

IWA Webinar – How can Water and Wastewater Utilities in Africa help meet the SDGs?

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Q&A report

Questions	Answers
<p>For Dennis, how can we ensure that revenue from the sanitation levy is invested back into the sector so that central governments do not apply those funds elsewhere?</p>	<p>Firstly if there is a regulator in the country, this can make sure that the funds are ring fenced and used specifically for the purpose for which the levy was established. If not then, what is required is to make sure that there is proper accountability and transparency i.e. making the Board of Directors aware of such a levy and its purpose and regularly reporting on its use, how it is benefiting the community</p>
<p>Water treatment in Africa is mostly controlled by private companies, who are profit oriented, and not caring at all in SDG; what mechanisms are put in place to change this?</p>	<p>Firstly, it is not true that water treatment in Africa is controlled by private companies. Secondly it is important to clarify that water treatment cannot be treated in isolation. Water treatment is just one of the components in a water delivery system as you have the source, pumping to the treatment plant, treatment, storage, transmission, distribution, billing, collection etc -this which is defined as a utility service.</p> <p>In Africa water utility service is in state owned enterprises. There are only four or five countries out of the 54 that comprise the continent that have private companies managing urban water services and these include Senegal, Cote d'Ivoire, Niger and, Gabon</p> <p>Whatever the case, there is need to ensure that the service providers provide the service effectively and efficiently. Most of the state-owned water utilities fail to meet the demand are not as efficient due to high losses (NRW), sometimes low tariffs, inefficient in collections, financial management but also old infrastructure that has not received most needed maintenance.</p>
<p>My question is regarding infrastructure. How can we fund the provision of necessary infrastructure particularly drinking water treatment plants and wastewater treatment plants? this is critical to achieving the SDG 6.</p>	<p>We need to be innovative. Governments still need to lead by creating enabling environment for private sector investment and/or management in a regulated environment. Investment requirements are huge. Strong regulations will mean lesser possibility of exploitation of the poor.</p>
<p>Question to Dennis. Do countries have standards in place for wastewater treatment?</p>	<p>There are international standards of quality of the effluent that comes from wastewater treatment plants. Most countries have either adopted or adapted these standards to the local situations. Usually, failure has to do with weak enforcement or low penalties compared to cost of compliance</p>

	<p>for those that breach the standards. If cost of compliance is far much higher than the penalty, of course organisations will choose to pay the penalty. i.e. if it will cost you so much to remove certain organisms from the wastewater but you would pay lesser to the environment agency if you are found wanting then you would rather go this route.</p>
<p>The issue of the need for a paradigm shift in approaches to sanitation has been with us for some time. Dennis, what do you think it will take to "shift"?</p>	<p>Treating sanitation as a utility service. Professionals in the sector giving it the priority that it deserves. Water has received far much higher prioritization. Looking at sanitation as part of the country's development agenda. Government prioritizing urban sanitation as a weapon to fight most of the public health related pandemics – COVID -19, Cholera, Ebola. All these diseases are linked to sanitation. If we have good sanitation, then we will reduce the burden on the health facilities.</p>
<p>Should it not help to put the European tax system effective in Africa? Dennis and Troels</p>	<p>Depending on what this means – I am not so much for copying some of these great systems that worked in Europe in other continents like Africa. We need to consider the local situations, use the systems that have worked elsewhere to determine what conditions that led to them being successful and then design appropriately home-grown solutions</p>
<p>Do you think that it is feasible to utilise private companies to build and operate and utilise concepts from the circular economy of dealing with treatment to generate bio-energy, or agricultural fertilisers etc to help with providing the finance necessary? Troels may be familiar with the Danish municipal biogas model and it would be interesting to understand if Dennis thinks this is feasible?</p>	<p>This is feasible and there are already a number of companies that have been successful i.e. Sanergy in Kenya or Sanivation – also in Kenya. But there are examples of other successful approaches in other countries in Africa</p>
<p>Dennis, do you think that ESG in a wider aspect like all African countries altogether, can reduce the problem?</p>	<p>If ESG here means Environmental, Social, and Corporate Governance then I say this could work in many countries in Africa. Governance is one of the critical problems of both the water and sanitation sector in Africa especially urban utility service. But I may not be sure what ESG stands for here for me to adequately answer the question.</p>
<p>To Dennis: what is the extent of standardisation of sanitation systems in Africa? Does this affect sanitation access?</p>	<p>Standards are there for sanitation, but it depends on each country adopting these for their use. Here is an example of a waste water standard. As you know we have 54 Countries all at different levels of adopting and/or adapting the international standards</p>

<p>Since water supplies like piped water are less expensive than other approaches to water supply, why aren't approaches such as these more widely used? Obviously approaches such as piped water are affordable because they are less expensive than the alternatives. Dennis</p>	<p>The driver for water supplies should be the Q – quality and quantity leading to issues of safety, sustainability, and affordability. Piped water is the default solution to urban areas regardless of the continent you may be in. however this eludes many urban dwellers due to the cost of managing these systems, affordability by the customers to connect but also insufficient infrastructure to extend to the usually far-flung areas. The quality of water from alternative sources such as boreholes, water sold is not assured, hence the need to encourage accessing from the authorized sources.</p>
<p>To Faustina: There is a thought that supplying water to low income areas is not profitable to utilities, What lessons can you share with regard to revenue mobilization from low-income areas?</p>	<p>Supplying water to low income areas has been perceived as not profitable but utilities that have taken the lead to serve poor areas are reaping positive benefits.</p> <p>I share a practical example of an analysis done in the last quarter of 2020 using 9,000 customers who were given subsidies to connect to GWCL's distribution network.</p> <p>The Billing data shows that an average subsidised connection adds GHS 96 per connection per month.</p> <p>Revenues from these customers total GH¢10 million (\$1.67m) annually. With a bad debt of 5% and operating expenditures of GH¢6.3million (\$1.05m based on 2020 budget figures).</p> <p>This means these customers are adding a margin of GH3.1million (\$517,000) annually to GWCL's bottom line.</p> <p>But these customers have a high propensity to default making it critical for GWCL to deliver sustained engagement with them through the following revenue mobilisation activities:</p> <ul style="list-style-type: none"> • House-to-house revenue mobilisation activities • Encouraging them to pay small amounts through e-payment platforms • The use of accountability approaches like community scorecards which brings together community leaders and GWCL to assess and monitor services based on key indicators like bill payment, service reliability, customer service, etc. • Strong presence of LICSU Staff in the community to consult and dialogue with

	<p>residents has also helped to bridge the gap between the utility and low income communities. These activities have largely contributed to get low income households to pay their bills.</p> <p><i>It is critical to note that where services exist and there is no special effort to facilitate the delivery, they are characterized by high level of water losses and poor revenue collection</i></p>
<p>Faustina, do you think the constraint why the poorest lack the pipe system is as a result of lack of infrastructure? Why is it that the majority of poor Africans are not connected to the main infrastructure that subsidies are paid for? for instance, piped water services, energy, sanitation and hygiene services etc. We have to fund infrastructural development to connect the majority to the main services for us to make headway in the SDGs in Africa.</p>	<p>I agree with you on the point that majority of low income households are not connected to piped system due to the lack of infrastructure in these areas.</p> <p>But there are other constraints beyond the lack of infrastructure which inhibit the poorest from accessing piped services.</p> <p>Even in cases where distribution pipelines are laid in these communities, people still cannot connect because of their inability to pay the initial new service connection fee which is a major constraint. Moreover, most of these households lack land titles (in Ghana the requirement is for an initial subscriber to submit a site plan which they don't have). Thus, beyond funding infrastructural improvements to these areas, utilities need to adapt their approach to be able to deliver services to these poor areas.</p>
<p>What measurements Morocco has taken to meet the demand of drinking water and irrigation at the ONEE project 2020-2027? Brahim</p>	<p>To meet the demand for drinking water and irrigation for the period 2020-2027, Morocco has drawn up an ambitious program to accelerate investments in the water sector with a view to strengthening the supply of drinking water and irrigation, for the areas most affected by the water deficit, for the period 2020-2027.</p> <p>I also attach to my answer a summary sheet of this program for more details. This sheet is given in French and English.</p>
<p>Question to Brahim, are there any subsidies from the government to implement renewable energy in the treatment plants to power for example desalination which are energy intense?</p>	<p>For the treatment plants carried out by ONEE, the state subsidizes the investment dedicated to the construction of purification works up to 50%, including renewable energy production works when they are planned.</p> <p>Otherwise, there is no specific subsidy for renewable energy (for ONEE's WWTPs in any case).</p>

<p>To what extent do you think illegal mining is hampering Ghana from achieving the SDG with regards to the provision of clean water? Faustina</p>	<p>Although Ghana permits to mine on a small scale, it is estimated that about 70% of small-scale miners are unregistered and operate illegally. They are known locally as 'galamsey' meaning "gather and sell." While illegal mining supports livelihoods, it has caused severe damage to the environment.</p> <p>60% of Ghana's water bodies are now polluted largely due to illegal mining activities. Many of these water bodies serve as sources from which GWCL draws and treats water to supply to residents.</p> <p>Illegal mining activities have led to low water availability for processing in affected regions in the country.</p> <p>Raw water flowing to GWCL intake points in these affected areas have high levels of sludge, which increases operational and maintenance costs significantly and makes the production process strenuous.</p> <p>In some cases, treatment plants have been shut down because there was too much silt in raw water or caused a decrease in water production by 50%.</p> <p>Illegal mining activities are having negative effect on GWCLs operations which would significantly affect our ability to supply adequate amounts of reliable safe water to consumers.</p> <p>Ultimately, if illegal mining is not tackled by government and stakeholders, we are likely to miss SDG 6 Target 6. 1: ensure availability and sustainable management of water for all; as well as Target 6.3: improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials.</p> <p>These are the targets Ghana will find difficult to achieve in 2030 if care is not taken.</p>
<p>Good work you are doing Diana. My question however is whether the toilets you are developing is linked to a centralised sewer systems where you can effectively treat the waste before reintroducing into the environment.</p>	<p>We are implementing two systems. We have low-cost areas where we are implementing the construction of water borne toilets which are connected to a centralized sewer system and the Low Income Communities where the toilets are designed for onsite sanitation and are constructed with a storage pit. For onsite sanitation, the pits are emptied once they are full, and the faecal sludge is collected and safely transported to a sewage treatment plant where it is treated</p>

<p>Diana how are pre paid meters helpful in promoting sustainable supply and consumption of piped water</p>	<p>Prepaid meters enable us to receive the payment in advance before the water is consumed. We have installed prepaid meters in communities where we have challenges collecting revenues and where there is huge outstanding debt. In low-income communities this has helped to reduce water wastage at customer premises as there is immediate behaviour change leading to improved network pressures, elimination of billing related complaints and enhanced revenue collection but we are not yet at a level where we are covering all our costs. We still need further investment in water supply and sanitation infrastructure including meters to cover new development areas as well as low income communities and we expect to eventually achieve our goal of financial sustainability.</p>
<p>Thanks @Diana for the wonderful presentation. concerning faecal sludge and solid waste mgmnt, you mentioned purchasing equipment for community based enterprises, on a pay back basis. Is this also under funding on the NWSSP or is it your own resources as a utility?</p>	<p>The equipment for faecal sludge management was procured under the Nkana Water Supply and Sanitation Project (NWSSP).</p>
<p>For Diana, were the goals of the educational program achieved?</p>	<p>We are just beginning to implement this programme and are yet to realise benefits.</p>