Alternative Water, Sanitation and Hygiene (WASH) Financing Mechanisms in Uganda
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LIST OF ABBREVIATIONS

3Ts: Tariff, Tax and Transfer
AfDB: African Development Bank
CBMS: Community Based Management Systems
CSBAG: Civil Society Budget Advocacy Group
CSOs: Civil Society Organizations
DP: Development Partner
DWD: Directorate of Water Development
EADB: East African Development Bank
FY: Financial Year
IDPs: Internally Displaced People
NWSC: National Water & Sewerage Corporation
O&M: Operation and Maintenance
OECD: Organisation for Economic Co-operation and Development
PPP: Public Private Partnerships
SDGs: Sustainable Development Goals
SUWASA: Sustainable Water and Sanitation for Africa
UBOS: Uganda Bureau of Statistics
UDB: Uganda Development Bank
UGX: Uganda Shillings
USAID: United States Agency for International Development
UNICEF: United Nations Children’s Fund
VC: Venture Capital
WASH: Water, Sanitation and Hygiene
WSPs: Water Service Providers
WSS: Water and Sanitation Services
FOREWORD

In order to engage government effectively on typical WASH budget issues, CSBAG during the implementation of this project has conducted a robust research and policy analysis on establishing alternative WASH financing mechanisms. The Ministry of Water and Environment needs support on how to tap into alternative financing streams from the private sector. It is envisaged that the findings and recommendations in this report will guide policy discussions between the Ministry of Water and Environment and the private sector for increased financing for the sector.

The Water, Sanitation and Hygiene (WASH) sub-sector entails the provision of safe water for drinking and other domestic use, the safe disposal of waste (toilet and other waste) and health promotion activities to encourage protective healthy behavioural practices amongst the population. In Uganda, WASH falls under a number of sectors. The water and environment sector takes the lead; other sectors are health, education and agriculture.

The selected projects showed some of the implementation challenges within sectors, specifically on the financing of the sector to improve WASH in schools and health centres. These included: inadequate funding; late disbursement of funds and therefore delayed procurement; poor planning; weak supervision and monitoring; and diversion of funds, among others. With these challenges, effective implementation of sector projects was problematic and this limited the achievement of the expected outcomes.

The total financing for the Water and Environment Sector totalled to approximately UGX 905.12 billion in FY 2015/16, of which UGX 560.95 billion was on-budget (appropriated by Parliament) and UGX 344.17 billion was off-budget financing. This therefore portrays a financing gap which affects quality delivery of WASH.

The findings of this study illustrate great opportunity in the alternative financing mechanisms identified in broadening the scope of and therefore improving WASH financing.

This report is intended for government, the private sector, NGOs and CSOs that influence policy-making at different levels. The results of the study will provide guidance especially when designing models to improve WASH financing. The key policy recommendations made in the report will be a key guide for various stakeholders in ensuring quality service delivery outcomes of WASH.
1.0. Background

The Water, Sanitation and Hygiene (WASH) sub-sector entails the provision of safe water for drinking and other domestic use, the safe disposal of waste (toilet and other waste), and health promotion activities to encourage protective healthy behavioural practices amongst the population. In Uganda, WASH falls under a number of sectors. The water and environment sector takes the lead; other sectors are health, education and agriculture.

The Water and Environment Sector Performance Report of 2016 also revealed that the average access to safe water in rural areas was estimated at 67% and that access to safe drinking water in the urban areas currently stands at 71%. The report further highlighted that communities need to be sensitized on hygienic practices in order to maintain a safe water chain from the source up to storage at the household level. It was also reported that functionality for rural water supplies has reduced to 86% from 88% which was reported in June 2015. However, it was reported that sanitation management is still poor. Less than 10% of the toilet facilities in towns can be emptied, making the demand for faecal sludge removal low. There are no sludge disposal/treatment facilities in most towns, and most small towns lack or do not have access to services of cesspool emptying trucks.

The total financing for the Water and Environment Sector totalled to approximately UGX 905.12 billion in FY 2015/16, of which UGX 560.95 billion was on-budget (appropriated by Parliament) and UGX 344.17 billion was off-budget financing. The off-budget financing includes UGX 285.04 billion as internally generated revenue by the National Water and Sewerage Corporation (NWSC) from water sales, and UGX 59.13 billion mobilized by civil society organizations (CSOs) in both the Water and Environment sub-sectors. In terms of releases of the allocated budget, the MoFPED performed at 92%, while only 45% of the overall development partners’ budget was actually released, due to suspension of some releases by the development partners. The suspension of the releases by the development partners was due to fiduciary malpractices in the utilization of the funds.

The on-budget and off-budget allocations mainly targeted priority areas of water production and water supply in urban areas. Despite the success registered, the government resource envelope is limited due to competing priority areas and more investment is required in WASH if considerable success is to be registered. Alternative financing should be sought to expand coverage of the programme.

2.0. Objective of the Study

Overall, the study sought to generate evidence on current WASH budget allocation and possible financing alternatives to increase investment in the WASH sub-sector. More

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specifically, the study explored the following:

a. Explicitly examine the level of funding for the WASH to map out WASH-related budget lines in other sectors beyond the mainstream water and environment sector;
b. Critically assess the financing mechanisms being employed in the WASH programme;
c. Suggest strategic financing options to be utilized in enhancing WASH programmes.

2.1 Factors affecting WASH financing

To arrive at alternative mechanisms of WASH financing in Uganda, it is important to explore key factors that underpin WASH performance. These include:

a. The impact of population growth;
b. Rapid urbanization;
c. Ageing infrastructure of WASH facilities;
d. Climate change.

2.1.1 The impact of population growth

According to the National Population and Housing Census (NPHC) 2014, the total population was reported at 34,634,650 people, up from 24,227,297 people in 2002, an increase of 10,407,353 people in 12 years. In 1959, the total population was reported at 6,449,558 people. This shows that the population has grown over five-fold since 1959 and is projected to reach 53,496,000 people in 2025.

Figure 1: Uganda population growth 1960 – 2015

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The growth in population has put pressure on the available water and sanitation infrastructure. However, funding for the sector has not grown at the same rate, leading to challenges of promoting WASH.

2.1.2. Rapid urbanization

In 2011, the population that lived in urban areas was 14.8% of the total national population, which increased to 16.1% in 2015. The annual average urban population growth was estimated at 5.37%. The rural population accounted for 85.2% of the total population in 2011 and 83.9% in 2015.\(^4\)

**Figure 2: Rural and Urban Population growth 2011 – 2015.**

![Graph showing rural and urban population growth from 2011 to 2015.](image)

**Table 3: Rural and Urban Population growth 1960 – 2015**

<table>
<thead>
<tr>
<th>Year</th>
<th>Urban population</th>
<th>Rural population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>5070531</td>
<td>29189811</td>
</tr>
<tr>
<td>2012</td>
<td>5350804</td>
<td>30049816</td>
</tr>
<tr>
<td>2013</td>
<td>5645834</td>
<td>30927553</td>
</tr>
<tr>
<td>2014</td>
<td>5956863</td>
<td>31826108</td>
</tr>
<tr>
<td>2015</td>
<td>6284604</td>
<td>32747779</td>
</tr>
</tbody>
</table>

Source: Extracted from UBOS Data

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Findings in Figures 2 and 3 imply that there is rapid population growth in rural areas as well as rapid urbanization from 4% in 1960 to 16.1% in 2015; which has resulted in unplanned settlements, making it difficult to supply water and sewerage services. At the same time, whereas the biggest percentage of the population (83.9%) is rural, safe water in rural areas was estimated at 67% in 2016. It was reported that the functionality for rural water supplies had reduced to 86% from 88% in June 2015, which implies that a considerable number of the population has no access to safe water.

2.1.3. Ageing Infrastructure

Ageing and sometimes malfunctioning infrastructure is a hindrance to WASH. The water infrastructure’s functionality rate was reported at 86% by the Ministry of Water and Environment as at June 2016, having reduced from 88% in June 2015. In rural areas, out of the estimated 109,000 water point sources, 16,350 were providing water as expected. Operation and maintenance (O&M) of rural and urban water facilities is one of the key challenges of water supply in Uganda, since the available funds are allocated to water production. In urban areas covered by the NWSC, O&M is carried out using internally generated revenues from water charges. Another major challenge is the insurgencies in some parts of the country, especially in the northern Uganda districts. The provision of water sources is a problem in those areas because the old sources were either destroyed or are non-functional. In the Internally Displaced People’s (IDP) camps, safe water was provided and as the population re-settled thereafter, functioning water sources were abandoned.

2.1.3. Climate Change

The provision of safe water and sanitation in Uganda has also been affected by climate change. The country has different rain patterns and uneven distribution of water resources. Many communities, especially the rural poor, depend on streams and swamps which are shared by both animals and humans, and which dry up during severe droughts. In areas like Kampala, floods are experienced in rainy seasons and existing sanitation systems are overwhelmed, leading to sewerage overflows which, consequently, contaminate drinking water.

2.1.4. WASH financing and budget lines

The Water and Environmental Sector was allocated UGX 552.317 billion for FY 2016/2017. For FY 2015/2016, 62% of the total sector allocation was in the form of on-budget support, while 38% was off-budget support. In terms of releases of the allocated budget, the performance by

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Ageing and sometimes malfunctioning infrastructure is a hindrance to WASH. The water infrastructure’s functionality rate was reported 86% by the Ministry of Water and Environment as at June 2016, having reduced from 88% in June 2015.
the government was 92%, while only 45% of the overall Development Partner (DP) budget was actually released.\(^7\) This was mainly due to delays in the implementation of some key projects under the ministry and NWSC, and also due to suspension of releases by KFW and Austria/EU to some of the Water and Sanitation development facilities.

Table 3: Past Expenditure and Medium Term Projections by Vote Function

<table>
<thead>
<tr>
<th>Vote: 019 Ministry of Water and Env.</th>
<th>2014/15</th>
<th>2015/2016</th>
<th>Medium Term Projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>0901 Rural Water Supply and Sanitation</td>
<td>23.974</td>
<td>64.644</td>
<td>8.935</td>
</tr>
<tr>
<td>0902 Urban Water Supply and Sanitation</td>
<td>50.479</td>
<td>213.006</td>
<td>64.768</td>
</tr>
<tr>
<td>0903 Water for Production</td>
<td>91.481</td>
<td>42.170</td>
<td>71.712</td>
</tr>
<tr>
<td>0904 Water Resources Management</td>
<td>5.884</td>
<td>41.539</td>
<td>2.370</td>
</tr>
<tr>
<td>Total for Vote:</td>
<td>139.639</td>
<td>426.959</td>
<td>96.592</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vote: 122 Kampala Capital City Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>0908 Sanitation and Environmental Services</td>
</tr>
<tr>
<td>Total for Vote:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vote: 500 501-850 Local Governments</th>
</tr>
</thead>
<tbody>
<tr>
<td>0981 Rural Water Supply and Sanitation</td>
</tr>
<tr>
<td>0982 Urban Water Supply and Sanitation</td>
</tr>
<tr>
<td>0983 Natural Resources Management</td>
</tr>
<tr>
<td>Total for Vote:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vote: 150 National Environment Management Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total for Vote:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vote: 157 National Forestry Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total for Sector</td>
</tr>
</tbody>
</table>


From Table 3 above, rural water supply and sanitation services were allocated UGX 85.266 billion for activities coordinated at the centre, UGX 2.0 billion for the District Sanitation Grant, while the District Water Supply Grant was UGX 62.372 billion. It is estimated that an additional 800,000 people will be served by the end of FY 2016/17. \(^8\)

For Urban Water Supply and Sanitation services, a total of UGX 156.290 billion, consisting of UGX 153.686 billion was allocated to the centre under the Directorate of Water Development (DWD), while UGX 2.504 billion was allocated to the Operation and Maintenance subsidy as a Conditional

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Grant to selected town councils.

Table 4: Budget Support forecasts 2016/17 – 2020/21 (Ugx. Billions)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>Water</td>
<td>29.6</td>
<td>33.8</td>
<td>32.5</td>
<td>32.5</td>
<td>32.5</td>
</tr>
<tr>
<td>Sweden</td>
<td>Health</td>
<td>1.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Sweden</td>
<td>Water</td>
<td>0.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Belgium</td>
<td>Water</td>
<td>9.4</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Austria</td>
<td>Health</td>
<td>7.5</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Netherlands</td>
<td>JLOS</td>
<td>3.7</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>World Bank</td>
<td>JLOS</td>
<td>260.6</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>PTA Bank</td>
<td>GBS</td>
<td>597.5</td>
<td>102.9</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Source: National Budget 2016/17

An analysis of Table 2 indicates a projected decrease of almost 85% in budget support from UGX 910.3 billion (FY 2016/2017) to UGX 136.6 billion (FY 2017/2018), and further expected decrease to UGX 32.5 in the three subsequent financial years.

2.1.5. Funding gap for FY 2016/2017

This section highlights priority outputs in FY 2016/17 and the medium-term areas which the sector has been unable to fund in its spending plans.

Table 5: 2016/2017 Funding gap for Water and Environment Sector (figures in billions)

<table>
<thead>
<tr>
<th>Requirement for Funding</th>
<th>Justification and Output</th>
<th>Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction of piped water supply schemes</td>
<td>In order to increase service coverage and functionality of the existing water sources, there is urgent need for specialized equipment for overhauling of boreholes in support of Community Based Management Systems (CBMS).</td>
<td>21.351</td>
</tr>
<tr>
<td>Construction of Piped Water Supply Systems (Urban)</td>
<td>For increased and reliable water supply and sewerage/sanitation services in all urban areas to support industrial processes. This will catalyze the push and pull economic effects through establishment of new industries that will create jobs and improve household incomes as well as provide markets for raw materials produced by households. A total of UGX 45bn may be required annually as additional funds to this vote function to cope with the requirements.</td>
<td>45.00</td>
</tr>
<tr>
<td>Construction of Water Surface Reservoirs</td>
<td>Rehabilitation of old dams in phases countrywide, clear backlog and fast-track construction of already designed facilities, strengthening of community management for improved use Additional funds required to undertake rehabilitation of old dams in phases countrywide, clear backlog and fast-track construction of already designed facilities, strengthening of community management for improved use. This is to enable supplementary irrigation under the Joint Programme Required for specialized equipment for hire by communities.</td>
<td>60.669</td>
</tr>
<tr>
<td>Water resources availability regularly monitored and assessed</td>
<td>National Strategy for Flood Management developed. Framework for water quality for SDG monitoring developed. Specialized water vessel for L. Albert to operationalize the oil contingency plan procured. Laboratory equipment for oil &amp; gas maintained.</td>
<td>14.670</td>
</tr>
<tr>
<td>Weather, Climate and Climate Change</td>
<td>Acquisition of transport and other equipment required by the CCU, facilitate the country to attain international certification, wind shear, instrument calibration lab, conventional weather instruments and operationalization of the approved Agency</td>
<td>27.00</td>
</tr>
</tbody>
</table>
3.0. Alternative Wash Financing Mechanisms

For FY 2016/17, the government targets to increase access to safe water to 79% in rural areas and reach 100% coverage in urban areas. In addition, construction of 33 town water supply schemes and 147 sewerage and sanitation facilities (public and household) in various towns will be started. The aim is to raise sanitation and hygiene levels in both rural and urban sanitation to only 30%. However, funding gaps still exist as indicated in Table 5, above. To bridge this gap, alternative WASH financing mechanisms must be sought.

Funds are allocated for water and sanitation development under the national budget, but donor funding plays a significant role in Uganda’s efforts to promote WASH. CSOs’ financial contribution and investments are derived largely from donor support, community contributions and, to a limited extent, income-generating activities. CSOs’ investments in WASH have declined in recent years in an environment that saw donor funding fall in general.

3.1. Public Private Partnerships (PPP) Financing Mechanism

A PPP is a contractual agreement involving the private sector in the delivery of public services. This is based on a partnership approach, where the responsibility for the delivery of services is shared between the public and private sector both of which bring their complementary skills to the enterprise. PPP is a mechanism recognized by the government of Uganda for which guidelines are developed for local governments.9

Figure 1: PPP WASH Financing Mechanism

Source: PPP framework 2015 (based on the economic, social and political dynamics in Uganda).

3.1.1. Components of the PPP framework

i) Preliminary Assessment
   a. Legal Framework
      • Identifying the key government institution that will champion and implement the PPP framework.
      • Working closely with the PPP champion to develop the PPP policy, legal framework, processes, and institutional responsibilities.
      • Design a PPP incentive framework that can be included in the PPP legislation.
      • If agreed and deemed appropriate, establish a central PPP institution to promote and assist government in implementing the PPP framework.
      • Assist in developing and implementing a PPP demonstration project.
      • Provide ongoing support to all institutions involved.

   b. Local Governmental Level
      Improve the capability of local government institutions, especially in the following areas:
      • Understanding the benefits of involving private operators in public service provision, especially in WASH services.
      • Procuring and selecting the most suitable private partner to operate and manage the WSS system in the area.
      • Monitoring the performance of the private operators.
      • Improving understanding of the management of WASH services, such as the importance of having tariff levels that at least cover the cost of operations.

   c. Community Level
      • Awareness-Raising Program: The main objective of awareness-raising is to have the public and community acceptance of private operators as one of the ways in which WASH services can be provided.

ii) Interventions
   a. Clustering and Subsidy Design
      When demand factors are not met, measures can be taken to improve demand conditions. These may include:
      • Clustering service areas. Proximity of small towns to larger cities may mean that WSS service provision in the cities can be expanded to serve neighbouring small towns.
      • Designing a subsidy scheme to that will ensure affordability while allowing for financial sustainability of the service provider may be more suitable. Private operators will not be interested in providing services if the revenues do not cover the cost. However, customer affordability is also an important factor. Therefore, a cost recovery average tariff can be calculated, and the tariff structure can allow for poor households to pay less than other customer groups, such as commercial or industrial entities.

   b. Capacity Building
      Capacity building for WASH projects may take many forms as outlined below:
      • Sensitizing communities on the involvement and the role of the private sector and the community’s roles in WASH;
• Training and developing the capacity of technocrats, in both government and the private sector, to evaluate projects, implement, appraise and maintain;
• Enabling private players to engage by creating clear guidelines, policies, laws and frameworks;
• Enhancing synergies between the public and private sectors.

iii) Implementation and Sustainability

Once capacity is developed for all the stakeholders in a PPP framework, successful implementation is dependent on the mode of implementation and contractual arrangements or obligations. These may be different for local governments, given the social, economic and political dynamics. Some of the modes are listed below:

a. Build-and-Transfer: a contractual arrangement whereby the concessionaire undertakes the financing and construction of a given infrastructure or development facility and after its completion turns it over to the government agency or local government, which pays the proponent on an agreed schedule its total investments expended on the project, plus a reasonable rate of return thereon.

b. Build-Lease-and-Transfer: a contractual arrangement whereby a concessionaire is authorized to finance and construct an infrastructure or development facility and upon its completion it is managed on a lease arrangement for fixed period, after which ownership of the facility is automatically transferred to the government agency or local government concerned.

c. Build-Operate-and-Transfer: a contractual arrangement whereby the concessionaire undertakes the construction, including financing the project and the operation and maintenance thereof. The concessionaire operates the facility over a fixed term during which it is allowed to charge facility users appropriate fees, rentals, and charges not exceeding those proposed in its bid or as negotiated and incorporated in the contract to enable the concessionaire to recover its investment and operating and maintenance expenses in the project. The concessionaire transfers the facility to the government agency or local government at the end of the fixed term.

d. Build-Own-and-Operate: a contractual arrangement whereby a concessionaire is authorized to finance, construct, own, operate and maintain an infrastructure or development facility from which the proponent is allowed to recover its total investment, operating and maintenance costs plus a reasonable return thereon by collecting fees, rentals or other charges from facility users.

e. Build-Operate-Share-Transfer: a contractual arrangement whereby a concessionaire is authorized to finance, construct, operate and maintain, share a part of the revenue and transfer the infrastructure facility at the end of the period. The proponent is allowed to recover its total investment, operating and maintenance costs plus a reasonable return thereon by collecting tolls, fees, rentals or other charges from facility users.

f. Build-Own-Operate-Share-Transfer: a contractual arrangement whereby a concessionaire is authorized to finance, construct, own, operate and maintain, share a part of the revenue and transfer the infrastructure facility at the end of the period.

3.2. Tariff and Repayable Financing Mechanism

Tariff and repayable financing involves the mobilization of financing from a variety of sources, which may include reducing costs (via efficiency gains or the choice of cheaper service options), increasing the basic sources of finance that can fill the financing gap, i.e. tariffs, taxes and transfers (“3Ts”) and mobilizing repayable finance (including loans, bonds and equity either from the market
The Water, Sanitation and Hygiene (WASH) sub-sector entails the provision of safe water for drinking and other domestic use, the safe disposal of waste (toilet and other waste), and health promotion activities to encourage protective healthy behavioural practices amongst the population.
or from public sources) in order to bridge the financing gap.

Defining how these various sources of finance can be combined is determined by projected future cash flows from a combination of the 3Ts, and using the revenue stream as the basis for attracting repayable sources of finance (loans, bonds and equity). In the context of Uganda, tariff alone is not sufficient to cover all costs. Repayable finance is required for initial investment and to complement revenues from tariffs at least for a transaction period.

**Figure 2: Tariff and Repayable Finance Mechanism**

![Tariff and Repayable Finance Mechanism Diagram](source)

Source: Adopted from OECD, 2015

The notion of the “3Ts” was developed by the OECD in 2009 and has become a common way of approaching deliberations of the financing of water services, with particular reference to water supply and sanitation. In reference to water financing, the “3Ts” concept is based on a cash flow made up of Tariffs, Taxes (subsidies) and Transfers (from aid or philanthropy). 10This cash flow covers the recurrent costs of water and helps to finance that part of its capital investment which is funded from repayable sources – loans, bonds and equity.

### 3.2.1. Implementation of the Tariff and Repayable Finance Mechanism

The notion of sustainable cost recovery, now endorsed by the OECD, recognizes that using a combination of tariffs, taxes and transfers is a more realistic way for developing countries to finance lifecycle costs of water services, and can be used to leverage other sources of financing (from the commercial and private sector).

11Sanitation services have a large element of public good; so partial funding through

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For water infrastructure, all these features are important; but an overriding decision is whether repayment is to be in foreign exchange or local currency.

i) Loans and Bonds

The interests of borrowers are the key features of different debt instruments, their interest rates, their repayment period or date (tenor), whether they have grace periods before repayment starts, the security (collateral) required, and their conditionality (actions to be undertaken by the borrower as a condition for getting the funding). For water infrastructure, all these features are important; but an overriding decision is whether repayment is to be in foreign exchange or local currency. This is crucial since the revenues of water investments are normally received in local currency. If repayment has to be in foreign exchange, the borrower is at the mercy of movements of the exchange rate which is very volatile in Uganda.

These loans can be obtained from:
- a. Public Development Banks, e.g. UDB, EADB, AfDB, World Bank etc.
- b. Commercial Banks
- c. Institutional Investors
- d. Issue of Bonds

ii) Tariff, Taxes and Transfers

Tariffs are the principal means of funding the recurrent (O&M) costs of water supply and sanitation; but in most countries, they make little contribution to investment costs. Public grants and subsidies are a major source of funding for water, in various forms covering financial losses incurred by utilities in selling water at less than the cost-recovering tariff hence providing grants towards capital investment and for annual costs of water provision. Transfers, e.g. aid or philanthropy funds, are a major source of funding and subsidising WASH -- an example is the Bill and Melinda Gates Foundation WASH financing in South Asia and Sub-Saharan Africa.

3.2.2. Success Stories for Tariff and Repayable Finance Mechanism

a. Kenya: Low-income communities in Kenya have access to affordable and clean water through innovative financing arrangements among banks, water service providers (WSPs) and the urban poor support by USAID through SUWASA.

This project helped the utilities in Kisumu and Nakuru towns to develop bankable infrastructure financing proposals, supported banks to determine creditworthiness of the utilities, and worked with consumers to understand their demand and willingness to pay for water. The approach was based on helping WSPs meet their mandates to serve the urban poor and recover their costs: banks to tap a new market opportunity; and urban poor consumers to gain improved access to clean, safe water at a cost that is a fraction of what they previously paid.

3.3. Venture Capital (VC)
Venture capital is a type of private equity, a form of financing that is provided by firms or funds to early-stage projects deemed to have high growth potential, or which have demonstrated high growth (in terms of number of employees, annual revenue, or both). Venture capital firms or funds invest in these early-stage companies in exchange for equity and ownership stake in the companies they invest in. Venture capitalists take on the risk of financing risky start-ups in the hope that some of the firms they support will become successful.

Venture capital is likely to become increasingly important in financing technological innovation in WASH. The high risk associated with newer technologies may reduce financing options for innovative water management, sanitation and hygiene technology projects.

The risk profiles of projects vary according to their technology and its stage of development, which determines the type of financing which is most appropriate. Venture capital is generally suited for unproven and untested technologies.

Uganda has of recent been a preferred destination for piloting and introducing new WASH technologies that focus on developing countries. The European Union (EU) has funded a WASHtech consortium (represented by Appropriate Technology Centre and NETWASH Uganda) to create clear structures for the introduction of new WASH technologies in order to improve success rates.

Figure 3: Venture Capital Funding Mechanism

3.3.1. Implementation of Venture Capital Mechanism
Under venture capital, the role of the government agency or local government is to provide the legal framework, contractual agreements, licenses, monitoring and evaluation. The investors provide the financing for the projects, and this would take a number of forms as spelt out below:

a. Assess for profit projects with high technology and high growth potential. The local government or government agency at this stage would be interested in the projects’ potential

The venture capital financing model has been successful in Mongolia and the country has made steady progress towards access to water. Almost all WASH services in Mongolia are supplied by service providers under service agreements with the respective districts.
to create a positive social impact (involving low-income population in the value chain).

b. Stakeholders are engaged to identify the Critical Needs of the Sector and projects supported to develop business cases, technical and financial proposals. VC invests by buying equity shares and can do structured investments such as convertibles.

c. Venture capital firms enter into agreements to invest in projects at early stages and help the company grow through active mentoring and guidance to the entrepreneurs. In effect, this is a partnership between the VC firm and the project / entrepreneurs. Equity financing does not involve collateral (security) and interest liability. Structured equity may involve preferred dividend obligation.

d. Monitoring and evaluation by venture capital firms (assessing operational and financial performance) and government agency / local government (majorly interested in social and environmental impact of the project).

e. Exit: Ability to generate financial returns. Once the entrepreneur’s project reaches a certain size / valuation, the venture capital investor may sell shares and exit; or transfer to government depending on contractual terms.

3.3.2. VC Success story
The venture capital financing model has been successful in Mongolia and the country has made steady progress towards access to water. Almost all WASH services in Mongolia are supplied by service providers under service agreements with the respective districts. In most of the urban centres in Mongolia, the provision of water supply and sewerage services is managed by either state/local/mixed government-owned providers through performance contracts. The rural water supply, rural waste management and area water kiosks are provided by private service providers, herder communities and individual households under some form of service agreement with the local government. WASH services with a potential revenue stream are generally engaged through some form of public procurement/auction that seeks to balance quality and price.

4. Conclusion
The Water and Environment Sector experiences low funding, with the biggest percentage of the budget going to water production. For successful delivery of WASH, a balance should be struck between water production and management (operations and maintenance), sanitation and hygiene practices. To attain the balance and realise the required success, the existing gap in funding WASH needs to be closed.

The proposed three alternative WASH financing mechanisms can be employed to meet the different financing needs depending on project suitability: 1. The PPP financing mechanism can be best suited for local governments (including small towns and rural areas) that have limited budgets; such partnerships can enable local governments deliver services to the people. 2. Tariff and Repayable Finance Mechanism can be suited for most financing needs -- the mixture of loans and grants facilitates operators to subsidise services for the beneficiaries, making this mechanism suitable for WASH entirely. 3. Venture Capital Funding would be more suited for high-tech WASH projects, e.g. in 2008 Kampala City Council had signed a deal with Cobal-USA for conversion of municipal solid waste into low sulphur diesel and electrical power. Cobal-USA was to form a joint venture with W2 Energy Incorporated to build and operate the waste energy plant. The project’s estimated turnover was $82 million per year, making it viable in terms loan repayment.

It is, therefore, recommended that for the proposed mechanisms to be adopted, the different key stakeholders (Government, CSOs, NGOs and Development Partners) should engage in capacity building at all levels, developing the policy and legal framework and harnessing synergies with all stakeholders.

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