

WATER AND SANITATION MARKET ASSESSMENT: POTENTIAL VIABILITY OF WATERCREDIT & MICROFINANCE SOLUTIONS IN UGANDA

Executive Summary

This report was developed by Water.org in partnership with The MasterCard Foundation to assess the market for water, sanitation and hygiene (WASH) services in Uganda and gauge potential opportunities to expand access to WASH through financial services, particularly microfinance. It builds upon previous efforts by Water.org in 2010 when a market assessment was completed in collaboration with *MicroSave* Uganda. The assessment is based on the analysis of technical documents as well as a series of interviews with a broad range of actors representing government entities, financial institutions (FIs), water utilities (WUs), and non-governmental organizations (NGOs). Three focus group discussions were also held with FI clients. The assessment research and interviews were conducted in July 2012.

Country Context, WASH Access & Poverty in Uganda

As of 2011 Uganda has approximately 34 million inhabitants, 5.1 million (15%) of whom live in urban areas while 28.9 million (85%) of whom live in rural areas (UBS, 2011). Although the population is predominantly rural, the urban population has tripled since 1980 (MWE 2011). The annual urban growth rate is estimated at 4.8% (MWE 2011). Regarding land tenure and housing, 71% of Ugandans live in homes their families own, of which 73% are roofed with iron sheets (UIA 2009). For cooking and lighting resources, 80% of household rely on wood (UIA 2009).

Agriculture is the main source of income for Ugandans, with only 5% of the adult population employed in the formal employment sector upon which income tax is levied (UIA 2009). However, agriculture is third in percentage of gross domestic product after the service industry and manufacturing. The per capita income in 2010 was 490 USD (AMFIU 2008). Uganda has surpassed the Millennium Development Goal of halving the percentage of the population living in poverty, from 56% in 1992/1993 to 24.5% in 2010/2011. Poverty rates are estimated to be higher than the national average in northern Uganda due to prolonged droughts, cattle rustling and civil war (AMFIU, 2008).

The numbers for access to water and sanitation vary by source. For this report, numbers are from the Joint Monitoring Programme (JMP- <http://www.wssinfo.org/>) as well as the Ugandan government's Water and Environment Sector Performance Reports. According to the JMP in 2011, 75% of people in Uganda had access to an improved water source, leaving 8.5 million people without access. Of people with access, 5% received water from piped water on their premises and 95% used point water sources including public water connections, boreholes, shallow wells, protected springs, and rainwater harvesting. This shows that nearly all 34 million Ugandans are potential clients for upgrading level of access from basic services to enhanced services, and ultimately piped water on premises. In rural areas

access stood at 71.7% and urban access at 91.3%. Access in rural areas is uneven, with some rural districts¹ standing at 95% coverage and others with access as low as 20%. The government reports estimate water coverage as lower 66% for urban and 65% rural areas (MWE 2011).

According to the JMP, sanitation access in Uganda in 2011 stood at 35% with 22.1 million people without improved access. Urban access was 33.9% and rural access at 35.2%. Open defecation nationwide was 8.6%, with rural open defecation larger than urban (9.9% versus 1.4%). Improved access is defined as those technologies in which people cannot readily come into contact with their faeces including ventilated improved pit latrines, flush toilets, and septic tanks not shared by more than one compound. Unimproved sources are simple latrines, rudimentary waste collection, no sanitation solution and sanitation solutions shared between compounds. The numbers from the government of Uganda are much higher, with sanitation access at 81% for urban areas and 70% for rural areas (MWE 2011). The government reports 73% of households using pit latrines (shared or otherwise). Pit latrines are the common type of technology with 73% of households reporting to using one. Open defecation, while low at 5% nationwide, is still very prevalent in the northern section with more than 24% of population practicing open defecation (MWE, 2010).

Ugandan Water and Sanitation Provision

The Ministry of Water and Environment (MWE) is the national custodian of water resource development, supply and protection. The role of MWE in water and sanitation is to fund, manage and monitor expansion of coverage; provide back-up support and maintenance; rehabilitate water and sewerage facilities; coordinate public-private partnerships; and develop policies for the Water and Sanitation Sector.

In Uganda, supply of water in large towns is relegated to the National Water and Sewerage Corporation (NWSC) while supply in small towns and rural growth centres are undertaken by a mix of Private Water Operators (PWO) and local government's Water Authority. In rural towns MWE coordinates implementation of water service provision through special programs including the District Water and Sanitation Development Conditional Grant (DWSDCG) through the Ministry of Local Government (MoLG).

With regards to sanitation, MWE's role is limited to the development of public sanitary conditions and promotions of hygiene and sanitation in small towns and Rural Growth Centers (RGCs). Ministry of Education and Sports (MoES) is responsible for provision of sanitary facilities and hygiene education, including hand washing in schools while the Ministry of Health (MoH) is responsible for hygiene and sanitation promotion for households through its Environment Health Division (MWE, 2011).

Urban Water Supply in Large and small towns

NWSC operates in 30 urban councils (including Kampala) across 23 districts. Whereas all the councils have water supply, only half have sewerage facilities and services, the rest relying on septic tanks, cess tanks and cesspools. To date, NWSC manages 27 water supply schemes – some supplying water to more

¹ Click [here](#) to download the latest sector report that provides details on level of coverage at each district.

than one council/town. The supplies consist of one gravity flow scheme, two ground water based schemes, and twenty four surface water based schemes (MWE, 2010, nwsc.co.ug).

As at 30th June 2011, NWSC had 272,406 customers of which, 90% were active connections. The remaining 10% are inactive connections, that are disconnected. During the FY 2010/11, the number of new connections averaged about 2,135 per month. Overall, there was an increase in new connections from 22,412 connections in FY 2009/10 to 25,633 connections during FY2010/11 (MWE, 2011).

Small towns refer to gazette municipalities, town councils and town boards outside the jurisdiction of NWSC (MWE, 2011). Institutionally, management of water and sanitation in small towns includes town boards and growth centres of up to 500 people and is undertaken by local governments with support from MWE (MWE 2010, UNDP 2011).

The management of water supply services in small towns is mainly provided through Performance Contracts between the Water Authority at the town council or municipality and Private Water Operators (PWO). The performance contracts usually range for 2-3 years with targets set for water supply and connections. Towns with limited capacity in terms of pipeline coverage do not attract private firms (UNDP 2011, MWE 2011) and instead use individual operators (not firms) or its Water Authority department.

According to UNDP 2011, private operators charge a flat connection fee of UGX 50,000 (USD \$21) which is heavily subsidized by the ministry. Connection fees in towns with no subsidies start from UGX 350,000 (USD \$145). The high costs in such towns make connections very expensive given lack of alternative source of finance to households. Even in cases where subsidies were obtained, many households found it difficult to pay the USD 21.40 connection fee in one go and were allowed to pay it in installments (UNDP, 2011, Interviews with Private Water Operators).

Therefore, financing individual household connections and infrastructure with Private Water Operators and NWSC seems to be a market of great potential in sectors where piped water services are being newly extended.

With regards to water tariffs, unlike the NWSC that has one rate per consumption category across its operation areas; PWOs, with permission from MWE, have different tariffs to ensure they can recoup investment costs and at the same time maintain the facilities. Due to low coverage of connections, resale of water by those with connections is common. One implication for this is that households with no connection pay twice the amount charged in areas where no subsidy is provided and thrice amount in areas with subsidy.

While considerable efforts are being made to improve access to water supply, the following challenges remain:

- a) Limited access to financial resources for investment in water and sanitation sector
- b) Increased cost of production amid high fuel prices.

- c) Introduction of VAT² for payment of NWSC user bills seen largely as revenue stream for the government is argued to increase cost of water reversing gain in access, restricting funds NWSC could instead invest in infrastructure, and increasing cost of contracts on water works which were previously VAT exempt.

Rural Water Supply

Given that the majority of Ugandans (85%) reside in the rural areas, the government, through increased budget provisions, has made deliberate effort to increase access to water in rural areas. Key strategies and programs include:

- a. District Water and Sanitation Development Conditional Grant (DWSDCG): This is the biggest rural water supply and sanitation programme being implemented through the local government. districts. The DWSDCG finances construction of water supply and sanitation facilities, community sensitization and mobilization in rural areas.
- b. Self-supply refers to promoting individual investment at household and or community level by beneficiaries with limited external support (MWE 2011, WorldBank 2004). Self-supply is aimed at empowering households to make small and incremental changes to water and sanitation options available to them.
- c. Rainwater harvesting strategy: Advocates for domestic roof Rainwater Harvesting at household level as a technology for increasing water supply with limited subsidy to households.
- d. Encouraging replication and adoption of technology through the creation of Appropriate Technology Centre (ATC) at Mukono. Through the center, technicians have been trained in the construction of ferro cement rainwater tanks among other technologies.
- e. Promotion of Hand Pump Mechanics Associations through Community Based Maintenance System (CBMS). The CBMS initiative is where beneficiaries are the first point of call for maintenance and repair of water facilities.

Major challenges in the sanitation and hygiene sector in the rural and urban areas include:

- Unclear institutional framework between local government and urban council as well as between the ministries despite signing of memorandum of understanding between the main industries.
- Investment in sanitation lags behind that of water supplies. This is further exacerbated by government policy of lack of subsidy in provision of sanitation in rural areas.
- No incentive or framework for private operators' engagement in sanitation.
- Rapid urbanization which has led to crowding in informal settlements with inadequate sanitation facilities.

² NWSC in collaboration with MWE is seeking redress on VAT and working with MOFPED to remove VAT on drinking water supplies.

Faced with these challenges, MWE is working closely with PWOs to initiate sanitation programs across the country. Several studies on feasibility of sanitation business models have been done with the hope of matching entrepreneurial skills with access to financial resources.

Ugandan Microfinance Sector

Uganda's financial sector is considered vibrant, having recovered from decades of civil wars between 1971 and 1986 (AMFIU, 2008). The shilling, in spite of recent upheavals, is stable with reduction of inflation rate from three digits in 1986 to single digits in the late 90's through to 2007. 2008 saw the highest inflation rate over the decade at 12.7%. While it reduced to 9.4% in 2010, 2011 saw a sharp rise in inflation to 30.5% (index mundi.com). The hike of inflation in recent years is caused by a myriad of factors ranging from domestic inducements to international food and oil prices (World Bank website; AMFIU, 2008).

Microfinance is a sub department in the Ministry of Finance, Planning and Economic Development (MoFPED), with its own minister. For regulation purposes Financial Institutions (FIs) are grouped into four tiers, based upon ownership and regulation credentials. Tier I are commercial banks, Tier II - Credit Institutions, Tier III – Microfinance Deposit taking Institutions and Tier IV Semi formal institutions including Microfinance Institutions and Savings and Cooperative Credit Organizations (SACCOs). Tiers I, II and III are regulated by 2003 MDI Act and 2004 Financial Act, administered by the Bank of Uganda. Tier IV institutions consisting of NGOs and SACCOs are loosely regulated by the NGO Act and Cooperative Act (AMFIU, 2008). According to AMFIU (2008) MoFPED issued a draft regulatory framework for Tier 4 FIs but little progress has been made in discussing the framework. There has been slow progress on finalizing the framework.

According to the FI Directory (AMFIU, 2011), there were 23 commercial banks, two credit institutions, three MDIs and more than 1000 non-regulated microfinance institutions and SACCOs, commonly referred to as Tier 4 FIs.

Table 1 highlights key characteristics of FIs in Uganda.

Category	Tier 1	Tier 2	Tier 3	Tier 4
Type of institution	Commercial Banks	Credit institutions	Microfinance Deposit taking Institutions (MDIs)	Non MDI MFIs (registered as NGOs or companies) and SACCOs
% of rural branches(2009)	35%	43%	63%	70%
Offered Products	Savings, term deposits, short and long term loans, credit and	Savings, term deposit, short and medium term	Savings, short term loans, money transfer,	short term loans

	overdrafts, lasing , forex transactions	loans, mortgages, money transfer agents	micro insurance	
Target group	Corporate and high end but with increased outreach to middle and lower income segments (Majority of Equity and Opportunity portfolio targets low income)	Targets active poor , whole sale lending to FIs (3&4)	Low income and economically active poor, beginning to increase outreach to middle and upper income categories	Low income - economically active in peri-urban and rural areas

**2007 study by Finscope revealed only 600 of over 1000 registered SACCOs were active.

Source: MFI Directory (AMFIU 2011)

Besides savings offered only by Tier I-III institutions, common financial products include business, salary loans, asset financing and agriculture. Portfolio for non-income generating products constitutes less than 5% of entire loan portfolio across the different organizations interviewed for the purposes of this study. Education loans are the most common non-income generating products provided by banks and MDIs. Solar loans are however on the increase.

Microfinance, Water and Sanitation Linkages

The provision of loans for water and sanitation products is not a new concept in Uganda. There are several ongoing and past programs that have structured investment in water and sanitation through the provision of loans. Leveraging on these efforts, there is good ground to scale WaterCredit Initiatives in Uganda. In brief they include:

a. International Finance Corporation (IFC)

To finance water supply investment before being refunded under the Output Based Aid scheme, PWOs relied on overdrafts and loans from other business to finance. Seeing need for financial access as a priority, IFC through its Small Scale Infrastructure Provider (SSIP) program leveraged its relationship with local commercial banks including DFCU (Development Finance Company of Uganda Bank Ltd) and Barclays to award loans to PWO. It trained bank staff and local government officers to enhance their understanding of the water supply business (IFC, 2010).

b. CIDI - Water.org’s WaterCredit (WC) pilot

In 2010, Water.org facilitated Community Integrated Development Initiative (CIDI) with approx. \$9,000 to pilot WC across the informal settlements of Kampala. As of June 2012, a total of 21 loans (13 water tanks, 2 household water connections and 6 sanitation loans) had been awarded. Loan terms ranged from 1 – 12 months, with the majority being six months. Interest was capped at 28% and loan amounts

ranged from USD \$77 to USD \$2000, with USD \$607 as the average loan size. As of June 2012, with the exception of two clients all the loans were on schedule, some having paid well in advance.

c. Rainwater Harvesting Tanks on credit initiatives

Several financial and non-financial institutions have on-lending for the purchase of water tanks in rural and urban areas. It is however difficult to determine the size of the portfolio as the product is not tracked as it is part of either business or salary loans.

d. Sustainable Water and Sanitation in Africa (SUWASA)

According to SUWASA's Deputy Chief of Party, in 2010 SUWASA initiated a two year project with the core objective of linking PWOs to financial institutions. The project, "Mainstreaming Private Sector Participation for Expansion and Management of Water Systems in Small and Medium Towns", was however cancelled due to slow progress but there are plans to restart another program following lessons learnt in the initial phase.

e. SANITATION AS A BUSINESS

MWE, in collaboration with WSP, is in the initial stages of launching a "sanitation as a business" initiative in four small towns of Busia, Mpigi, Luwero and Wobulenzi (MWE & WSP, 2012, draft). The program will be aimed at improving fecal management and treatment in the towns by facilitating construction of shared fecal sludge disposal facilities, collaboration between different emptiers, and acquisition of equipment including trucks to facilitate emptying of fecal sludge (MWE & WSP, 2012, draft). To finance the different interventions, it is hoped that entrepreneurs, including PWOs, will attract funding from financial institutions. (MWE & WSP, 2012, draft).

f. Self-Supply

Aimed at encouraging rural households to make incremental improvement to their water and sanitation facilities, Self-supply, unlike the majority of development initiatives, focuses mainly on effecting change at the household level. Although it does not exclude community initiatives, the main aims of self-supply initiatives are to educate those without access to water and sanitation of the solutions available to them that can provide marginal improvements to their current scenario. With the government policy of no subsidies for sanitation interventions, and reduced subsidies for water interventions, the program could provide an environment in which private financial institutions offering market rates may be in demand. According to UWASNET Research Officer, Self-Supply initiatives were piloted in the South Western Towns of Uganda but now discussions are underway to replicate the program across the country.

Conclusion and Recommendations

Potential Loan Products and terms

Taking into consideration existing water and sanitation infrastructure across the country, potential products could range from extension of infrastructure, rain water harvesting systems, shallow wells, deep boreholes, individual and public toilets, septic tanks, water purification systems to incremental improvements to existing water and sanitation facilities (self-supply concept). With established private

sector involvement in water and sanitation provision, utility companies including NWSC and PWOs, and entrepreneurs should be targeted by FIs as potential partners in identifying clients interested in accessing WC loans.

The size/amount of loan will be highly dependent on type of product (Table 2). A further indicator to loan sizes can be drawn from existing initiatives. For instance, CIDI's average loan is USD 672, highest and lowest loans being both for tanks at USD 2,000 and USD 77 respectively.

Table 2: Market prices for potential WaterCredit Products

Potential products	Price range (USD)
Household	
Water tanks	\$29-\$4,800
Toilets/Latrine	\$160-\$650
Water connections	\$20 -\$400
Boreholes	Not less than \$9,000
Shallow wells	\$100-\$600
Improvements such as rope pump, bucket	Less than \$ 50
Hygiene and treatment products	\$10 - \$40
Enterprises (Utilities and Entrepreneurs)	
Infrastructure extension	Not less than \$10,000
Public toilets	From \$4,000 (5 stance toilet block)
Water-kiosks with reservoir	From \$2,000

Interest rates and collateral

Taking into consideration current market trends, the financial sector continues to experience high costs of borrowing despite slight ease of inflation from 27% in December 2011 to 18% in May 2012. In spite of efforts by BoU to reduce lending rates by lowering the CBR (Central Bank Rate) from 21% in March to 17% in June (BoU.or.ug), the market has not positively responded to reduced rates citing increased uncertainty with fuel prices which are on an upward trend.

To determine interest rates for loan products, all MFIs interviewed reported to pegging interests rates on a myriad of factors including CRB, 91 Treasury bill rates, size and duration of loan and cost of loan capital, to mention a few. Effective interest rates across the institutions ranged from 25%p.a. to 46% p.a. Of importance is that all MFIs indicated to applying the same principles of interest rate calculation across all products, implying water and sanitation will not be exempted from such process.

Pegged to the high cost of loans is the need for collateral for borrowers. All interviewed MFIs required an individual to secure collateral worth 150% of the loan amount. This is proving to be a major inhibitor for potential clients and its effects are likely to be exacerbated with water and sanitation loan products.

In discussions held with users, insistence of collateral and, in particular pegging of households goods especially for group co-guarantee programs, was a major cause of concern and leading cause to low interest in joining groups to taking out loans.

To successfully roll out WaterCredit in Uganda, Water.org suggests the following should be considered:

- Simplifying technical and marketing aspects of water and sanitation to allow credit officers to communicate effective messages to clients.
- Enhanced marketing and promotions of WC products, therefore increasing uptake initial uptake
- Developing Effective and efficient supply chain systems
- FIs should be supported in product development, marketing, market assessment, staff training, staff support (Product Champions), exchange visits, product monitoring including purchase of assets to enhance monitoring.

The following are key risks identified during discussions held with FIs, government agencies, and potential clients (in three focus group discussions and other stakeholders).

- Tendency for clients to think water is a natural resource and thus should be provided free of charge.
- Non-income generating loans may require long repayment periods leading to increased operational costs.
- Inclusion of VAT in water supply has increased cost of piped water, which may increase demand for alternative water sources including rainwater harvesting but pose a risk to water connection to the grid as households return to unsafe water sources.
- Supplier related challenges e.g. delivery of substandard products, poor construction of facilities
- Political interference in particular during election year potentially resulting in elevated default rates
- High interest rates /cost of borrowing resulting in low demand for WaterCredit products
- Unprincipled loan collection processes resulting in increased reluctance to take up loans
- Poor understanding of the water and sanitation landscape resulting in reluctance to provide water and sanitation loans to households and private entrepreneurs
- Poor product packaging compounded by inappropriate loan terms

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