of users are satisfied with the scheme, eighty-eight percent are forced to supplement with sources other than community water or rainwater because of poor service (Table 2). Almost all of these respondents use unsafe sources such as open streams and unprotected springs. Thus, while residents were meant to have access to an "improved" water source, actually they continue to rely on unsafe sources that the MDGs are working to eliminate. As Clasen (2012) notes, this is a case in point of improvements that are undermined because realities of water quality are not taken into account. These challenges are discussed below.

Table 1 Profile of questionnaire respondents		
(Total number of households sampled)	(46)	
	Sample size	Median
Median household size	27	7 persons
Median hostel unit household size	14	2 persons
	Sample size	Percent
Proportion of female respondents	25	58 %
Proportion of hostels in sample	14	34 %
Highest Education Level Attained		
Less than high school	7	17 %
High school	10	24.4 %
University	24	58.5 %
Household Monthly Income (1 USD ≅ 490 CFA)		
No response	18	45 %
Less than 100,000 CFA /month	12	30 %
100,000-250,000 CFA/month	9	22.5 %
More than 250,000 CFA/month	1	2.5 %

Table 1 – Profile of questionnaire respondents

Table 2 Characteristics of community water use for the GWM scheme	
Proportion of surveyed respondents using (42 responses)	
Stand taps	55 % (23)
Private connections	45 % (19)
Most important reason why community water is used (41 responses)	
Landlord's choice	5 % (2)

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Better water quality	5 % (2)
Better reliability	12 % (5)
No utility water in this area	56 % (23)
Shorter distance	10 % (4)
Lower cost	12 % (5)
Are users satisfied? (40 responses)	
Proportion of users responding "Yes"	60 % (24)
Proportion of users responding "No"	40 % (16)
Do you use sources other than community water and rainwater? (43 responses)	
Yes	88% (38)
No	12% (5)

Table 2 – Characteristics of community water use for the GWM

Planning issues

The first category of difficulties can be categorised as 'hard' engineering issues. Community schemes face challenges related to a lack of technical support and capacity, and poor cost recovery (Carter, 1999; Evans, 1992). Lessons have been learned from these experiences, and it is understood today that community-based water management requires a supporting agency that no longer solely provides technical or financial assistance but facilitates processes that increase the community's capacity to manage its own water system (Fonjong, 2005).

GWM's problems appear to be partially rooted in deficient planning. There was no knowledge of the source's capacity, and no account taken in the design of the potential growth of the neighborhood's population. Planners should have recognised that many of the new residents of Buea as a result of the establishment of the University would seek accommodation in the growing number of multi-floor student hostels (Table 1). Construction of hostels was booming in the Wokoko neighborhood due to the neighborhood's sparse population at the time and its proximity to the University. Planning permission for the student hostels was given by the authorities without considering the physical limits of the community water supply scheme. These planning oversights indicate the improvements needed in communication and planning capacity among local community water stakeholders.

The community water supply scheme required stronger technical support to address the planning challenges posed by urbanisation. Based on the physical dimensions of the distribution system, the scheme was estimated to have a potential capacity of 1,400 people at a consumption rate of fifty litres/person/day (basic water requirement from Gleick, 1996), and 3,500 people at a consumption rate of twenty litres/person/day (estimated standpipe per capita water consumption in Buea, and the lower end of the World Health Organisation's twenty to forty litres per person target range for drinking and sanitation, excluding cooking and cleaning) based on a water collection period of 8hrs per day. Today, it is highly probable that the potential capacity has been met and even exceeded, given the conservative estimate of 1,420 people in the upper network consuming the basic water requirement of fifty litres/person/day. Hence it is understandable why the lower Molyko section of the network no longer receives water, since the available water is used up in the upper Wokoko section of the network. The community scheme did not have the

capacity to carry out such planning calculations by itself, or at least were not made aware of the physical limitations of the system.

The second category of difficulties can be categorised as 'soft' or management issues. The scheme was originally intended to supply public taps rather than individual connections. However, the increased demand for water due to the population growth, especially of students (Table 1), resulted in long queues at the public taps. This put pressure on the management committee to alleviate the queues by allowing more individual connections to the student hostels. However, it is observed that when access to water is improved, reducing the return travel time for fetching water below five minutes, water consumption increases dramatically (Cairncross and Valdmanis, 2004). The management committee made the decision to allow individual connections without knowing this implication. So while the decision may have resulted in short-term level of service benefits to the student hostels, in the long-run overall water demand would have increased to greater than fifty litres/person/day consumption from individual connections, further exceeding the limited water supply and creating water shortages, that marginalised other community members, especially seniors and the poor. In hindsight, with the appropriate technical support and knowledge, the management committee could have made the better decision to increase the number of standpipes instead. This could have improved the accessibility issues without encouraging higher consumption and deteriorating the level of service in the long-run.

The accounts above provide examples of the impact of the lack of capacity on the operational ability of community water supply. In the urban context, the added planning and management complexities, and the dynamic nature of the urban setting require stronger institutional support and technical capacity than is usually provided to community water schemes to better cope with urbanisation.

Participation issues

Another factor that contributed to the community scheme's operational difficulties was the deterioration of participation from the residents and people who made up the management committee. Effective participation aims to deliver sustainable water management by improving communication between community and management and thus improving financial transparency, by encouraging community cohesion and perception of ownership and responsibility, and by creating a system that better mirrors user expectations, consequently improving the perceived benefits of the system (Evans, 1992). Effectiveness of participation itself is dependent upon factors which increase the emotional drivers of behaviour (pride, shame, frustration) through mechanisms such as governance and hierarchy, strength of the community (Njoh, 2002; Njoh, 2003b), the size of the scheme because smaller schemes are more cohesive, and compensation and incentives as opposed to volunteerism (Kleemeier, 2000; Njoh, 2002).

GWM was intended to function on a participatory basis. Continued participation (1) would have enabled the management committee to more effectively finance the scheme's operational costs by increasing the involvement of users, and (2) would have enhanced the avenues of communication between the community and the management committee thereby increasing transparency and users' sense of ownership. In GWM, the participatory mechanism broke down; several management committee members stopped attending meetings and volunteering. Community management has been applied effectively in smaller, rural communities, but the urban context presents a different set of conditions: larger, more heterogeneous populations, and a higher turnover of community members. Additionally, in Buea, the management committee of the community water supply scheme was appointed by the town council on the basis of social standing and managerial competence, but not all the appointees lived in the community being served, contributing to the breakdown of the participatory process. Our research will explain how this is linked to urbanisation.

'Indigene' and 'stranger' relationship. Urbanisation attracts large numbers of people from outside regions, and leads to greater interactions among different groups of people. The migration to Buea, especially to the neighborhoods being served by the community water scheme, demonstrated this. The management committee had no mechanism in place to adapt its membership. As members were appointed by the town authorities, and possibly for political reasons, there was a reluctance to involve the 'strangers' in the management committee. The indigene and stranger distinction appears to be based on ethnicity rather than any other factors, due to Buea's position as a strong traditional power base of the Bakweri group. The locals or 'indigenes' did not want to appear to cede control of the water resources that had belonged to them and been their responsibility for generations. The management committee did not encourage increased community participation, and neither did it petition the municipal authority to allow it to make changes to its membership to adapt accordingly. Additionally, the municipal authority was either unaware of the breakdown of participation or did not prioritise a revamp of the management committee. In GWM, there was no entity or institution to verify the continued success of community participation.

Community cohesion. Sun et al. (2010) found that in Ghana, communities that have higher levels of existing community groups tend to also have functioning water and sanitation committees. However, community cohesion, mobilisation, and involvement can become difficult, as in Buea.. While forms of power and organisation such as the traditional hierarchy maintained their official relevance, practically their effectiveness became weakened as the neighborhood accommodated new arrivals and some community leaders were less able to keep track of the populations they were supposed to represent. This weakening of community cohesion could have reduced the 'sense of ownership' the community as a whole felt about its water scheme; those new migrants to the area who were not involved in the initial planning, financing, and construction of the scheme would experience less of a sense of involvement and of a personal investment in the scheme. Furthermore, community-based management can enhance divisions by paradoxically

strengthening notions of which groups are included and which are excluded from 'community.' Thus, as in Buea, when the system is community-based but the authority behind the system is indigenous, rivalries can be exacerbated by giving the indigenes the power to determine who is or is not a part of that 'community' and who is represented.

Undermining of the feedback systems in rural community-managed schemes. Three mechanisms are at play in a rural community-managed scheme to encourage participation.

- In a rural community, due to the limited alternatives for water supply, management committee members are almost always also users of the community water scheme. Thus, the first mechanism is the positive reinforcement for participation: committee members who are resident of the area served and who are users of the water supply they are managing have a vested interest in participating in management decisions to ensure the scheme's successful operation.

- Second, there is positive feedback due to community recognition from peers. Recognition, gratitude, prestige, and enhanced social standing all contribute to encourage successful management and committee members' ongoing participation, and the more effective the participation, the more positive reinforcement committee members receive for their actions.

- The third mechanism is a negative feedback due to community pressure. Committee members who are less successful at carrying out management roles are pressured by their peers to perform better.

These mechanisms are not necessarily present in an urban setting. In GWM, care had not been taken to ensure that committee members would be subjected to the pressures and incentives mentioned above: the participatory process failed because committee members were not all resident in the community, compounded by the fact that the appointments were made by the town council and not by the users. As a result the management committee felt accountable to the town council and less so to the community.

Logistical burden of participating. Finally, there were inadequate incentives for the appointed management committee members to actively contribute to the functioning of the committee. The research highlighted that the lack of payment or honorarium resulted in committee members defaulting from their responsibilities. The opportunity cost of travel is not insignificant in Buea, and indeed in many urban areas, especially if committee members are non-resident in the communities whose water they are supposed to manage. An honorarium or provision of refreshments at meetings is suggested to encourage participation.

Implications: what would an effective urban community scheme look like?

Lessons from Kumbo, Cameroon: incentivisation

Community-based management was applied effectively in another urban setting in Cameroon, in Kumbo in the Northwest Region of Cameroon where the community began managing the water supply system in 1991 after sixteen years of management by the national water utility. Kumbo avoided the pitfalls noted in the example of Buea because the community took over a system with significant existing infrastructure, and had relatively strong human capacity and skills. Strong political connections allowed Kumbo to draw on long-term support from elements in Cameroon as well as overseas. Kumbo was a relatively homogeneous society and united around their distrust of the Francophone government institutions. Crucially, there was a strong incentive for success because community-managed water was the sole option for potable water in Kumbo, and there was no alternative in the case of failure (Njoh, 2006). The strong community organisation allowed more direct community management of the water supply infrastructure. This system worked in Kumbo not only because of all the incentives noted above but because it had the authority of the traditional leaders, or Fon, who continue to hold a prominent position in the leadership structure of the Northwest Region. However, the community activism in Kumbo cannot be viewed uncritically. Page (2003) notes that the system's long-term viability is questionable, as urgent repairs of aging infrastructure would require outlays of capital beyond the capability of the community. Page (2003) also describes the paradox that the community-managed Kumbo Water Authority (KWA) accelerated the commodification of water. In order to attract grants, it successfully introduced payments, ironic given the fact that originally community management was instituted to maintain free water. However, the KWA is able to leverage its position as a community water provider to keep the trust of their users.

The implication is that it is important to build redundancy into the participatory incentive mechanisms such that even if non-financial incentives are ineffective, appropriate economic incentives or honorariums still encourage participation. Finally, the case of Kumbo suggests that some user cost recovery is required to ensure the long-term sustainability of the system, and that maintenance of trust is crucial to community-based management.

Delegation of authority and accountability

In Buea, the delegation of authority from the municipal council to the management committee led to inefficiency. The membership was unable to adapt to the changing composition of the neighborhood and to the absenteeism of committee members. The municipal council wants the management committee to solve the community scheme's management and water problems, yet does not give it the authority and accountability to do so independently of the municipal council's approval. Thus, this top-down decision making approach results in a management committee that it is answerable to the municipality rather than to the community, which is at odds with community-based management.

The implication in an urban setting with multiple layers of governance is that community schemes must remain accountable to their communities. The role of the other governance institutions will be to advise and ensure harmony with wider policy and development goals,

but an understanding needs to be reached in which the management committee is given the authority to make **operational and procedural** decisions independently of municipal approval, **thus remaining accountable to the community of users**.

Experience from Ghana: Water and Sanitation Committees (WATSANs)

There should be a role for an NGO, trained council member, or government institution, to advise on management issues beyond the technical aspects of operating the scheme and on ensuring community participation. For example, in Ghana's national water management organisational structure, there exists a national Community Water and Sanitation Agency (CWSA), under them at the regional level are Regional Water and Sanitation Teams (RWST), and at the community and village level are WATSANs (Fuest, 2006). According to Fuest, the CWSA is responsible for national water strategy and providing technical assistance, but in practise it delegates responsibility for strategy to RWSTs and community-based WATSANs. Partner NGOs have a role in the partnership; they are charged with grassroots tasks such as community mobilization, training, hygiene education, monitoring and evaluation.

In Buea, **and in other urban community schemes, lack of ongoing technical support is a barrier.** Community-based management would benefit from added technical and management support from the institutional level, providing the information tools and technical guidance to address operational problems, and setting up transparent community-based WATSANs that are made accountable to the community of users.

Changing the Cameroonian legal context of community water

The Cameroonian water law makes water supply in urban areas the sole responsibility of the utility CDE (Republique du Cameroun, 2007), implying that urban community schemes cannot co-exist with the water utility. Therefore, in the current legal context, it will be difficult for urban community-managed schemes to receive official institutional support as described in previous sections, because such actions will be seen to undermine the legislation. Acknowledgement of legitimacy and support from local authorities would open the door for community providers to receive the backing needed to put them on a sustainable path.

Currently, the legitimacy of community-managed water in urban Cameroon is ambiguous, and community schemes need to be situated within a clear legal framework before they can be made more effective. **In Buea and in other urban situations, community water must have the full backing of the law and political will in order to function effectively.**

Conclusions

While community systems provide several benefits—they fill a gap in supply and require a lower investment than a town supply, usually being simpler and using labour and money resources from the community supplied—this research showed that community-based management needs

to be applied with care in urban or urbanising settings. First, the dynamically evolving nature and diversity of Buea's population had consequences on participation. Urban populations are more transient than rural ones, experiencing a higher turnover of people. Thus, sometime after GWM was created, some of the originally appointed management committee members no longer resided in the community served or even in Buea, and hence those members defaulted on participating in meetings. Second, community-managed water supply schemes in urban areas require more institutionalised technical support in the areas of management, planning, and engineering, because of the challenges posed by the urban context. The advantages of following such a system similar to that used in Ghana would provide support for the issues mentioned previously, and where a national regulatory institution could play this role in partnership with local community organisations and NGOs.

The experiences from Buea serve as a guide to urban community water schemes in other regions: schemes must be supported through technical and managerial assistance by local authorities, institutions, and NGOs, but before this is possible, community water providers would need to be recognised as legitimate urban water service providers in order to operate in an urban water framework that allows for partnerships among public, private, and community actors, in a concerted plan for water provision. Finally, while the conclusions were drawn from the specific case study of a community-managed water scheme in an urbanising region of Cameroon, the implications can be extrapolated to the wider context of community management in urban areas.

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