

# Stand-alone unit or mainstreamed responsibility: how can water utilities serve low-income communities?

Urban utilities throughout the developing world face the challenge of extending services to low-income communities (LICs). This paper draws on current best practice to explore a question that is core to addressing this challenge: how can utilities effectively *structure their organisation* to extend services to LICs? Our review of ten utilities reveals three candidate approaches:

- Dedicated, stand-alone LIC unit with operational function;
- Dedicated, stand-alone LIC unit with advisory function;
- 'Mainstreaming' approach in which responsibilities for serving LICs are distributed throughout the utility's operational units.

The paper draws the following conclusions:

- **Service extension to LICs must be framed as an opportunity:** achieving real and quantifiable progress in serving LICs is tied to a positive framing of pro-poor service delivery from staff at all levels of the utility.
- **Mainstreaming approaches are proven to deliver services at scale:** The rapid increase in coverage achieved by Manila Water Company (MWC) and Phnom Penh Water Supply Authority (PPWSA) is potentially instructive for utilities looking to scale-up services to LICs.
- **Dedicated LIC units can be effective catalysts for improved service delivery:** In cases where a utility is only starting to address this challenge, a dedicated LIC unit can act as a transitional department while the utility consolidates its approach. Dedicated units might be best employed as a stepping stone, helping to address initial preconceptions around pro-poor service delivery, and leading ultimately to full integration of LIC responsibilities into the mainstream operational structure.
- **LIC units can be dynamic in nature:** A number of utilities consider it an advantage to keep flexibility in their model for serving LICs, enabling them to respond dynamically to changing opportunities over time.



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<sup>1</sup> Useful previous publications in this area include WSP (2009) Setting up pro-poor units to improve service delivery: Lessons from water utilities in Kenya, Tanzania, Uganda and Zambia; and WaterAid (2009) Water utilities that work for poor people: Increasing viability through pro-poor service delivery.

## Introduction

### The complex challenge of serving low-income communities

Urban water utilities in Africa and Asia have historically focused on serving the 'low-hanging fruit' of the city's business centre and middle or high-income residential districts. This tendency to prioritise areas with a high return on investment has led to people who live in low-income, informal settlements – often more than half of the population of Asian and African cities – going without a public water supply. However the situation is now evolving, in part thanks to a sector-wide drive for 100% inclusive service delivery. Utilities are themselves realising the commercial benefits of serving 'low-income communities' (LICs – see Box A), but they continue to face enormous challenges in providing adequate services to these parts of the city, which often lie beyond the reach of existing infrastructure. These challenges are multiple and include lack of investment finance; insufficient or uncertain water resource; complex and unfamiliar social and political conditions; and the rapidly expanding and transient nature of low-income settlements. In summary, utilities are faced with the imperative of providing affordable services to low-income consumers, often using new approaches that satisfy the technical requirements of these areas, while maintaining commercial viability and keeping costs low.

This paper builds upon discussions held at the 2013 WSUP Masterclass in Kampala, which brought together pro-poor specialists and top management from utilities throughout Africa, and also from Manila Water – a utility that has implemented a well-known and successful approach to serving LICs. It was clear from these discussions that identifying the appropriate organisational structure for any given utility is central to solving the problem. The paper contrasts three options available to utilities in determining how to structure their organisation towards serving these communities: i) the use of a dedicated, stand-alone LIC unit with an operational function; ii) the use of a dedicated, stand-alone LIC unit with an advisory function, and iii) a 'mainstreaming' approach in which responsibilities for serving LICs are distributed throughout the utility's operational units. Using data gathered through a consultative exercise with utility staff, local experts and WSUP staff, and drawing upon case studies of ten utilities currently delivering water and/or sanitation services, the paper considers the pros, the cons and the context-dependencies of the three approaches.<sup>1</sup>

### Box A. Two important notes on terminology

In most African and Asian cities the majority of low-income consumers are clustered into **low-income communities** (LICs – sometimes referred to as 'slums', 'informal settlements' or 'peri-urban settlements'). Of course it is not always as simple as this: we may find middle- or high-income consumers living in or adjacent to LICs, or conversely, low-income consumers who live in middle or high-income districts. Nonetheless, in most cities the concept of a 'low-income community' is meaningful and useful, and is employed as an umbrella term in this paper.

The term '**LIC Unit**' is used in this paper to refer to a dedicated unit within a utility that has responsibility for low-income communities, and/or for low-income consumers. Different utilities use different terms with essentially the same meaning: so in addition to 'Low-Income Consumer Unit' or 'Low-Income Community Unit' [LIC Unit], we may also see 'Informal Settlements Department' [ISD], as in Nairobi; 'Peri-Urban Department' [PUD], as in Lusaka; 'Community Liaisons Unit' [CLU], as in Dar es Salaam; or Community Programme and Consumer Relation Division [CP&CRD] as in Dhaka. The term 'pro-poor unit' is also widely used in the literature. Although the precise nature of each unit will vary, our use of the term 'LIC Unit' should be understood to cover all of these terms.

## 1. Key requirements for effective LIC service delivery: learning from 2013 WSUP Masterclass

The approach taken by a utility to improving services to LICs will be influenced by a number of core factors, including financial incentives (the degree to which the utility must be self-financing or commercially viable); availability and cost of investment finance; available water resource capacity; and the institutional, political and regulatory frameworks that govern service delivery to LICs in the local context. While it is important to acknowledge that each utility adopts a unique starting position informed by these factors, the WSUP 2013 Masterclass set out to identify *shared requirements* for effective service delivery to LICs across contexts. Urban WASH professionals and leading figures from utilities and local government throughout Africa and Asia were asked for their view, with a strong degree of consensus emerging from the discussion. Eleven key requirements for effective service delivery to LICs were identified and are summarised in Box B.

### Box B. Key requirements for effective service delivery to LICs as identified by utility staff at the WSUP 2013 Masterclass, Kampala

**Corporate commitment** - The utility and other key institutions, including the regulator and the asset holder, must be formally committed to a strategy for serving low-income consumers.

**Status and power** - Those responsible for delivering the LIC strategy must have sufficient status and power, relative to other units and departments within the utility, to be able to achieve their objectives.

**Clear roles and responsibilities** - The roles and responsibilities of those involved in delivering the strategy must be clear, consistent with other departments, and understood throughout the utility and by relevant stakeholders.

**Central role** - The LIC strategy must inform and be a central component of the overall city-wide strategy. The utility must also act as the central point of coordination for all donor-supported interventions in low-income areas.

**Real responsibilities** - Genuine commercial responsibilities for revenue collection, investment, non-revenue water (NRW) reduction and project implementation in low-income areas must be assigned to specific individuals; advisory and support roles on their own are insufficient.

**Synchronisation of commercial and social objectives** - The utility must be simultaneously committed to social objectives (serving poor citizens) and commercial objectives (achieving overall business viability), and these two objectives must be seen as being absolutely compatible.

**Clear plans and KPIs** - Short, medium and long-term objectives for serving LICs must be clear and fully integrated with the utility's wider strategies. Well-focused Key Performance Indicators [KPIs] must be devised including metrics to assess **i)** contributions of low-income areas to total revenues, **ii)** NRW, and **iii)** consumer satisfaction.

**Adequate resources** - There must be adequate allocation of resources - financial, human and material - to implement the strategy.

**Dynamic and innovative** - There must be a dynamic and innovative culture within the utility that continuously searches for improved service delivery models which are cost-effective, affordable and sustainable, and which provide better services to consumers.

**Balanced staffing** - There must be a healthy balance of staff within the utility between **i)** operations and engineering expertise, and **ii)** social and community development expertise.

**Customer relations** - There must be positive relations and strong understanding between the utility and its existing and potential customers in low-income communities.

Having identified these 11 key requirements, participants were asked to prioritise the three requirements they rated as being most important in terms of serving LICs effectively, and to consider the specific challenges that would need to be overcome for each of these requirements to be realised (Table 1). Taken as a whole these three requirements reflect the need to determine clear responsibilities and plans for serving LICs, while at the same time ensuring organisational-wide commitment to these plans. The implication is that although a stand-alone LIC unit might be a transparent and efficient way to organise these responsibilities, such a unit would not be successful without high levels of corporate commitment, most obviously from top-management but equally from staff at all levels across the utility.

**Table 1.** The three most important requirements for effective service delivery to LICs and their associated challenges

Key Requirement	Associated challenges to be overcome
<b>Corporate Commitment</b>	<ul style="list-style-type: none"> <li>▪ Inherent top-management belief that serving low-income communities results in a low return on investment and is therefore incompatible with the need for the utility to be financially viable. This belief might be underpinned by a real or perceived high cost of investment, and/or a real or perceived risk of asset loss in informal settlements.</li> <li>▪ Scarce resources and funding limitations.</li> <li>▪ Wider organisational resistance to introducing LIC unit.</li> <li>▪ Political interference in utility services (for example, populist imposition of commercially non-viable water tariffs without any compensatory provision of public funds).</li> </ul>
<b>Clear Roles and Responsibilities</b>	<ul style="list-style-type: none"> <li>▪ Staff resistance to losing influence or to accepting additional responsibilities.</li> <li>▪ Potential overlap of responsibilities and roles with other departments inside the utility and with other government agencies.</li> <li>▪ Lack of acceptance of LIC unit roles/responsibilities by other departments, who may view the unit as insignificant by comparison.</li> </ul>
<b>Clear Plans and KPIs</b>	<ul style="list-style-type: none"> <li>▪ Defining and agreeing LIC targeting criteria: who exactly are low-income consumers? Within whose geographical area of responsibility do they live? Who needs to be subsidised and who doesn't?</li> <li>▪ Defining KPIs that are valid for all customers and potential customers across the utility's geographical area of responsibility.</li> <li>▪ Ensuring plans have the flexibility to adapt to the fluid service needs of low-income communities.</li> <li>▪ Aligning utility plans to an existing master plan.</li> </ul>

## 2. Utility structures for LIC service delivery: mapping the landscape

Discussions at the WSUP 2013 Masterclass underlined that a core set of requirements do exist for service low-income communities effectively, regardless of the context; however, meeting these requirements is far from straightforward, and only a handful of utilities have done so successfully at scale. A vital first step for a utility is identifying the optimal organisational structure that will allow the challenges listed on page 4 to be overcome. For example, organisational resistance was cited by masterclass participants as a common barrier to serving LICs: is this best countered by a dedicated unit advocating internally for that cause, or by distributing responsibilities for serving LICs across operational units, ensuring that everyone has a stake in the outcome?

The answer to this question is clearly context-dependent, but there are insights to be gained from examining how service provision to LICs is currently being addressed by urban water utilities. Table 3 presents data gathered for ten utilities, selected to provide a cross-section of service providers in Africa and Asia. The utilities serve populations ranging from 1.9 million (AdeM, Maputo) to 14 million (Ghana Water, one of three national utilities included in the sample). Each utility has responsibility for a service area with a significant low-income population, ranging from 0.6 million (Phnom Penh Water and Sewerage Authority, Cambodia) to over 4 million (Dhaka WASA, Bangladesh). This mapping exercise paid particular attention to the organisational structure employed by utilities to serve low-income consumers, and confirmed three broad approaches: i) the creation of a operational LIC unit, ii) the creation of an advisory LIC unit, and iii) mainstreaming of LIC responsibilities across departments. These three approaches are detailed in Table 2.

**Table 2.** Organisational structures for LIC service delivery and sample utilities adopting the approach

Organisational structure for LIC service delivery	Operational LIC unit
Description of approach	Full responsibility for service provision to low-income communities is concentrated within a dedicated LIC unit which takes direct responsibility for management of investment, service provision and revenue collection within low-income districts.
Adopted by	Lusaka Water and Sewerage Company (LWSC, Zambia), National Water and Sewerage Corporation (NWSC, Uganda)
Organisational structure for LIC service delivery	Advisory LIC unit
Description of approach	A LIC unit is set up in a supporting role, with responsibilities including developing and testing appropriate service delivery models and advising operational units on models to adopt.
Adopted by	Nairobi City Water and Sewerage Company (NCWSC, Kenya), Dhaka Water Supply and Sewerage Authority (DWASA, Bangladesh).
Organisational structure for LIC service delivery	Mainstreamed LIC responsibilities
Description of approach	Skills and responsibilities for serving LICs are distributed across the utility's operational departments.
Adopted by	Manila Water Company (MWC, Philippines), Phnom Penh Water Supply Authority (PPWSA, Cambodia), Jiro Sy Rano Malagasy (JIRAMA, Madagascar), Águas da Região de Maputo (AdeM, Mozambique).



Table 3. The ten utilities and their key characteristics

Title of utility, mandated service area, country	Mandate	Organisational structure for LIC service delivery	Total population of mandated service area	Coverage level (% of mandated area)	Low-income population unserved by the utility <sup>a</sup>
LWSC, Lusaka, Zambia	Water and sanitation	Operational LIC unit	2.1 million	Water: 87% Sanitation: 71%	Water: 0.8 million Sanitation: 1.3 million
NWSC, 44 towns in Uganda	Water and sanitation	Operational LIC unit	National: 4.5 million Kampala: 2.1 million	National: Water: 78% Sanitation: no data available Kampala: Water: 85% Sanitation (sewerage): 5%	National: no data available Kampala: Water: 0.5 million Sanitation: no data available, but known to exceed 0.5 million
DWASA, Dhaka, Bangladesh	Water and sanitation	Advisory LIC unit	12 million	Water: 80% Sanitation: 30%	Water: 2.5 million Sanitation: 4 million
NCWSC, Nairobi, Kenya	Water and sanitation	Advisory LIC unit	3.7 million	Water: 74% Sanitation (sewerage): 28%	Water: 0.9 million Sanitation: no data available, but known to exceed 0.9 million
DAWASA, <sup>b</sup> Dar es Salaam, Tanzania	Water and sanitation	Advisory LIC unit	4 million	Water: 59% Sanitation: 37% (Sewerage: 7%)	No data available
GWCL, Urban areas of Ghana	Water	Currently forming an advisory LIC unit	14 million (urban population of Ghana)	Water: 60%	Water: 4 million
JIRAMA, Urban areas of Madagascar	Water	Mainstreamed pro-poor responsibilities	4.8 million	Water: 56.2% in Antananarivo; no data available for wider area	Water: 0.8 million for Antananarivo; no data available for wider area
AdeM, Maputo, Mozambique	Water	Mainstreamed LIC responsibilities	1.9 million	Water: 60%	Water: 0.8 million
PPWSA, Phnom Penh, Cambodia	Water	Mainstreamed LIC responsibilities	3 million	Water: 84%	Water: 0.5 million
MWC, Manila, Philippines	Water and sanitation	Mainstreamed LIC responsibilities	6.1 million	Water: 99% Sanitation: 88% (Sewerage: 9%)	Water: 0.1 million Sanitation: no data available

Sources: Key informants and other documents listed under each country in references.

<sup>a</sup> Estimates based on information provided by key informants in each country.

<sup>b</sup> DAWASA is the asset holder while DAWASCO is utility and operator.

### 3. Utility factfiles

In this section we look in more detail at the individual approaches to serving LICs now being taken forward by our ten utilities. Although each utility has adopted one of three organisational structures for serving LICs, we observe considerable variation in approach within this broad categorisation, influenced by the different institutional, regulatory and political contexts within which each utility operates. Six of the ten utilities have established a dedicated LIC unit with either an operational or advisory function; the key characteristics of each unit are summarised in table 4.

#### 3.1. Utilities with an operational LIC unit

##### Lusaka Water and Sewerage Company (LWSC) Peri-urban department (PUD) - Zambia

<sup>a</sup> NWASCO (2013).

Mandate	Water and sanitation
Total population of mandated service area <sup>a</sup>	2.1 million
Coverage level (% of mandated area served by the utility) <sup>a</sup>	Water: 87% Sanitation: 71%
Low-income population unserved by the utility	Water: 0.8 million Sanitation: 1.3 million



LWSC staff member inspects a water kiosk, Lusaka

In a decision driven by strong top-management commitment to improving both water and sanitation service delivery in low-income districts, LWSC created a dedicated LIC unit in 2000. The PUD has full operational and commercial responsibility for all 33 Peri-Urban Areas in Lusaka, 10 of which are overseen by 'Water Trusts': high-capacity, community-based organisations with representation from National and local government, service providers, local businesses and communities. Lusaka Water delegates responsibility for water services provision to the Water Trusts, who often oversee service delivery to substantial low-income populations (for example, the peri-urban area of Kanyama has a population of approximately 250,000 people). The responsibilities of the Water Trusts typically include management of water kiosks (which either deliver water from local boreholes, or in some cases take water from Lusaka Water's piped network - see Mwanamwambwa et al, 2005), and revenue collection. Water Trusts which use water from local boreholes take responsibility for borehole management and water treatment; however the PUD maintains an important role in resolving issues and ensuring long-term asset maintenance.

The PUD sees its responsibilities as clearly defined: in line with its operational role, it includes an Engineering Unit, a Community Unit and three Zone Heads, the latter responsible for overseeing connections and billing within defined geographical areas in close coordination with the Water Trusts. Staffing is a deliberate balance of engineers, social specialists and staff with business skills. In considering the applicability of this 'operational' approach in other contexts, however, it is important to bear in mind that the PUD is intrinsically linked to the Water Trusts who have the day-to-day responsibility for managing the systems. In order to cover operation and maintenance (O&M) costs the Water Trusts retain a percentage of cash revenue and pass a percentage on to the LWSC: the Water Trusts therefore generate less revenue (per cubic metre of water supplied) for LWSC than areas supplied directly by the utility. It should also be noted that the trusts are responsible for managing non-revenue water (NRW) within their area as this impacts directly on their revenue. In Peri-Urban Areas without a Water Trust, the PUD takes direct responsibility for service provision and all revenue is passed directly to the utility. LWSC are currently looking at alternative delegated management arrangements which they anticipate will generate more revenue than the Water Trust model: the roles and responsibilities of the PUD and other LWSC departments are therefore under review.

<sup>a</sup> NWSC (2014).

<sup>b</sup> Otema (2014).

### Uganda National Water and Sewerage Corporation (NWSC)

Mandate	Water and sanitation
Total population of mandated service area <sup>a</sup>	National: 4.5 million Kampala: 2.1 million
Coverage level (% of mandated area served by the utility) <sup>a</sup>	National: Water 78% Sanitation: no data available Kampala: Water: 85% Sanitation (sewerage): 5%
Low-income population unserved by the utility <sup>b</sup>	National: no data available Kampala: Water: 0.5 million Sanitation (sewerage): no data available, but known to exceed 0.5 million



Group connection with metered standpost provided by NWSC, Kampala

NWSC is currently responsible for water and sanitation (sewerage) services to 44 urban towns including the capital Kampala, a mandate that has increased significantly since 2009. Ensuring access to both clean piped water and safe sanitation for low-income communities is a key priority for Uganda to improve quality of life and alleviate poverty: the national goal, as defined in the 2006 Ministry of Water and Environment's National Water Policy, is to reach 100% coverage for water supply and sanitation services in urban areas by 2015 (Kariuki et al, 2014).

Informed by this wider government agenda, NWSC established a pro-poor branch in 2007 to promote, plan and support service expansion in low-income settlements, focusing initially on Kampala. The branch is well-supported by NWSC's senior management and controls its own operational budget, with the main utility responsible for funding capital investment. The operational function of the branch is focused on billing and collection, with full responsibility given for revenue collection from pre-paid meters attached to public standpipes in Kampala. In addition the branch performs advisory and technical support roles including identification and prioritisation of low-income locations, project evaluation and impact assessment, and documentation of lessons learned.

Urban sanitation coverage remains very low in Uganda, largely as a result of insufficient attention to on-site sanitation and faecal sludge management (FSM), currently the responsibility of municipal authorities. NWSC's sanitation mandate relates only to sewerage; with existing sewerage networks in Kampala (as in most developing cities) focused on middle- and high-income districts, the pro-poor branch of the utility is therefore focused solely on water. The Ugandan government recognises the need for change and FSM is now being incorporated within new strategies and programmes: the current Kampala Sanitation Master Plan has provision for constructing sludge treatment facilities as well as improving the collection of sludge, and a new European Union-funded project in Kampala is dedicated to developing an integrated city-wide on-site sanitation concept with an emphasis on FSM (Mutono, 2013).

### 3.2. Utilities with an advisory LIC unit

#### Dhaka Water and Sewerage Authority (DWASA) Community Programme and Consumer Relation Division (CP&CRD) – Bangladesh

<sup>a</sup> Khan (n.d).

<sup>b</sup> Shaheen (2014).

Mandate	Water and sanitation
Total population of mandated service area <sup>a</sup>	12 million
Coverage level (% of mandated area served by the utility) <sup>b</sup>	Water: 80% Sanitation: 30%
Low-income population unserved by the utility <sup>b</sup>	Water: 2.5 million Sanitation: 4 million



Group connection with underground storage tank provided by DWASA, Dhaka

In 2010 DWASA set up a Community Programme and Consumer Relation Division (CP&CRD) with seven staff members and advisory responsibility for serving low-income communities. The introduction of the Division reflects the growing commitment of DWASA senior management to providing improved WASH services to low-income communities: DWASA Managing Director, Engr. Taqsem A Khan, has publicly stated DWASA's commitment to providing safe drinking water to all Dhaka LICs by December 2015 (UNB Connect, 2014).

The Division currently has two main functions: i) improving utility and LIC customer relations, and ii) coordinating the activities of the many NGOs active in Dhaka's low-income communities with DWASA staff, and with other water, sanitation and hygiene practitioners. Relating to point i), the Division has been instrumental in supporting the start-up of a call centre to improve customer service. The division currently has no ring-fenced budget of its own; however DWASA expect that the Division's role will become more significant and evolve over the coming years in terms of its size and scope. For example, the Division's current focus remains almost exclusively on water supply, but this could possibly expand to include on-site sanitation in future if DWASA continues its increasing engagement with FSM services.

#### Nairobi Water and Sewerage Company, Informal Settlements Department (ISD) – Kenya

Mandate	Water and sanitation
Total population of mandated service area	3.7 million
Coverage level (% of mandated area served by the utility)	Water: 74% Sanitation (sewerage): 28%
Low-income population unserved by the utility	Water: 0.9 million Sanitation: no data but known to exceed 0.9 million

Nairobi Water's Informal Settlements Department (ISD) is backed by strong corporate commitment from the utility, reflected in the decision to internally allocate the Department its own budget and to grant access to investment funds. Norman et al (2013) report that the ISD currently participates in processing customer applications for household water connections - 2,400 accounts to date - thereby acting as a mediator between low-income consumers and the operational units (referred to in Nairobi as 'the regions'). In response to longstanding tensions between Nairobi's low-income communities and the utility, a key role of the Department is developing LIC customer relations more broadly. For example, many LIC residents fear that the 'formalisation' of informal settlements through improved service provision will have negative

#### Sources:

Maina (2014).  
WASREB (2013).



implications for the community: the ISD aims to counteract these perceptions by placing communities at the centre of decision-making. In addition, the ISD retains a strong role in developing and testing innovative service delivery models aimed at facilitating affordable water connections for low-income consumers (e.g. social connection policies, pre-paid metering), and takes the lead role in planning service extensions to LICs. The Department's draft three-year plan is ambitious and includes extending water supplies to a further 200,000 low-income customers through 50km of pipework; for sanitation, which lags behind water supply both in terms of coverage and support from the utility, the ISD nonetheless plans to provide 10,000 household toilets, 1,000 shared yard toilets (known as stand-alone units) and 100 communal ablution blocks (Njambi, 2013).

#### **Dar es Salaam Water and Sewerage Authority (DAWASA) Community Liaison Unit (CLU) – Tanzania**

##### **Sources:**

EWURA (2012).

Mandate	Water and sanitation
Total population of mandated service area	4 million
Coverage level (% of mandated area served by the utility)	Water: 59% Sanitation: 37% (sewerage: 7%)
Low-income population unserved by the utility	No data available

DAWASA is the asset holder and lease-holder with responsibility for investment in water and sewerage infrastructure in Dar es Salaam (the mandated service provider of piped water and sanitation services is DAWASCO: Dar es Salaam Water and Sewerage Company). DAWASA's CLU was established in 2003 specifically to run the Community Water Supply and Sanitation Program (CWSSP). The CWSSP funded small water supply and on-site sanitation facilities for communities within the DAWASA service area that were unlikely to be reached by DAWASA systems in the near future. The CLU worked with NGOs who mobilised and assisted LICs in Dar es Salaam to prepare grant requests and develop capacity to manage water supply and sanitation schemes following construction. Under the CWSSP, 50 small water supply schemes (mostly based on boreholes) and ten sanitation facilities were constructed. World Bank (2012b) reports that creating the dedicated unit proved an effective approach for managing the CWSSP, to the extent that in 2010, DAWASCO followed suit by establishing its own LIC unit to work closely with the CLU. The utility's LIC unit is responsible for technical support to the off-network community-based schemes and has responsibility for oversight of service delivery.

#### **Ghana Water Company Limited (GWCL), Pro-Poor Coordinator and the Low Income Consumer Support Unit (LICSU)**

##### **Sources:**

Boachie (2014).

GWCL (2014).

Mandate	Water and sanitation
Total population of mandated service area	14 million (urban population of Ghana)
Coverage level (% of mandated area served by the utility)	Water: 60%
Low-income population unserved by the utility	4 million

“GWCL senior management recognise that low-income customers are a ‘business’ worth pursuing”

GWCL has responsibility for urban water services provision nationally, including in Accra and other major cities and towns with a population of more than 5,000 people. All GWCL’s pro-poor initiatives are project-based, funded by external organisations, and focused on providing communal or public facilities rather than household connections. A single Pro-Poor Co-ordinator in the national Head Office helps GWCL’s operational units (‘the regions’) to engage low-income households, and involves the community in decision-making around extension of service lines from water mains. Currently, this is very much a support and advisory role with no operational or investment budget support.

In addition to the presence of a Pro-Poor Co-ordinator, there is a growing awareness across GWCL of the strategic importance of serving low-income communities. Senior management recognise that low-income customers are a ‘business’ worth pursuing, and actively support the creation of a Low Income Support Unit with sub-units located in the regions. The Unit already features on the GWCL organogram, despite not having yet been formally established; it is expected to play an advisory role and to be active from early 2015.



Public water standpost provided by GWCL, Kumasi, Ghana

Table 4. Key characteristics of featured LIC units

Utility and LIC unit	LIC unit key characteristics						Main activities
	Title	Type ('operational', 'advisory' or 'other')	Date established	Number of staff	Operational budget for the past year (salaries, vehicles, etc.)	Project/ investment budget for the past year	
DWASA, Dhaka, Bangladesh	Community Programme and Consumer Relation Division (CP&CRD)	Advisory	2010	7 (4 of whom are seconded from WSUP)	Nil	Nil	Improving utility and LIC customer relations; coordinating activities of NGOs and others; facilitating billing and revenue collection.
GWCL, Urban areas of Ghana	None currently but forming a Low Income Consumer Support Unit (LICSU)	Advisory. A single pro-poor co-ordinator only. The LICSU is expected to be in place by early 2015.	Pro-poor coordinator started in 2011; LICU forthcoming.	1 (the new LICSU is likely to have 3 members at Head Office)	Nil	Nil	Majority of work is project based and includes sensitising and liaising with utility staff; coordinating with NGOs and CBOs; mobilising communities.
NCWSC, Nairobi, Kenya	Informal Settlements Department (ISD)	Advisory technical support unit.	2008	15	Dedicated budget, no data available.	Dedicated budget, no data available.	Coordinating donor and partner initiatives; implementing capital work programmes; providing guidance and support to branch offices for O&M and social issues.
DAWASA <sup>a</sup> , Dar Es Salaam Tanzania	Community Liaison Unit (CLU)	Advisory	2003	5	Dedicated budget, no data available.	No data available.	Implements and supervises community-managed water and sanitation schemes; facilitates community mobilisation through NGOs.
NWSC, 44 towns in Uganda	Pro-Poor Branch in Kampala	Operational <sup>b</sup>	2007	12	USD 40,000	Nil	Operating and maintaining facilities in LICs; creating public awareness; providing feedback to management; networking with NGOs and CBOs involved in service provision.
LWSC, Lusaka, Zambia	Peri-Urban Department (PUD)	Operational	1999	30 (14 at Head Office plus approx. 5 staff in each of 3 zonal offices)	Dedicated budget, no data available.	No data available.	Full commercial and operational responsibility in 23 peri-urban areas (PUAs) without a Water Trust; full commercial but less operational responsibility in further 10 PUAs where Water Trusts have day-to-day responsibility.

**Sources:** Key informants in each country plus: WSP (2009) - for Kenya, Tanzania, Uganda and Zambia; Kariuki et al (2014) for Uganda, WaterAid (2009) - for Uganda, Cambodia and Philippines.

<sup>a</sup> A new Pro-Poor Branch was established in DAWASCO in 2010. This is an operational support unit with responsibility for oversight of the DAWASA CLU implemented off-network community-based schemes.

<sup>b</sup> Kampala is by far the largest service area for NWSC. The Kampala PPB is one of 20 in Uganda and is 'operational'; however, the other branches in the smaller towns are currently advisory rather than operational.

### 3.3. Utilities with mainstreamed responsibilities for LIC service delivery

#### Jiro Sy Rano Malagasy (JIRAMA) – Madagascar

**Sources:**

Ranaivo (2014).

Mandate	Water and sanitation
Total population of mandated service area	4.8 million
Coverage level (% of mandated area served by the utility)	56.2% in Antananarivo; no data available for wider area
Low-income population unserved by the utility	0.8 million in Antananarivo; no data available for wider area

The Madagascar water utility JIRAMA is mandated by the Ministry of Water on a concessional contract basis to serve the capital Antananarivo and over sixty other urban and rural districts. In Antananarivo, JIRAMA supplies water to 75,000 houses and 2,100 water kiosks, serving around one million people. The remaining 0.8 million low-income residents use unsafe sources: shallow wells, streams and water vendors.

JIRAMA has a strong recent history of improving service delivery to low-income consumers. However, this commitment is seriously constrained by a lack of water resource within the city, a situation made worse by JIRAMA's inability to cover operational costs, and by the political uncertainty during the past five years (now improved following the presidential elections in late 2013) that has restricted donor investment in water abstraction and treatment infrastructure. Having recognised that it needs to increase water availability and strengthen its low-income customer base, the utility has set up a dedicated unit to fast-track applications for network connection for community kiosks. A second and vital aspect of JIRAMA's strategy is a citywide NRW reduction programme: the utility has devoted significant resource to this programme with the aim of increasing revenue and freeing up financial resource to further improve service provision to LICs.

Responsibilities for serving LICs are currently mainstreamed within JIRAMA's operational departments. At the WSUP Masterclass 2013, JIRAMA outlined plans to undertake a process of internal restructuring which will include setting up a dedicated LIC unit; JIRAMA is now debating if this unit should be located within the investment or commercial arms of the utility (Baghirathan, 2014).

#### Águas da Região de Maputo (AdeM) – Mozambique

**Sources:**

Madeira (2014).

Mandate	Water
Total population of mandated service area	1.9 million
Coverage level (% of mandated area served by the utility)	60%
Low-income population unserved by the utility	0.8 million

The private lease-holding water utility in Maputo serves approximately 60% of Maputo's population through approximately 200,000 household connections and 600 standposts. The remaining 0.8 million people access water either through on-selling from neighbours, or from the private borehole operators who proliferate in the peri-urban areas beyond the reach of AdeM's network, known locally as Pequenos Operadores Privados (POPS). There are currently over 800 POPS, each serving between 20 and 300 households through dedicated reticulation systems. Despite their large number and relatively large customer base, all the POPS remain unregulated, informal service providers.



“AdeM argues that there is no need to have a dedicated LIC unit with its own structure, agenda and targets”

AdeM's mandate is limited to water only, for which they use a decentralised structure with five directors in five geographical regions. Each director is responsible for delivering the water supply service and meeting area-specific key-performance indicator (KPI) targets in their designated region. While these regions are inhabited by high-, middle-, and low-income populations (and include commercial and public buildings), AdeM's structure does not include a LIC unit; instead AdeM attempts to serve all of these groups through its mainstream operations. AdeM's senior management are aware that a focus on achieving their KPI targets could inevitably lead to a greater emphasis on the high-end users and 'better' payers; in response to this the utility has challenged itself to meet the mandate to serve all of Maputo, not only the affluent 'good customers'. The regulator, Conselho de Regulacao do Abastecimento de Agua (CRA), and the asset holder, FIPAG, have played a key role in instigating this change by insisting that AdeM takes a citywide pro-poor approach. With support from WSUP and local CBOs, and through working in LIC pilot project areas, AdeM has focused on achieving high levels of individual household connections, improving billing and revenue collection, and reducing NRW - down from 55% to 48% over two years (WSUP, 2014). The direct consequence of this has been an improvement in revenue generation from serving these low-income areas and recognition by AdeM that these customers present a viable business case.

With the full-support of CRA and FIPAG, AdeM now displays a strong commitment to serving LICs. Indeed, AdeM argue that if they can fulfill their mandate and meet their own KPIs then there is no need to have a dedicated LIC unit with its own structure, agenda and targets; in their view this would be a distraction from the company's main business and their preference is to continue to develop the mainstreaming approach.

#### Manila Water Company (MWC) - Philippines

Sources:  
World Bank (2012a).

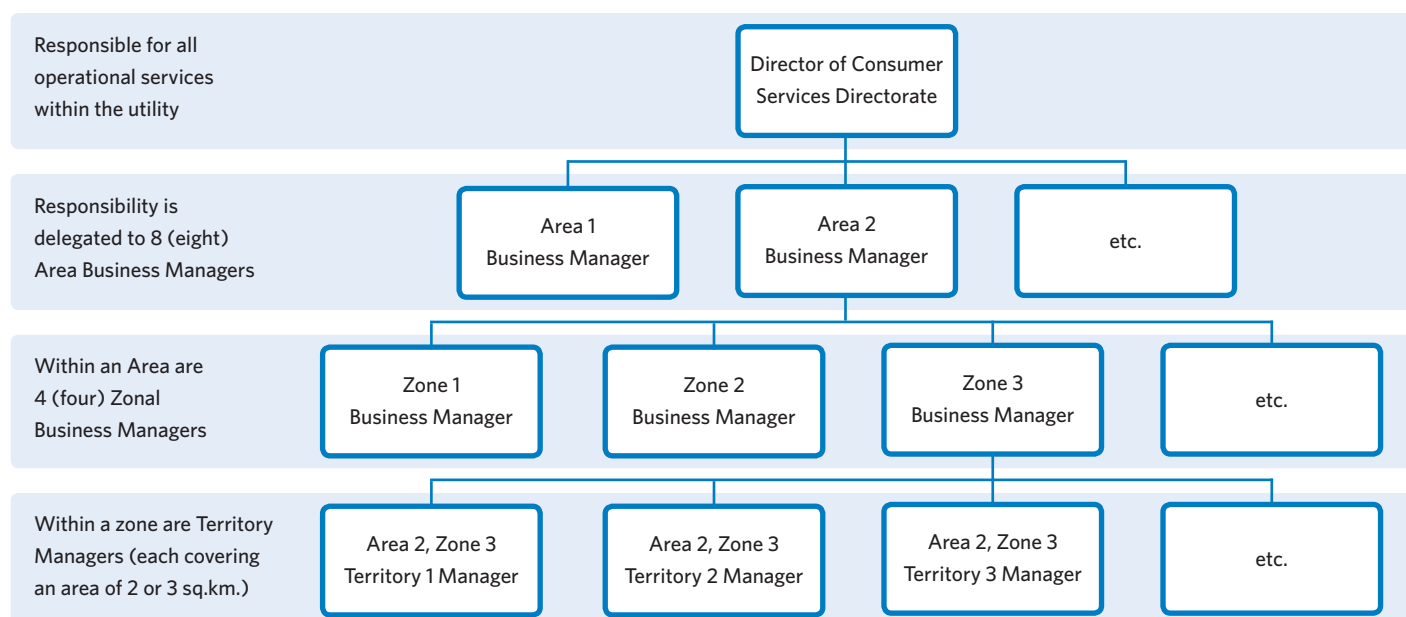
Mandate	Water and sanitation
Total population of mandated service area	6.1 million
Coverage level (% of mandated area served by the utility)	Water: 99% Sanitation: 88% (Sewerage: 9%)
Low-income population unserved by the utility	Water: 0.1 million Sanitation: No data available

When Manila Water Company began operating its water service in 1997, only 58% of the population had water service and only 26% of the service area offered 24-hour supply. With just 1,500 connections, Manila's low-income households were particularly underserved, forcing people to meet their needs for drinking and cooking by fetching water from public taps, buying it at highly inflated prices from street vendors, or tapping illegally into nearby pipes. To correct this situation MWC introduced performance targets, organisational reforms and a new programme with an inclusive business model: Tubig Para Sa Barangay (TPSB), or Water for Poor Communities. Three schemes were initially established under the programme: i) bulk water provision, whereby Manila Water supplied water to the community edge, beyond which a CBO or entrepreneur constructed and managed a micro-network; ii) shared group connections with two to five households sharing one meter; and iii) household meters, often clustered along major roads rather than immediately outside the individual home (Cheng, 2014). An integral feature of the programme were the partnerships created with CBOs and with 'barangays' - local government units (LGUs) - to ensure communities were actively included in the design and implementation of water supply systems, thereby helping to promote sustainability and create incentives for all stakeholders from the outset.

The progress made by MWC in serving low-income communities as result of the TPSB programme is hugely impressive: MWC now serves over six million people (coverage estimated at 99%), with 1.7 million individuals benefiting under the TPSB. These customers have 24-hour access in 99% of the distribution area, at water pressures high enough to conveniently use taps and enable indoor plumbing. The utility has also overseen a remarkable fall in NRW from 63% in 1997 to 11% in 2011. This progress would not have been possible without a strong commitment from senior management towards serving the urban poor. The TPSB model is designed to reach low-income communities based on a clear business case: underserved, low-income households demonstrate a willingness to pay for safe, reliable water; as such, connecting these households gives the utility access to new markets while reducing costs from illegal connections and other inefficiencies.

Although MWC established a new programme specifically to improve services to low-income consumers, it is important to note that responsibilities for implementing the TPSB strategy and for serving LICs more broadly are mainstreamed into MWC's operational units. All operational services within the utility are the overall responsibility of the Consumer Services Directorate, as shown in the organogram in Figure 1. Within the Directorate, water and sanitation service delivery is ultimately delegated to Territory Managers who have wide-ranging responsibilities, from billing to revenue collection and liaison with the utility's NRW Reduction unit. MWC hold that the TPSB model and decentralisation has been a key factor in successfully extending services to LICs; Territory Managers in particular have played a vital role in remaining 'close to the ground' and ensuring a strong interface between low-income customers, the LGUs and MWC.

Figure 1. Organogram of MWC Consumer Services Directorate.



Although still impressive, the rate of change in sanitation in Manila has been comparatively slow compared to the water service, with 9% of MWC's service area covered by sewerage. AECOM and SANDEC (2010) estimate that 88% of the population has access to on-site sanitation (septic tanks), although in low-income areas space for building is at a premium, leading to many households using shared facilities of two to three households per unit. Since 2005 and through the adoption of a more affordable strategy involving a septage management programme (primarily using households' existing septic tanks), MWC is now accelerating coverage and is currently targeting full coverage by 2037 (World Bank, 2012a).

**Sources:**

Visoth (2014).

PPWSA (2013).

“PPWSA has increased coverage to the inner city area of Phnom Penh from 40% in 1993 to 100% in 2014”

**Phnom Penh Water Supply Authority (PPWSA) – Cambodia**

Mandate	Water
Population of mandated service area	3 million
Coverage level (% of mandated area served by the utility)	84%
Low-income population unserved by the utility	0.5 million

Like the Philippines, Cambodia has considerable experience of mainstreaming LIC service delivery. Hailed by the Asian Development Bank as a “model public sector water utility” (WaterAid, 2009), PPWSA has increased coverage to the inner city area from 40% in 1993 to 100% in 2014, including 30,000 connections to low-income households. Unusually for a utility operating in low-income areas, PPWSA focuses exclusively on household connections, and does not use water kiosks or standposts; nor does it employ any specialist staff to serve LICs. Progress has been achieved through the utility’s ‘Clean Water for the Poor Programme’, which works as follows: i) staff follow set procedures to ensure that each new household connection is classified into one of five ‘poor’ categories; ii) a committee of the PPWSA jointly evaluates these conditions with direct help from the local communities and assigns each household into a category which determines the level of subsidy provided (this committee could be seen to be performing the role of an advisory LIC unit as it carries out a discrete task for the utility, however PPWSA do not view it as such); and iii) depending on the outcome of the committee’s assessment, households receive both a subsidy on the connection charge and access to a discounted water tariff. The programme has been backed up by strong political support and a ‘culture of change’ within the utility (WaterAid, 2009) which has overseen a huge improvement in utility-customer relations. This is reflected in the programme’s success in dissuading consumers from using informal sources for their water, including vendors (known locally as ‘wholesellers’) who on-sell PPWSA water at vastly inflated prices, and abandoned piped connections manned by private sellers who often supply untreated river water.

“The case for corporate commitment to serving LICs begins with the assertion that it is commercially viable”

## 4. Discussion

### Corporate commitment is a pre-requisite to serving low-income communities

This paper has aimed to shed light on current practices for serving LICs through a rapid review of ten utilities, each of which had demonstrated a willingness to devote time and resources to addressing this challenge in their mandated area. In all ten cases there was strong evidence of a commitment, at both the management and the political level, to increase access to services for low-income communities. As such, the review supports the sentiment clearly expressed by participants at the 2013 WSUP Masterclass that “corporate commitment” is a pre-requisite to progress and the single most important requirement for serving LICs. It is beyond the scope of this paper to address how corporate commitment can be promoted and secured in cases where it is lacking, although inspiration can be drawn from the selected case studies. Manilla Water, for example, have developed their approach to serving LICs based on the simple business case that underserved, low-income households usually are willing to pay for safe and reliable water; extending services to these communities can therefore open up new markets and generate additional revenues. Utilities are not expected to extend services as a loss-making exercise; the case for corporate commitment to serving LICs begins with the basic assertion that it is commercially viable for them to do so, and any argument must be underpinned by “hard data” to that effect.

### Individual approaches must be adapted to the local context

Having taken a strong level of corporate commitment as our starting point for extending services to low-income communities, the body of this paper was concerned with the organisational structures now being deployed by utilities to achieve this aim. We observed three models across the ten utilities: i) the use of a dedicated, stand-alone LIC unit with an operational function; ii) the use of a dedicated, stand-alone LIC unit with an advisory function, and iii) a ‘mainstreaming’ approach in which responsibilities for serving LICs are distributed throughout the utility’s operational units. However within these three broad categorisations there were a wide range of responses and a high degree of nuance: utilities have adopted diverse mainstreaming approaches, and there is also considerable variation in the capacity and activities of dedicated LIC units. These variations arise in part because managers are experimenting and seeking to develop best practice in what has been, until recently, a neglected area; but they are also caused by the range of circumstances in which managers have to make these decisions. Critical differences exist across these utilities in terms of the environment they inhabit and what is possible in their given context. In particular, it is likely that some or all of the following will influence how managers can respond:

- Background service performance and revenue (cashflow).
- Cost of capital and access to (cheap) finance.
- Scope for cross-subsidies or external subsidies.
- Role of the regulator in approving or disallowing cost-reflective tariffs.
- Cost of infrastructure, which in turn will be driven by a number of technical considerations including the nature of the urban space, the water resource and the costs of infrastructure development.
- Capacity and skills.
- Relative scale of the challenge (i.e. percentage of unserved population across the service area).
- Rate and nature of urban growth (e.g. infill within the existing city boundaries or expansion beyond them) relative to existing infrastructure.

“The primary concern of a LIC unit might evolve from new connections to supporting customers once coverage has improved”

In light of these constraining factors it becomes difficult to advocate one particular model as “the best approach”: rather, the most appropriate approach will depend on the starting point and requirements of each utility. Nonetheless some key areas emerge from the review as meriting further exploration.

### **LIC units can be dynamic in nature**

It was notable that several of the study utilities are considering changing or evolving their approach as they continue to evaluate the best way to serve low-income communities. A strong example of conducting ongoing analysis is LWSC, the utility in Lusaka, who are considering modifying their approach in order to generate higher revenues, despite the status of the Water Trust model as a ‘success story’ for extending services to LICs. Other utilities such as JIRAMA in Madagascar and GWCL in Ghana are in various stages of transition on the path to creating dedicated LIC units. One of the drivers contributing to this state of permanent evolution could be the need to respond to funding opportunities; some funders require the utility to demonstrate a ring-fenced management arrangement for pro-poor investments, while at other times, the LIC unit may be more effective as an operational arm of the mainstream utility business. The primary concern of a LIC unit might also evolve from new connections to supporting customers once coverage has improved. The performance of NWSC’s Pro-Poor Branch in supporting customers is another example of this dynamic change over time: NWSC is now preparing to handover installation and maintenance of prepaid meters to branches, leaving more room for the head office to focus on other issues. A number of utilities consider it an advantage to keep flexibility in their model for serving LICs, enabling them to respond dynamically to changing opportunities over time.

### **The importance of framing service extension as an ‘opportunity’**

As noted, each of our ten utilities demonstrated a strong level of corporate and political commitment to serving low-income communities. Linked to this commitment is the propensity to view serving LICs as an opportunity rather than a risk. Literature elsewhere has highlighted that LIC units can be seen either in a positive light – being illustrative of the commitment to increase access to services, or in a negative light – being simply ‘window dressing’ (see Norman et al, 2013) which appears to represent progress while achieving little in practice. This review has further underlined that achieving real and quantifiable progress in serving LICs is tied to a positive framing of pro-poor service delivery from staff at all levels of the utility.

### **The operational-advisory continuum**

It is important to acknowledge that this paper has used some simplifications. Firstly, ‘operational’ and ‘advisory’ LIC units can be considered extremes of a continuum: it could be argued that the pro-poor branch of NWSC in Uganda (for example) is situated halfway along this continuum, combining operational responsibilities with advisory/support responsibilities. Secondly, ‘operational’ is in itself a simplification of complex reality: ‘operational’ responsibilities for service provision may be distributed in different ways within a utility (for example, there may often be an investment/infrastructure arm and a commercial arm). A more detailed analysis of organisational structures for LIC service delivery would need to consider these complexities further.

“Dedicated LIC units can be viewed as a stepping stone while the utility consolidates its approach”

## 5. Conclusion

The rapid review for this paper has demonstrated that improved services for low-income communities can be delivered effectively both by staff in a distinct LIC unit, and by individuals embedded in existing ‘operational’ departments. There are however strong arguments in favour of each approach.

### **Mainstreaming approaches are proven to deliver services at scale**

Of the ten utilities featured in the study, it is notable that the two utilities achieving the widest coverage both use a mainstreaming approach. MWC (Manila, Philippines) and PPWSA (Phnom Penh, Cambodia) achieved rapid increases in coverage by first adopting a clear strategy - titled Water for Poor Communities, and Clean Water for the Poor respectively - then by involving all departments in implementing this strategy in a utility-wide movement to serve consumers in low-income areas and low-income consumers more broadly. Although not all utilities will be able to replicate this approach from their current starting position, the success of these two initiatives is striking and potentially instructive for utilities looking to scale-up LIC service delivery. A further advantage of the mainstreaming approach is to negate the risk of splitting away responsibility for LIC services into a separate unit developing into ‘window dressing’: a tokenistic initiative that is not taken seriously by the utility’s leadership or by staff in other departments.

### **Dedicated LIC units can be effective catalysts for improved service delivery**

The review also finds a useful role to play for dedicated LIC units, specifically where a utility is only starting to address the challenge of providing services to low-income communities. In these cases a LIC unit can play a catalytic role and act as a transitional department, helping to address the varied challenges and preconceptions around pro-poor service delivery as well as the complex overlapping of departmental responsibilities, all of which can lead to institutional neglect of consumers within LICs. Although some utilities are beginning to demonstrate that a dedicated LIC unit can deliver services at scale, there is an argument for viewing dedicated units as a stepping stone while the utility consolidates its approach, leading ultimately to full integration of LIC responsibilities into the mainstream operational structure.

### **The same principles always apply**

The approach taken by a given utility will therefore depend on its starting position and future strategy; both the adoption of a mainstreaming approach and the introduction of a dedicated unit with operational and/or advisory functions are viable options. Importantly, the review identified other common factors of vital importance to service delivery, over and above the organisational structure employed. These include a) the commitment of top-management within the utility to serving LICs, b) support to the utility from a proactive regulator, c) the establishment of pro-poor Key Performance Indicators (KPIs) to drive a genuine focus on improving services in low-income communities, and d) a culture within the utility of engaging with low-income consumers and listening to what their needs and priorities are. The most effective utilities will hold a strong commitment to achieving universal access within the service area, and will utilise an institutional structure that ‘works’ with the local context and which enables a range of service delivery approaches in order to achieve their goal.



## References

### General

- Norman, G, Siyeni, Y, Otema, J, Hayward, T and Parker, S (2013) Pro-poor responsibility in utilities: dedicated LIC unit, or responsibility integrated across mainstream operations? Paper for AfWA 2013. Water and Sanitation for the Urban Poor (WSUP). London, UK.
- WaterAid (2009) Water utilities that work for poor people: Increasing viability through pro-poor service delivery. London, UK.
- WSP (2009) Increasing viability through pro-poor service delivery. Lessons from water utilities in Kenya, Tanzania, Uganda and Zambia. WSP World Bank.

The following references provided useful information that informed the ten case studies and the four data tables.

### Bangladesh

- DWASA (2013) Quarterly Report on LIC Activities through CP & CRD. DWASA, Dhaka, Bangladesh.
- Khan, T. A (n.d.) Dhaka Water Supply and Sewerage Authority: Performance and Challenges (pp. 1-13). DWASA, Dhaka, Bangladesh.
- LGD (2005) Pro Poor Strategy for Water and Sanitation Sector in Bangladesh. Local Government Division, Government of Bangladesh, Dhaka, Bangladesh.
- MLGRD (2012) National Strategy for Water and Sanitation Hard to Reach Areas of Bangladesh. Ministry of Local Government and. Rural Development, Government of Bangladesh, Dhaka, Bangladesh.
- Shaheen, A (2014) Personal communication.
- UNB Connect (2014) Safe water for all city slums by 2015. Available at [unbconnect.com/mou-dwasa-2/#&panel1-8](http://unbconnect.com/mou-dwasa-2/#&panel1-8) Accessed on 12 May 2014.

### Cambodia

- Binayak Das, Ek Sonn Chan, Chea Visoth, Ganesh Pangare, and Robin Simpson (Ed.) (2010) Sharing the Reform Process, Mekong Water Dialogue Publication No. 4, Gland, S. I. 58pp. (n.d.).
- Biswas, A. K and Tortajada, C (2010) Water Supply of Phnom Penh: An Example of Good Governance. International Journal of Water Resources Development, 26(2), 157-172. doi:10.1080/07900621003768859
- PPWSA (2013) Clean Water for All Communities: PPWSA Annual Report 2013. Phnom Penh Water Supply Authority, Phnom Penh, Cambodia.
- Visoth, C (2014) Personal communication.

### Ghana

- Boachie, F (2014) Personal communication.
- GWCL (2014) Website of Ghana Water Company Limited. Available at: [www.gwcl.com.gh/pgs/hmp.php](http://www.gwcl.com.gh/pgs/hmp.php)
- Nyarko, K. B, Odai, S. N, Owusu, P. A, & Quartey, E. K (2008) Access To Sanitation And Safe Water: Water supply coping strategies in Accra.

### Kenya

- Maina, G (2014) Personal communication.
- NCWSC (2011) Social Connections Policy For Nairobi's Informal Settlements. Nairobi City Water and Sewerage Company, Nairobi, Kenya.
- Njambi, L (2013) NCWSC Strategy for NCWSC- ISD 2014-2016. Nairobi City Water and Sewerage Company, Nairobi, Kenya.
- WASREB (2013) A Performance Review Of Kenya's Water Services Sector 2011 - 2012. Water Services Regulatory Board, Nairobi, Kenya.

### Madagascar

- Baghirathan, B (2014) Personal communication.
- Ranaivo, J (2014) Personal communication.

### Mozambique

- BPD (2005) Water provision and independent providers in the peri-urban districts of Maputo and Matola: a case study synopsis (pp. 9-11). Business Partnerships for Development (in Water and Sanitation), London, UK.
- Fedirko, L, and Gabriel, G (2012) Maputo's Water Utility: Historic overview and reform policies.
- Madeira, A (2014) Personal communication.
- WSUP (2014) Urban Programming Guide. WSUP, London, UK.

### Philippines

- Cheng, D (2014) The persistence of informality: Small-scale water providers in Manila's post-privatisation era. Water Alternatives 7(1), 54-71.
- IFC (2012) Manila Water Company. Inclusive Business Models — Guide to the Inclusive Business Models in IFC's Portfolio (pp. 38-39). International Finance Corporation.
- Largo, E (2014) Personal communication.
- Largo, E (2013) Providing Water Service to Urban Poor Communities: WSUP Masterclass - Manila Water (PPT).

- AECOM and SANDEC (2010) A Rapid Assessment Of Septage Management In Asia: Policies And Practices In India, Indonesia, Malaysia, The Philippines, Sri Lanka, Thailand, And Vietnam. Regional Development Mission for Asia (RDMA), USAID, Bangkok, Thailand.
- World Bank (2012a) East Asia Urban Sanitation Flagship Study: Philippines Country Study (Draft). World Bank, Washington DC, USA.
- WSP (2004) Increasing Access The Experience of Small-scale Water Providers in Serving the Poor in Metro Manila. WSP (East Asia and Pacific) of the World Bank. Manila, Philippines.

### Tanzania

- EWURA (2012) Water Utilities Performance Review Report 2012/13: Regional Water Utilities and DAWASCO. Energy and Water Utilities Regulatory Authority. Dar Es Salaam, Tanzania.
- World Bank (2012b) A Case Study Of Public-Private And Public-Public Partnerships In Water Supply And Sewerage Services in Dar Es Salaam. World Bank, Washington DC, USA.

### Uganda

- Kariuki, M, Patricot, G, Rop, R, Mutono, S, & Makino, M (2014) Do pro-poor policies increase water coverage? An analysis of service delivery in Kampala's settlements. WSP of the World Bank, Washington DC, USA.

- Mutono, S (2013) Personal communication.
- NWSC (2013) National Water And Sewerage Corporation: Five Year Strategic Direction (pp. 1-32). National Water and Sewerage Corporation (NWSC), Nairobi, Kenya.
- NWSC (2014) Enhancing Financial Sustainability and Infrastructure Growth, Annual Report 2012 - 2013.
- Otema, J (2014) Personal communication.

### Zambia

- Mwanamwambwa CK, Nkoloma HC, Kayaga, S (2005) Linking community to policy level support: the CARE-Zambia trust model. 31st WEDC International Conference, Kampala, Uganda, 2005.
- Ndongwe, G (2013) Water and sanitation service delivery in Lusaka: challenges and future outlook. PPT. Lusaka Water and Sewerage Company, Lusaka, Zambia.
- NWASCO (2012) Website of National Water Supply and Sanitation Council (NWASCO). Available at [www.nwasco.org.zm](http://www.nwasco.org.zm). Accessed on 5 May 2014.
- NWASCO (2013) Urban and Peri-Urban Water Supply and Sanitation Sector Report 2013. National Water Supply and Sanitation Council (NWASCO), Lusaka, Zambia.
- Sipuma, R (2014) Personal communication.

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