

**BOX OF COMMENTARIES FOR KEY STAKEHOLDERS**

**1. Box of Commentaries for Customers as Stakeholders**

<i>Utility One – All respondents</i>	<i>Utility Two – All respondents</i>	<i>Utility Three – 89% of respondents</i>	<i>Utility Four – All respondents</i>
<p>“Other Stakeholders the customers well their concern is let them get potable water and they are getting it”. (Respondent A1)</p> <p>“Then of course if I talk about the urban <b>customers</b> they are interested to see that our services are the best”. (Respondent A2)”</p> <p>“than our <b>customers</b> mainly in the urban areas because that is our key service area” (Respondent A9)</p> <p>“I believe our <b>customers</b> are the major stakeholders”. (Respondent A10)</p> <p>“We believe that <b>customers</b> are kings therefore they have to be well treated”. (Respondent A10)</p> <p>The <b>customers</b> are the stakeholders that is one, they are very important stakeholders. (Respondent A14)</p> <p>“Our <b>customers</b> in urban areas”. (Respondents A4-A8)</p> <p>“In terms of key stakeholders first of all think of our <b>customers</b>”. (Respondent A15)</p> <p>“I think the number one stakeholders should be our <b>customers</b>”. (Respondents A18 – A21)</p> <p>“For number 3, I will mention <b>customers</b> as stakeholders”. (Respondents A11-A13)</p> <p>“As a rural water supply department, at least the main stakeholders will be the <b>rural people that we serve</b>, the rural communities those are the major stakeholders” (Respondent A3)</p>	<p>“Number one we will look at the <b>customers</b> who are our major stakeholders”. (respondent L1)</p> <p>Our stakeholders we have the <b>general public</b> (respondent L2)</p> <p>“Stakeholders are the <b>people that patronize</b> us that is the end-users”. (respondent L3 –L15)</p> <p>“Then our <b>customers</b>, because we have customers living in different areas which we have identified as densities”(Respondent L16)</p> <p>“Some commercial <b>customers</b> are using our water and not acknowledging it ” (Respondent L17)</p> <p>“Critical stakeholders are the <b>customers</b>”. (Respondent L18)</p> <p>“one of our key stakeholders in <b>the population</b> that is one”. (Respondent L19)</p> <p>“The stakeholder will be the <b>customer</b> but we are not able to actually meet customer demand”. (Respondent L20)</p> <p>we have <b>our customers</b> the people we serve and it varies”.. (Respondent L21)</p> <p>“Our <b>customers</b> that pay regularly are the ones that have contributed”. (Respondent L22)</p> <p>“the <b>customers</b> that consume water and pay for it are positive stakeholders”. (Respondent L23)</p>	<p>“Basically our key stakeholders are <b>the residents</b> of the Island they are residential houses, schools, clinics, maybe huge shops, large supermarkets and all that they are our basic key stakeholders”. (Respondents P1-P3)</p> <p>“Our main key stakeholders are the <b>customers</b>” (Respondent P4)</p> <p>“The stakeholders involved for water services are basically our <b>primary customers</b>, residents, of course, we have industrial customers too then you have which fall into the communities basically those are our stakeholders” (Respondent P5)</p> <p>“so <b>everybody that is resident</b> in these two local government in the state that utilises our water is a stakeholder”. (Respondent P7)</p> <p>“Okay the key stakeholders are the <b>companies, schools and hotels</b>”. (Respondent P8)</p> <p>“Presently our stakeholders are the truck association the people that come here they are our <b>customers</b>”. (Respondent P9)</p>	<p>“The Kaduna state water board rely on industries you understand because they are the major <b>customers</b>”. Respondent K1</p> <p>“So obviously our key stakeholders are the people, the people we are serving our <b>customers</b> so they are number one stakeholders”. Respondent K2</p> <p>“Our stakeholders – major stakeholders are <b>customers</b>, our customers the industries, the commercial <b>places, the institutions both state and entrepreneurs all the people</b> we supply water. Respondent K3</p> <p>“Most of our key stakeholders are <b>consumers</b> who use water for domestic consumption, Agric and commercial consumptions”. Respondent K4</p> <p>“Then our <b>consumers</b> too. we have categorised our customers for ease of operation and better customer relationship”. Respondent K5</p> <p>“Key stakeholders that are involved when we are talking about key stakeholders it is usually the people of the state. <b>The people we serve</b>”,. Respondent K6</p>

1.1 Box of commentaries for customers supporting services

<b>Utility One</b>	<b>Utility Two</b>	<b>Utility three</b>	<b>Utility four</b>
<p>“Our customers in urban areas, you can classify them in the two groups, there are those <b>that will respond to us promptly</b> when we take our water bills you know that part is positive aspect”. (Respondents A4-A8)</p> <p>“they are interested to see that our services are the best because they are enlightened when there are issues they call, they inform us”. (Respondent A2)”</p> <p>“then International Communities you know these people they are not Nigerians they came from developed countries, so they have to be served and treated well. Most times their feedback improve our services”. (Respondent A10)</p> <p>“Because we give them good service they <b>give us our revenue in return</b>”. (Respondents A11-A13)</p> <p>“stakeholders hat always want to contribute they rely and depend solely on the water especially those ones whose only source of water is generated by water board” (Respondent A15)</p> <p>“the main stakeholders that want our organisation to move forward are the populace and customers they want to encourage us they want to help us”. (Respondent A18-A21)</p>	<p>“we had members of the general public whose I guess business are connected with our core business who have read our master plan on our website and who are interested in partnering with us”(Respondent L2)</p> <p>“In areas like Ojo, Festac area, Lagos Island water is not good and since the customer will rely solely on our water, whatever happens to us will really affect them either positively or negatively so these people are very good” (Respondent L18)</p> <p>“Some of our people here <b>they support us</b> even when you have intermittent supply of water for one reason or the other they still honour our bills” (Respondent L19)</p> <p>“we have people that are actually interested in our project they want to pay even though we have problem getting the money from them”. (Respondent L20)</p> <p>“we have stakeholders that have major positive interest on the organisation like we have our customers the one that we serve” (Respondent L21)</p> <p>“Our customers that pay regularly those are the ones that has contributed positively to the growth of the organisation” (Respondent L22)</p> <p>“the ones that consume water and pay for it are positive stakeholders”. (Respondent L23)</p>	<p>“some of them have agreed that wow this is a fantastic thing most likely maybe they have travelled abroad before and they have seen how it is and they feel it is good as long as it will even reduce the cost of even producing their own water” (Respondent P1-P3)</p> <p>“and then the good customers that are willing to pay for our services are also good. So that is the way it is”. (Respondent P4)</p> <p>“There are individuals that are really interested in what we are doing and have shown a certain level of concern and eagerness to see what will even happen vis-à-vis payment plan and all that”. (Respondent P5)</p> <p>“when they pay their bills regularly when they are happy if you have service and you have value for those services you pay your bills regularly. So when we get bills without struggling, it’s a positive impact on us it keeps our business going you know. When we get good feedback, it gives us a good reputation” (Respondent P7)</p>	<p>“majority of the people appreciate what we do and we have people that go out of their ways to help us like if there are pipe burst and we don’t know we have people that will call and try to monitor you know they are customers it’s not their responsibility but they will call in and report the pipe burst and they try to monitor and ensure that repairs are carried out” (Respondent K2)</p> <p>“the industrial consumers they pay fairly good rate water rates, tariffs so that we can be able to sustain the system unlike domestic consumers” (Respondent K5)</p>

1.2 Box of commentaries for customers that defaulted payments

<i>Utility One</i>	<i>Utility Two</i>	<i>Utility three</i>	<i>Utility four</i>
<p>“Some customers could be of negative influence. They believe it is a God-given product which they <b>do not need to pay for</b>”. (Respondent A1)</p> <p>“there are those just <b>do not bother paying their water bills</b> sometimes you disconnect and they go round the back and go and get connected”. (Respondents A4-A8)</p> <p>“we discovered that some consumers by pass the meter so those are among the stakeholders, they can recharge 4000 and if you do not go and check for the next three months <b>they will not pay</b>” (Respondent A10)</p> <p>“the customers there are lot of ways they hinder sometimes <b>even not paying regularly</b> is one of the reasons, and even staff members of staff conniving with customers maybe to connect them” (Respondents A11-A13)</p> <p>“customers <b>that are not paying</b> they can have a negative effect on the organization” (Respondent A14)</p> <p>“some who even go to the extent of using our water for almost months and they being are being charged with the bill of 100 thousand naira <b>they will not pay</b>” (Respondent A15)</p> <p>“that is the customer issue a times they <b>don’t pay</b> there are a lot of illegal connections” (Respondent A16)</p> <p>“some squatter settlement that our pipes runs through them, sometimes <b>they create access into the water and take water</b> thereby they contaminate our water” (Respondent A18-A21)</p>	<p>“We shut down we are not producing water, we are not giving water to the people, people are not paying we are not getting enough IGR to pay salaries” Respondent L2</p> <p>“response of customers towards <b>paying their bills you know it is not encouraging</b>” (Respondents L3-L15)</p> <p>“Some commercial customers are using our water and <b>not acknowledging it or paying</b> for it they lie that they have their own boreholes” (Respondent L17)</p> <p>“Within the people, we serve for example generally and unfortunately in this part of the country or in this part of the world people believe that <b>water should be free</b>” (Respondent L19)</p> <p>“yes we have a lot of people that <b>do not actually want to pay</b> when they receive the water they will say no water because they believe water is free”(Respondent L20)</p> <p>“in the past most of our customers like hotels manufacturing companies now they have now gone for boreholes <b>they leave our services for boreholes</b>. So they prefer having their boreholes rather than continue using our water” (Respondent L21)</p> <p>they use our water and they <b>are not willing to pay</b>. they do connections illegally I don’t really want to say in connivance with our staff (Respondent L22)</p> <p>but also part of that populace can be said to be negative sometimes because in the past Nigeria water has been supplied for free for sometimes and there are some people that are still of the opinion that water <b>should not be paid for</b> (Respondent L23)</p>	<p>“but the negative impact outweighs the positive one at the moment. Well, that is because before now water is being given to them free so some haven’t come around to really appreciate what we are doing that’s why he said that they are considering that we are ripping them off”. (Respondent P1-P3)</p> <p>“There are those of them that <b>will not want to pay</b>, we may call them bad stakeholders but they want the services so the negative stakeholders will be those that don’t want to pay, <b>those that want to steal</b>”. (Respondent P4)</p> <p>“you will hear things like <b>water is free</b> and why should we pay for water and all that so people like that you can categorise them under negative” (Respondent P5)</p> <p>“People will think that oh depending on us will not be adequate we can’t serve their needs so they will continue to provide water for themselves and so the purpose in which government set us up will be defeated”. (Respondent P7)</p> <p>“Yes, most of our stakeholders especially the schools they say our charges are very high so they are very reluctant to pay”. (Respondent P8)</p>	<p>“Because people here the attitude is poor. They do not like paying for water in Nigeria”. (Respondent K3)</p> <p>“The main aspect a lot of people consumers, they consider water supply as a social good so that is really posing a lot of problems because in a situation whereby people are giving value to products you know that is when you will be able to generate as much revenue. People say it is natural after all water is from God they do not look at the components of its production” (Respondent K1)</p> <p>we are trying our best to see that we should proffer ways of getting the money from the consumers. they feel that the rate is higher. The rate is too much for them. They tamper with the meter (Respondent K4)</p> <p>“I think the attitude of our consumers, they see everything that government does as yes it’s their right it should be free so some people don’t even see it needful to pay the water rate because they feel that is the only thing they can enjoy from the government” (Respondent K5)</p> <p>“The people we serve, most instances you will discover that most people think that water should be free. most domestic customers are not ready to pay as cheap as it is you get it. they get plumbers to connect to our pipe connections”. (Respondent K6)</p>

## 2. Box of commentaries for informal service providers and vandals

Utility One	Utility Two	Utility three	Utility four
<p>“In places like Asokoro and Maitama, we have booster pumps that pump water. In a situation where these booster pumps are not efficient enough that is where these <b>informal people</b> come in. So sometimes, we even engage them to help us reach areas we cannot reach.” Respondent A2</p> <p>“(the <b>Mairuwa people, and the borehole people.</b> Mairuwa people definitely when there is too much water from our town they can sell so they actually are our competitors and then the people who have boreholes and trade on water are our competitors.</p> <p>Then the <b>people who do sachet water</b> they are also our competitors.</p> <p><b>Mairuwas</b> are not registered, they shouldn’t have been our enemy or against us if they are regulated and we want to sell water and they are buying from us, now bringing it but they do the opposite)” (Respondents A4-A8)</p> <p>“<b>Informal service providers</b> are influential stakeholders. They could be a hindrance because they are not organised. We should be able to control their activities but if they carry on providing water supply from sources that we do not approve it could endanger people and then it will boomerang on the organisation”. (Respondent A9).</p> <p>“I will not regard them as bad stakeholders but they are not helping our business are the <b>people into borehole</b>. You know the activities of the borehole people is affecting our revenue” (Respondent A10)</p> <p>“At times people that hinder our activities are like some of all these Julius Berger, Arab Contractors when they are doing their <b>road construction at times they rupture our pipe</b> and at last we lost some revenue and some water there.</p> <p>We also have some <b>vandals, pipeline vandals, some hoodlums</b> anyway that might try to excavate the pipe to go and sell or others they are also some of them within the city and we also have a kind of people who try to connect our water without us knowing and so it results to leakage” (Respondents A11-A13)</p> <p>“<b>Mairuwas</b> (meaning water vendors that sell water in containers loaded in movable carts) go to the extent of breaking our pipe, they do all kind of things to make us experience pipe burst. You know for those people once there is a disruption in the supply of water definitely, they will have access to sell their water” (Respondent A15)</p> <p>“I think the negative stakeholders are these bottled water people because they give false information to customers. They tell people water board water is not clean and cannot be consumed directly. We <b>have illegal connections</b> too we have people who connect our water illegally.” (Respondent A18-A21)</p>	<p>“pipes you know we have a <b>lot of miscreants in Lagos the area boys</b>, they will want to stop the vehicle they will want to extort money from the contractor sometimes they will drive them from site but because we have had this stakeholders engagement sometime we involve people who know them especially the CDAs” (Respondent L1)</p> <p>“We know who our enemies are yes we do. We know that these <b>truck pushers people who sell water in jerry cans</b> they are our major enemies. There are some enemies there are some groups of the people that are not that visible to us like plumbers who break pipes, who vandalise our pipes and there are some thugs who gather themselves together when we are about to start a project they make it impossible for the contractor to set out, to start the project, to get the police men to arrest them then allow the contractor to set out on the project so we know who these people are and we try as much as possible to curb their activities so that we can move on”. (Respondent L2)</p> <p>Also the <b>informal service sector</b> impacts us immensely, though these set of people I would not say are totally negative if you permit me because those who are into sachet water for example have not enabled us in a way provide good water for our consumers. Because <b>some of them vandalise or illegally tap</b> into our mains to get water and then will package and resell to consumers and since we do not get value for money for which this theft has been carried out of cause it is negative to our business. (Respondent L16)</p> <p>“And we have some <b>these sachet water producers</b> now competing very seriously with us and some of them are of negative impact because some of them it is our water they are using and they are not paying for it”. (Respondent L17)</p> <p>“so the people that will not want us to succeed are our competitors, <b>the pure water company</b> who uses our water you understand the bottled water people <b>the water vendors</b> you understand they are our competitors because they have small capital outlay and they have big profit so it’s better for them if we continue to be falling down and then they will be rising up”. (Respondent L18)</p> <p>“I see those ones has those that are in <b>slum areas that we can’t easily provide the water for them where their own source of getting the water is by regular tankers</b> that normally ply their route and some, they use bad water and they don’t even care to meet the government on how government can assist them in giving them water”. (Respondent L21)</p> <p>“The stakeholders that affect us negatively are <b>basically the water vendors</b>, they use our water and they are not willing to pay. In fact they are a major problem to us, they do connections illegally I don’t really want to say in connivance with our staff but they are our major stakeholders that affect us negatively. Effort to rid them off has not been yielding good result” (Respondent L22)</p> <p>“people that will not want us to succeed are our competitors, the pure water company who uses our water you understand <b>the bottled water people</b> the water”. (Respondent L1)</p> <p>“we have in what is <b>water packagers all these pure water vendors</b>. They divert our water package it and sell it to people. So you may want to record that one”. (Respondent L19)</p> <p>(“Yes during construction for example you want to lay your pipes while some people will be happy that oh you are bringing water to our domain some will tell you look, <b>you cannot pass through my frontage of my compound</b> that will also require some negotiation and other talk to overcome such;. Another thing is that in some case during construction some set of people will say that we don’t need water its soldier we want, we have to go to round table conference to resolve that kind of issues;. Particularly as he mentioned during pipe laying people at times they don’t observe the required setback you are supposed to give on your property so you <b>find out they have even erected walls on the drain</b> giving no room for you to make use of that setback that should ordinarily be allowed or provided so you just have to re-negotiate with them that okay maybe whatever we destroy we damage we are going to re-instate even though officially they are not supposed to”) Respondents L3-L15</p> <p>“And also we have been facing a lot of <b>water theft illegal connection onto our mains and all of that. Encroachment unto setback areas</b> it has been difficult for us to extend service to some areas because there have been encroachment onto government laid down setback areas” (Respondent L23)</p>	<p>“some have said that they don’t need potable water from us that they don’t believe in it. They believe in the one that they buy from the shops and basically, they just feel that it’s a way of trying to rip you off because right now is that when you use our potable water you pay for it so it’s like why would they want to, it’s like a rip-off, <b>they will prefer going to shops and basically depend on their borehole for their other needs like the washing and all that</b>” (Respondent P1-P3)</p> <p>“the negative stakeholders will be those that don’t want to pay, <b>those that want to steal</b>” (Respondent P4)</p> <p>“when <b>road were being constructed the ministry of works did not consult the ministry of water resources</b> or water board as the case maybe to be able to even identify where our pipes are so what happened is that <b>we had a lot of damaged pipes</b>” (Respondent P5)</p> <p>“in developing Africa because the water utility service was not a critical concern of government, and so management or services were epileptic so most people have gone ahead to <b>provide water for themselves and those water we realise are not potable water</b>, they are not clean water and the government is concerned about their citizens and do not want to lose people because of contaminated water” (Respondent P7)</p>	<p>“The pipelines also since we have a lot of extensions, population growth has increased so we tend to be extending again and again that is also another challenge and we experience vandalisation, vandalisation is affecting it we cannot extend into bushes when you extend into bushes the <b>vandals they follow it and remove it</b>” (Respondent K1)</p> <p>“others you know even when they are disconnected because reconnecting water is so easy unlike electricity which is more technical they tend to you know go back in the night to reconnect we still get <b>some people that vandalise our water structures like water metres</b> and things like that you know in the past we used to use water meters that had some brass components in them and so we had some people that will go out to vandalise these water metres in order to remove the brass component and sell as scrap although we have learnt our lesson and we are using almost 100% plastic metres now so I think we have gone over that” (Respondent K2)</p> <p>“Sometimes <b>human activities you know this Nigeria where you see people cutting trees or going to wash upstream</b>. So we get this water from the river if they wash upstream, it might come to our fitting so this maybe is the only challenge” (Respondent K3)</p> <p>“if you put the metre <b>they will break the meter</b> because they feel that the rate is higher. The rate is too much for them. So when you come to read the metre they will tell you that the consumption is not accurate. It’s the challenges here and there” (Respondent K4)</p> <p>“there are some partners that impact negatively because maybe their users of water and their response some of these stakeholders are <b>the flower operators, the garden operators, they sell flowers the car wash operators, block industry operators</b> they impact negatively on the business. Because these are people that waste water a lot I know where they sight these their businesses are mostly in strategic places where they are sure they will attract their customers and where most cases our facilities are there like pipelines are there. So they always have water supplied but the abuse is so much. But when you make attempt to recover fairly reasonable rate from them by maybe installation of meters they vandalise it so the effect is really very negative on us”. (Respondent K5)</p> <p>“People that <b>have flowers and car wash are high consumers of water that don’t even pay</b> and if you are going to check their connection you discover that they didn’t go through the channel so even though in most cases we try to work on that and ask them to go and register because they impact negatively on the system. They shouldn’t be even using this water to wash cars and water flowers so you discover that the negative impact mostly comes from the beneficiaries” (Respondent K6)</p>

### 3. Box of commentaries for Financiers

Utility One	Utility Two	Utility three	Utility four
<p>“The Federal Capital administration (FCTA) is the co-stakeholder that is assisting us with funds to finance some of our maintenance activities here. FCTA provides infrastructure while we maintain what they provide”. (Respondent A16)</p>	<p>“We have the non-governmental organisations who are like a watchdog between us and our community”. (Respondent L1)</p>	<p>“I will consider NGOs as a stakeholder. We invite them to help us project our plans to the public. They act as intermediaries between us and the public during stakeholder palets. They are sponsors too. For example the World Bank, SUWASA the Sustainable group from America USAID, an ADB partner with us. The government too is a stakeholder” (Respondent P4)</p>	<p>“We have development partners who partner with us in providing infrastructure. The federal government is also a stakeholder because of an ongoing arrangement with the Federal Government to supply water infrastructure to some parts of the state” (Respondent K2)</p>
<p>“There is the FCDA (Federal Capital Development Authority) which is a parastatal under the Federal capital territory administration who are very important stakeholders. They are important because they are the body that is charged with the provision of water infrastructure in the FCT. We operate as an arm of the Federal capital territory administration and then we take charge of the operations alone”. (Respondent A1)</p>	<p>“Our stakeholders we have the state government”. (Respondent L2)</p>	<p>“We have stakeholders in the project, we have World Bank and ADB and then counterpart funding by the rivers state. The bulk of the money is coming from ADB, then we have some coming from World Bank too so but at the moment we are making use of the resources from our government rivers state” (Respondent P6)</p>	<p>“Well I don’t know whether you can call the World Bank as our stakeholders you know they are also a major financial usually its loan we take from them like the project I am talking about is an African development bank project and also the one from Islamic development bank but we are taking loans from them through the federal government so on that I think they impact well on us”. (Respondent K6)</p>
<p>“JICA has also helped us maximise our revenue generation by installing bulk meters in all the zones, tanks and in the loops and districts”. (Respondents A22-A23)</p>	<p>The external stakeholder majorly we have Lagos state government as our own major stakeholder (Respondent L21)</p>	<p>“World Bank is partnering with us, invested in water because it has become a united nation's concern and so we are not only committed to the Rivers state government we are also committed to the World Bank and there are measurable standards that you must meet you know to keep your loan facilities going and there are standards that we must keep to show efficiency and effectiveness” (Respondent P7)</p>	<p>“The government itself Kaduna state because they provide the infrastructure. They build the dams, they build the waterworks, they lay the pipes you know then we have development partners and the world Bank, IDP, in fact, most of the projects water expansion that is done in Kaduna state you discover that most of them are done with partnering with these development partners. Like presently we have the Islamic Development Bank as our development partner and African Development Bank presently there is an ongoing project in Zaria” (Respondent K5)</p>
<p>“We have an ongoing project sponsored Japanese International Cooperation Agency (JICA) project. The project is not a loan it is a grant. They are providing solar energy as an alternative power generation system for the lower Usman Dam”. (Respondent A14)</p>	<p>“So the key stakeholders we have are one the government. The government in two levels, the federal government through the Federal Ministry of water resources as well as Federal Ministry of Finance (Respondent L23)</p>		
<p>“UNICEF provide counterpart funding for water projects we provide 50% of the funding and UNICEF supports with the remaining 50%. In other areas, UNICEF could provide 100% like training community artisans so that they could maintain those small scale water schemes”. (Respondent A3)</p>	<p>“This is a government-owned company, Lagos state is our sole financier, and our business is majorly the production of water, distribution and getting revenue back from customers so basically I can only say the stakeholder as of now is the Lagos state government”. (Respondent L22)</p>		<p>“the tariff setting is set by the government you don’t have the control of setting the tariff so we get nothing from any other person apart from the government” (Respondent K4)</p>
	<p>“, the government are key Stakeholders, because they give us subventions based on what we sell and the revenue we generate.” (Respondents L3-L15)</p>		
	<p>“I start with Ministry of Environment, Ministry of Environment dictates the policy that the state government designs or decides to use to determine the coverage and supply of water supply to consumers in Lagos state and the budget of Ministry of Environment sometimes takes into consideration the sustainability of water supply to consumers in Lagos state. (Respondent L16)</p>		<p>“The World Bank, The African development bank, the Islamic development bank they help fund and finance this water supply water projects”. (Respondent K3)</p>
	<p>“NGOs are key stakeholders.” (Respondent L23)</p>		
	<p>“I know they are being financed by international donor agencies like the World Bank, the IFC and all that”. (Respondent L22)</p>		<p>“Production of water in that capacity is a huge project you know, it’s enormous so government assistance is always needed so the government is the first stakeholder. We go for world funding, funding from the international organisations” (Respondent K1)</p>
	<p>“Lagos Water Corporation is one of the agencies of Lagos state government so we have to relate with our mother ministry which is the ministry of environment because it is part of Lagos state government”. (Respondent L19)</p>		

#### 4. Box of commentaries for Utility Management and Staff

Utility One	Utility Two	Utility three	Utility four
<p>“Number one stakeholder that I will mention is the staff because the input of the staff has a long way to give us the result that we desire. So it positively impacts on our activities i.e. staff” (Respondents A11-A13)</p>	<p>Then the staff union, the union are very critical. They are very critical in the development of the sustainability of the sector because their activity can cause a serious problem in providing the needed services (Respondent L18)</p>	<p>“you have the unions the ones that are the truck drivers the actual companies that go pick up sewage from people’s home” (Respondent P5)</p>	<p>“So our stakeholders are the urban settlers, the government that owns the asset some CSOs and NGOs and also the workers of this organisations” (Respondent K6)</p>
<p>“You need staff to operate the plant equipment. I manage this plant he manages this plant we are all key stakeholders. Staff have a major role to play when it comes to managing the water treatment plants”. (Respondents A22-23)</p>	<p>as regards the organisation that of the internal I will say staff they are the key stakeholders of the organisation. (Respondent L21)</p>	<p>“Every staff that I interface with are our key stakeholders. The staff in water operations, procurement, finance and administration are all stakeholders as far as the project is concerned” (Respondent P6)</p>	<p>“even we the staff we have stake in our water supply” (Respondent K3)</p>
<p>“Staff are key stakeholders because they are the ones who do the job in-house”. (Respondent A9)</p>	<p>We have the staff who will work towards the achievement of these projects (Respondent L1).</p>	<p>“The internal stakeholders are the people who are engaged in the organisation, who are in the operational department, and who are in the customer relation department” (Respondent P7)</p>	
<p>“Our head of department is a key stakeholder because they are the main people that ensure the necessary resources required for producing quality water is made available. We also have other head of departments that ensure are operations are run successfully.” (Respondents A18 –A21)</p>	<p>You know key stakeholders from our department distribution department and I guess you know what we do in distribution that is we convey treated water from the waterworks which we call networks to the consumers. So from there the stakeholders internal we have the production department, we have the commercial department which is next when we receive the product from the production centre we give to the consumers and those consumers we have the department called commercial that will go and collect the revenue for us. So internally we have also a commercial department that is also a stakeholder. Also, we have IT&amp;T that is information technology that will produce the bill for us, we have them also has internal stakeholders then human resources too then also the maintenance department we have them that will manage our office facilities (Respondents L3-L15)</p>		
<p>“The staff are very important stakeholder because they ensure a smooth flow of activities from production to transmission to distribution and revenue collection”. (Respondent A17)</p>	<p>I am the head of human resources and mostly I deal with staff, I do more of internal than external but even as I do more of internal I still with some essential ministries in the state civil service. (Respondent L17)</p>		
<p>“We have what we call area managers like in the whole federal capital territory (FCT). In FCT, we have districts and in these districts we now have areas. This is where we have managers controlling areas officers where customers can go to respective area offices that take care of different districts instead of coming here”. Respondents A2</p>	<p>The workers here we are stakeholders. (Respondent L2)</p>		
<p>“coming back to our administration again the Federal capital territory administration, through the department of establishment and training very important to us because they recruit staff for us we have no autonomy of recruiting staff, and so the staff they recruit and post to us these are the people we use” (Respondent A1)</p>	<p>“they do connections illegally I don’t really want to say in connivance with our staff but they are our major stakeholders” (Respondent L22)</p>		
<p>“We have a finance and account department that handle finances, we have an admin department and supply department that handles the administration of the staff and under that, you also have facility management which handles the management of facilities of the whole waterboard” (Respondent A3)</p>	<p>“We have been able to ribble around the work challenges is because you still have some dedicated staff” (Respondent L20)</p>		
<p>“Then we talk about ourselves – A4, I want to add the personnel the staff because of the role they have to play in provision of water is very important you need scientists that will carry out the treatment, the analysis before you can say the water is good for consumers use those people their services are very important to us (staff) –A6, And it’s the same thing too with staff. You have good staff you have bad staff. – A7 (Respondents A4-A8)</p>			
<p>“we have set up a unit called monitoring and detection they go out daily you know from place to place and even I can remember there was a time we have a joint task force with Abuja environmental board because they too they have what we call spy those ones that is their job” (Respondent A10)</p>			

## 5. Box of commentaries for consultants and contractors

Utility One	Utility Two	Utility three	Utility four
<p>“These our <b>specialists in chemicals</b> those who supply us chlorine and other treatment measures they are very important to us. Because of the understanding we have they keep on supplying products to us believing that they will get their money. They get the money but not at the right time” (Respondent A1)</p>	<p>We have the <b>contractors</b> even though they make money from it but they are still working on the project. (Respondent L1)</p>	<p>No commentaries</p>	<p>No commentaries</p>
<p>“Then other stakeholders the people who supply us chemicals our <b>contractors</b> they make sure that the water we produce is of the standard that is required and they make sure that the chemicals are supplied as at when due”. (Respondent A4-A8)</p>	<p>“Also we have <b>people giving us electricity supply</b> to power our assets also those are the external stakeholders”. (Respondent L2)</p>		
<p>“I mentioned <b>contractors</b>. They are important to us because from time to time we engage them in terms of provision of infrastructure or rehabilitation of municipal water supply. for now we don’t really provide the infrastructure another body does that because of the way FCT is structured and then hands over to us to manage. But for rehabilitation of such infrastructure like right now we have an ongoing rehabilitation project on the treatment plant we supervise that directly and then sometimes we have contractors who handle installation of metres and so we also get consultants sometimes” (Respondent A9)</p>	<p>“The independent power plant that will generate this electricity for us that is going outside the national grid of PHCN is provided by <b>electrical suppliers</b> external to us so those are major stakeholder. But still it is not cheap so the government is still paying that for us” (Respondents L3-L15)</p>		
<p>“then followed by some of our service providers, like <b>contractors</b> then consultants who are aiding us in one way or the other to achieve some of our aims”. (Respondents A11 –A13)</p>	<p>Then our <b>contractors and consultants</b> are very influential Stakeholders. <b>Contractors</b> who for example are on site at our major water works ensure that the standards are put in place during construction. <b>Consultants</b> also do their best to ensure that they carry out necessary supervisory function over those contractors on site. (Respondent L16)</p>		
<p>“We have some consultants that is working with us we have millennium integrated systems they are taking care of our data base and we have <b>proganema</b> they are also our <b>consultants</b> too. They take care of the revenue aspect”. (Respondent A15)</p>	<p>“The introduction of this <b>IPP dedicated power</b> supply has helped us because before we didn’t have anything like that but now that we have had we use it in our major water work at Iju and Adiyari and to power Akute” (Respondent L17)</p>		
<p>“On the distribution network, some of our <b>contractors</b> have shown willingness to go and borrow money on our behalf alright to come and provide distribution network in form of a loan we have not been able to provide the distribution network to those places”. (Respondent A17)</p>	<p>Those five critical stakeholders are the customers, the contractors, the <b>traditional rulers and religious organisations</b>, landlord associations and the community development association. (Respondent L18)</p>		
<p>“Yes I think other people that impact positively on us are the <b>manufacturers</b> of the things we use the equipment we use in the work place, laboratory if they are bringing things that will last in our hands, we progress we don’t have to spend more money in buying such things and then the chemical we put inside the water too, if they are prepared according to standard they help us” (Respondents A18-A21)</p>	<p>Other stakeholders should be <b>contractors</b>. We outsource some of our jobs maintenance jobs we outsource them because we cannot cope with it in-house. (Respondent L19)</p>		
<p>“The <b>contractors</b> are important stakeholders we need chemicals and plant equipment for production and this is why we engage contractors to do that. We have a large chain of contractors that are stakeholders”. (Respondent A22 – A23)</p>	<p>“APN are key stakeholders. Before 2010 we are solely relying on NEPA, PHCN, but now we have our own IPP Independent power plant being <b>operated by APN that is a subsidiary OANDO</b> and since then we have had a war constant power supply”. (Respondent L20)</p>		

6. Box of commentaries for community development groups

<i>Utility One</i>	<i>Utility Two</i>	<i>Utility three</i>	<i>Utility four</i>
<p><i>“then you have the local community groups such as youth groups, women groups, market women in the communities, these are also smaller groups that we interact with, when we go to all these communities we meet them and the traditional rulers too so all these form part of the stakeholders” (Respondent A3)</i></p>	<p><i>“We have had this stakeholder engagement sometime we involve people who know them especially the CDAs that is the community Development Association because they know about these projects and what they can benefit from the projects”. (Respondent L1)</i></p>	<p><i>“the members of the CDC that is the community development committee but the larger individuals, the committee itself different people your regular Joe we want to invite all of them over for a meet where we would discuss with them on different issues concerning water production and water services”. (Respondent P5)</i></p>	<p><i>“So our stakeholders are the urban settlers, the government that owns the asset some CSOs and NGOs and also the workers of this organisations” (Respondent K6)</i></p>
<p><i>“Then you have the NGOs the CSOs” (Respondent A17)</i></p>	<p><i>“Civil society organisation are key stakeholders. We engage civil society organisations that speak to the landlord association, and the transitional rulers. We have a contract with them for about 5 years”. (Respondent L18)</i></p>	<p><i>“Presently our stakeholders are the truck association the people that come here” (Respondent P9)</i></p>	
	<p><i>“We have letters from various resident association they want our water and they are ready to pay but unfortunately we are still not yet able to meet the demand gap but we are trying our best” (Respondent L19)</i></p>		
	<p><i>“The Civil Society Organizations you engage because they have positive thinking all the time. They talk to those with negative interests so you can have your way”. (Respondent L3-L15)</i></p>		
	<p><i>“We make use of Community development association and the Community development committee which is on a higher level before we commence our projects”. (Respondent L3-L15)</i></p>		
	<p><i>“We also have a consultant on that which happens to be our Civil Society Organisation consultants he is the one midwifing between we the organisation as well as the network of NGOs they call them triple NGOs that’s the network of Nigerian Non-governmental organisation so they are different NGOs but they are under the same network so this consultant is one of them so she is the one midwifing between us as an organisation, series of NGOs as well as some other Media houses so that is one of our strategy” (Respondent L23)</i></p>		



## 7. Box of commentaries for policy makers and Law Makers

Utility One	Utility Two	Utility three	Utility four
<p>“The <b>National Assembly</b> is very important to us because they need to pass the law as quickly as possible to make the utility board independent. The issues of staffing, operating as an arm under another organisation, infrastructure development will be solely vested on the board once the bill is passed”. (Respondent A1)</p> <p>“The <b>Ministry of health</b> checks and test the quality of water we give out. The ministry of environment also impacts us indirectly”. (Respondent A2)</p> <p>“The Federal Ministry of Water resources acts as facilitators. When we have interventions from development partners outside the country they go through the federal ministry of water resources.” (Respondent A3)</p> <p>“The ministry of environment, the ministry of health, and the ministry of water resources are main stakeholders”. (Respondents A4 –A8)</p> <p>“In order of priority, the Ministry of water resources should come first because that is where the national policy on Water is domiciled. Whatever decisions they make about their policies on the provision of water supply affects us”. (Respondent A9)</p> <p>“we have a joint task force with Abuja environmental board because they monitor illegal connections. They go out every day” (Respondent A10)</p> <p>“Our key stakeholder I want to break the government down into three. Because in the government you have the executive, you have the legislative and you have the judiciary. I think these three arms of government are supposed to be part of our stakeholders because at a certain stage we need legislation. Like water board now, we are operating like a department under FCTA which is hindering a lot of things we cannot really prosecute our debtors for non-payment of water because we are not a legal entity of our own” (Respondent A11-A13)</p> <p>“Then we also have government itself which is our regulatory bodies as an umbrella to the board because the water board is specifically working under MFCT so they are also stakeholders. Then the other way round other stakeholders we have again are water resources it's a ministry on its own but it's also a stakeholder because, we normally have annual meeting in such a way like we call it a conference that connect all water board or water corporations in every state together. We have a body headed by ministry of water resources we used to have a meeting one week” (Respondent A15)</p> <p>“Then the federal ministry of water resources is one of our key stakeholders. They release water from Gurara dam to augment what we have”. (Respondent A16)</p> <p>“Lastly on the challenge is on the issue of the act, establishing FCT water board that bill to be enacted by National Assembly because National Assembly happens to be like our own state assembly that bill has not been enacted it's a challenge we can't sue on our name and people cannot sue us on our name they have to sue our minister” (Respondent A17)</p> <p>“And beside that we have a sort of like Federal Ministry of Water Resources serve as regulators. They come around check our water samples, check for those parameters most especially in most cases they take treated water and see whether those parameters in the treated water actually conform to Nigerian standard and WHO standard for both water quality” (Respondents A18-A21)</p>	<p>“Number 2 we have the government you see the ministry of environment who we report directly to”. (Respondent L1)</p> <p>“Yes we have a task force in the corporation they go around monitoring such activities and they also collaborate with the Lagos state task force to do the same thing. The Lagos water sector law from 2004 has provided for a water court where we can charge people who vandalise our properties so these measures that are in place to curb activities like that” (Respondent L2)</p> <p>“I start with Ministry of Environment, Ministry of Environment dictates the policy that the state government designs or decides to use to determine the coverage and supply of water supply to consumers in Lagos state and the budget of Ministry of Environment sometimes takes into consideration the sustainability of water supply to consumers in Lagos state. Therefore Ministry of Environment is key to the services being provided by Lagos Water Corporation as an organisation” (Respondent L16)</p> <p>“We work with, mostly the organisation will have to work with ministry of water resources because they are in charge of water like the rivers and so on. So whatever decisions they make there will definitely impact on us. Like our river Ogun that we use in producing our major water is controlled by Ministry of Water resources” (Respondent L17)</p> <p>“Civil society organisation are key stakeholders. We engage civil society organisations that speak to the landlord association and the transitional rulers. We have a contract with them for about 5 years”. (Respondent L18)</p> <p>“we have to relate with our mother ministry that is ministry of environment because Ministry of environment is part of Lagos state government but our mother ministry we relate to the government through the ministry of environment we are under the ministry of environment” (Respondent L19)</p> <p>“The external stakeholder majorly we have Lagos state government as our own major stakeholder as regards the organisation that of the internal I will say staff they are the key stakeholders of the organisation. As regards to that question to engage them, because we are under a ministry of environment at Alausa, so and we have a unit in Lagos state water corporation the project implementation unit which is something that has to do with the capital project they will be the one to do the follow up with those ministry at Alausa” (Respondent L21)</p> <p>“we have are one the government. Government in two levels, the federal government through the Federal Ministry of water resources as well as Federal Ministry of Finance” (Respondent L23)</p>	<p>“The state government that is trying to assist us in funding, and legislation, reforms and all that, those are positive impact from them as stakeholders”. (Respondent P4)</p> <p>“The stakeholders meeting is not in our hands to do but the regulatory commission has to do that and come up with a policy for us so we are working towards that” (Respondent P8)</p> <p>“so the people that should do the sensitisation is the public health department they are the ones that will carry out that sensitisation. I think we should have a forum with the public health, with the environment ministry, and then have some kind of seminar and workshop with them” (Respondent P9)</p>	<p>“So based on that being under the state government the mother industry is Ministry of Water Resources and as such, production of water in that capacity is a huge project you know, it's enormous so government assistance” (Respondent K1)</p> <p>“Federal government is also a stakeholder because of an ongoing arrangement with the Federal Government to supply water infrastructure to some parts of the state and this arrangement is such that the Federal Government is doing the upstream section that is building the dam while the state government is doing the water treatment plant and the distribution network” (Respondent K2)</p>

## BOX OF COMMENTARIES FOR KEY CHALLENGES

### 1. Box of commentaries for funding challenge

#### Utility One

“**Funding** has been a major challenge for us, I hope you have the opportunity of visiting one or two of our areas offices they are not in good shape.” (Respondent A1)

“**Funding** is still that same issue like the FCTA they have their own reasons why they are starving the board of funds”. (Respondent A2)

“we have lots of challenges and we are not being able to meet up our targets, I will say on an estimate not even up to 50% of our targets right now because of funding challenges and also even development partners like UNICEF they have also reduced their **funding** in terms of some interventions that they could provide 100% funding in the past now they will only provide 50% if you are willing to give the other 50%. So if we can't get the other 50% from here they will not be able to meet up the requirement so it's a challenge” (Respondent A3)

“and economic scarcity too when people are complaining about money here and there it might affect their response in terms paying bills especially by consumers and then even the government on their part might affect the way money is being released for **funding** of certain operational expenses of the board” (Respondent A6) Then the inhibitors I stated **funding** (Respondent A8) in Nigeria today I think a lot of organisations have the same problem with **funding**” (Respondent A7) (Respondents A4-A8)”

“The time frame for achieving all of those plans have even elapsed due to maybe poor **funding**” (Respondent A9)

“there is what is called running cost to aid the movement of staff. The only problem concerning this is that sometimes the money does not come always”. (Respondent A10)

“**Funding** is the major problem, the government is starving us with funds. The government is still coercing us to generate and send to them to the central body which we do not have total control of the money” (Respondent A11). “The government is not helping because when the water board generates revenue all monies goes to the treasury single account (TSA). I strongly believe that the water board needs to be exempted from it. A revenue-generating organisation will generate millions but at the end of the day get stipends to work to realise that goal in a month”. (Respondent A12). “Previously we get over 200 million naira. But currently, as I am speaking to you this month it is slightly above 70 million, so the revenue is dropping coming down because they were not ejecting anything into the system again since September we had only one allocation 22 million naira and we have piles of liability on ground. They are starving us with funds here majorly”. (Respondent A13) (Respondents A11-A13)

“It's not different we have a mandate to carry out and we pursue it but the only thing is fund. When the government is not funding the organization it has a negative effect on the mandate”. (Respondent A14)

“Now with the issue of **funding**, there is some money they normally release to us they call it running cost, throughout last year towards the end of the year, it was last September running cost that we picked which is since last year”. (Respondent A15)

“so basically the government is supporting us seriously to do our own duty but the major setback at times is the **funding** is a major challenge actually”. (Respondent A16)

“I talked about the aging treatment plant the rehabilitation is already ongoing but it could have been finished about a year or two years ago but unfortunately because of **lack of money** it couldn't be completed on time” (Respondent A17)

“we even put some equipment in the budget the government will cancel these are things. Some of those things we put to update our labs has been cancelled. You know all those things pull back our work because if the **finances** are there, the things that we put on budget is granted to us the way we requested it” (Respondent A18-A21)

“As you know **paucity of fund**, fund are never sufficient for any organisation take it or not, even in your house unless you are one of these big time millionaire who stumbled upon funds, the fund are always insufficient” (Respondents A22-A23)

#### Utility Two

As an organisation we face a lot of challenges as you can see all around you and the one challenge is **funding** (Respondent L1)

“We also have **problems with the state government releasing funds** for our subvention. we are not charging an economic rate government is subventing the tariff by giving us money for some of our business activities for example for salary they subvent us, for purchase of chemicals they subvent us but the **release of the money for buying chemicals is not as frequent** as it should be we are not getting enough IGR to pay salaries. Salaries are delayed” (Respondent L2)

“Example areas like Epe, Gbadagry, you are expected to serve them and not generate so much from them for example the **corporation has not increase its tariff** since 1999.” (Respondent L3-L15)

Where you have budgeted so much to ensure that water reaches other communities that have hitherto not been served and for budget reasons or for **funds in-availability** you are not able to reach that of course anybody looking at you using the public eye will not agree that you are working towards your policy. operations on gas which is really taking a lot from what we earn although it is being supported by the government but notwithstanding if the decision is going to be taken by us as responsibility overtime then, of course, we may not be able to survive and sustain the business. (Respondent L16)

The policy is that we should give everybody in Lagos water especially the metropolis but because like you have ten children you know you have to feed the ten children **but you don't have enough money** to feed them so it whatever you can give them that you give them so it's either the children are not feeding well or that they might eat once a day or something that is what it comes to. (Respondent L17)

we still go through **the state government to go and beg for money** to do things. (respondent L18)

And then **everybody's problem is money** and this place is not an exception but then how much too are we generating from our own business. (Respondent L19)

“A lot of customers used to patronise our services but lately most of them have left for other informal services at alarming rate. For instance, **the hotels no longer pay us for water** they prefer having their boreholes.” (Respondent L21)

“Our major challenge is inadequate **funding**. **Funding** is our major problem.” (respondent L22)

“So on that basis people are seeing water as what should be free so in some area that probably our service is quite pretty good people use water indiscriminately probably leave your tap running and all that. lot of politicians have been preaching or probably campaigning to people that oh I am going provide this service free”. (Respondent L23)

#### Utility three

“we have not been able to like come up with every article of the policies because of the other challenge which will be finance. If we get to having money to get into those aspects we will go onto them”. (Respondent P1 – P3)

Political influence and promises about water being free and politician seeing investment in water as a waste and other competing sectors. (Respondent P4)

**A major challenge is funding**, funding in the sense that when the corporation was formed they took over from the old water board and there are a lot of things that were left undone and hence you had a decay of infrastructure. we don't even have funding because like I said how fast we can these things depend upon our reach of funding don't forget that the same source of funds that we have we have to spread it all across you know different sectors personnel, overheads, chemicals so that is a challenge (Respondent P5)

“If you go to those offices there are no chairs, no furniture for now and it is because of limited **cash** so fund is challenge. They've not really provided working tool for everybody because one we have limited funds to work with so they were still banking on let World Bank project start”. (Respondent P6)

**Well we have financial challenge**. Funding has not been easy with the economic situation especially in Nigeria where we have mono-economy and now the oil price is down the government don't have so much money to fund. And the World Bank will not come with their funding until there is a counterpart funding. So the major challenge is fund that is one. (Respondent P7)

for the **revenue now it's just below 40%** because our plan is to realise at least a hundred thousand naira daily but right now its not even on a daily basis. Like in January we only realised about 161,000 and for this two weeks in February we have realised about 66,000 and it's not adequate (respondent P8)

we need improvement there are some chemicals that we need to purchase, in order to carry out some essential analysis and so there are some chemicals we need. Then we need to equip the lab to standard of carrying out all analysis then anaerobic sector we need to ensure that we can get sufficient supply of cow dung in order for you to generate **gas all these require money which we do not have** (Respondent P9),

#### Utility four

“We used to have about 10 textile companies paying about 11 billion naira in a month but all of a sudden all of them they folded up. Now **we are relying only on commercial and domestic customers with low tariff rates**”. (Respondent K1)

“revenue **collection is one** because people here the attitude is poor. They do not like paying for water in Nigeria” (respondent K3)

we are not a profit-making organisation but we are not able to break even so most times we have to fall back on government, the government gives us subventions, buy water treatment chemicals for us because the collection is bad. And that is tied to, you know Kaduna used to be a highly industrialised town but because of whatever issues almost all industries all the textile mills there were about 10 textile companies in Kaduna here and when we schooled in 90's you know we used to hear that one textile company will pay water board as at then about 5 million naira a month which was more than sufficient to pay salaries and even buy chemicals as at then you know and there were like 10 of them and other industries car industries and all that. All of them have packed up so **we have had this loss of revenue** from our industrial customers that is a serious challenge and we have had to fall back on the domestic that don't pay so that's a major challenge, revenue generation”. Respondent K2

“Our **tariff structure is not appropriate**. I mean it does not cover the cost of production. Yes it might not cover the cost of production because of the inability still of some people to pay. But it should be defined if we are producing water at 50 naira lets sell it at 50 naira, if the government is saying sell it at 25 naira let it be that they will be able to mark up the 25 naira”. (Respondent K6)

“Our embargo you don't need to sell and the people buy, and the tariff setting is set by the government you **don't have the control of setting the tariff so we get nothing** from any other person apart from the government” (Respondent K4)

“of let me say **funding** is a major challenge because we don't fix our rates based on the prevailing circumstances for instance the tariff we have now, we are operating now was fixed in 2012 and you know between 2012 and now a lot of things have happened in the economy. Inflation and whatever but we have to cope because it is that” (Respondent K5)

## 2. Box of commentaries for infrastructure

Utility One	Utility Two	Utility three	Utility four
<p><i>"I hope you have the opportunity of visiting one or two of our areas offices they are not in good shape. One major aspect of the problem of water supply is the issue of infrastructure which we have no power over it" (Respondent A1)</i></p> <p><i>"Our physical infrastructure are obsolete. In terms of our waterlines, they are more than 30 years but we are still using them. There should be some kind of phased replacement of all these things but it has never happened but what we literally do is wait for something to happen then you now replace that is what we do". (Respondent A2)</i></p> <p><i>"in the past, we used to have some spares for maintenance of rural water schemes, hand pump, boreholes rural water schemes. So when they had problems and challenges we will go and maintain the facilities for them so it came to a situation we don't have these spares anymore and no funding for that. we have a lot to do, we have a lot to achieve and this is because as I said earlier we lack some tools and equipment to do some of this work that we need to do" (Respondent A3)</i></p> <p><i>"Physical infrastructure I will rate it one, it is very poor. There are other offices where six, seven staff are sharing an office smaller than this. There is no air conditioning and is very hot. Sometimes there is no power supply and you have to be on sit. The tables, chairs, computers and most of the furniture in those offices are also broken". (Respondent A7)"then poor and ageing infrastructure that is maintenance of pipelines all those things that should help us and then" (Respondent A8" (Respondents A4-A8)</i></p> <p><i>"Our water Infrastructure is not enough and population growth is putting pressure on water supply" (Respondent A10)</i></p> <p><i>"Most areas do not have water not that we are lacking water, production is not a burden but the distribution channel is not there, re-reticulation is a problem and we do not have enough booster stations. Some are very high areas that water cannot get to that place, so presently I think we are having issues with funding anyway in terms of budgeting". (Respondent A11-A13)</i></p> <p><i>"Major challenge in the organisation just as he said we have equipment challenges. Most of our systems in the office they are outdated we need to upgrade them. Most of our area offices they do not have structures some of them they stay outside under trees". (Respondent A12)</i></p> <p><i>"For the physical infrastructure we do not have enough, like the area offices they are not in good condition and you know, a staff is supposed to have a conducive environment for work it even adds to your psychology". (Respondent A14)</i></p> <p><i>"Yes we have distribution network but it's not enough. The distribution network is supposed to be in phases one, two three four. It's only phase one that is fully completed now the rest of the phases have not been done. So we are lacking distribution network" (Respondent A16)</i></p> <p><i>"Challenges No 2 is this we have four phases of treatment plant phases 1, 2, 3 and 4. Phase one was commissioned in 1987 this treatment plant is aging they cannot produce to the capacity any longer and similarly to phase 2 that was commissioned in year 2000 that is no 2. No 3 is the conveyer pipeline that is conveying the treated water to the city. Each of the treatment plant has its own separate conveyance pipeline that we call trunk line. Phase one has its own, phase two has its own. Phases 3 and 4 still under construction it has not been laid so if it happens to have produced excess water from Lower Usman dam of which trunk line one and two cannot convey then it's a waste this is a challenge that we have and phase 1 and phase 2 trunk line can only accommodate 10,000m<sup>3</sup> per hour if you produce anything above that then you are in trouble alright" (Respondent A17)</i></p> <p><i>"Before they go to the dam, and round to check they have to keep on begging for vehicle. They don't have enough vehicle. Our chemicals for lab work at times go down to almost extinct before the contractor brings a new supply" (Respondent A18 –A21)</i></p> <p><i>"So the challenges we face again is that most of our planned maintenance, preventive maintenance have turned out to become break down maintenance. Because we don't have fund to carry them out as at when required and it's reducing equipment life span Respondent A22. The FCDA who provide all the infrastructure, they gave us plant to produce they have not provided the infrastructure to evacuate what we produce that is why we can't produce to waste. The only/ little infrastructure we have that is what we are using to evacuate Respondent A23" (Respondents A22-A23)</i></p>	<p><i>"what we have now and the gap that needs to be covered so as to be able to supply water adequately. Currently, we have two major waterworks which is Iju and Adiyari and both of them have a capacity of 210(MGD) million gallons per day and then we have some other small mini and micro waterworks" (Respondent L1)</i></p> <p><i>"Our network is over a hundred years old you can imagine trying to adapt and change a network like that to suit the Lagos of today you know from 1810 or something like that no for 1910 to 2016 in those days they had network from Iju right down to Ikoyi". (Respondent L2)</i></p> <p><i>"as it where we have limited areas being covered by our pipes because we are an organization set to deliver water to households and because we are supposed to deliver water in large quantities in pipes to households, pipe-borne water to households it requires that we lay those pipes as far as possible to ensure that good quality water gets to our customers so that is also very important". (Respondent L16)</i></p> <p><i>"one we need to fix most of our waterworks they are not performing at the optimum. Because most of the equipment we have are ageing" (Respondent L17)</i></p> <p><i>"Secondly is also the maintenance of the equipment, all the asset the maintenance is a major issue. We all know that preventive should be the first priority preventive maintenance but with what we are getting in terms of revenue we are not able to meet up our obligations in that regard so maintenance of the asset and our facilities they are also major challenges on our part. Another challenge is that in some areas, the public at times they damage some of our assets. At times they may not have water so they just go to most of our pipes and assets there. There are some that instead of putting their soak-away pit in their compound they just put it outside where they know at times our mains are there or our mains will pass that place so they give us bad pipes, they make us to use veto power to evacuate their soak away" (Respondents L3-L15)</i></p> <p><i>"One major water works and about two mini water works and then about 6 micro waterworks but even as that time all of them are not producing at the design capacity even when they were just being built. I remember then it was being built by Tinubu. One designed for one million is producing 300,000 in fact most of them were producing 300,000" (Respondent L18)</i></p> <p><i>"we carry out maintenance of our generator, vehicle, piping you see one of the major challenges is that the spares we get it is a task to differentiate original from fake. It's a very big task and if you are not careful you get the wrong one" (Respondent L19)</i></p> <p><i>"presently what Lagos state actually require is about 645MGD but out total infrastructure as of today is just 210MGD and out of that we have not been able to actually produce at maximum presently we are just around 110MGD you can see the gap, the gap to actually meet the populace, the infrastructure are failing. we are also having challenges with our equipment. Having problem with our equipment because of lack of operational maintenance" (Respondent L20)</i></p> <p><i>"the problem at hand is that most of the infrastructure in place were not working at the full capacity" (Respondent L21)</i></p> <p><i>"the epileptic power supply has been a challenge to our assets some of our assets are ageing quite fast so which have depleted our capacity utilisation" (Respondent L23)</i></p>	<p><i>"We experience a lot of pipe burst because our pipe line is old. We have also stopped using one borehole because the saline intrusion in it is too much" P1</i></p> <p><i>"Another challenge is about our equipment you know trying to fix them as when due and all that so we are working on that as well" P2, P3. (Respondent P1-P3)</i></p> <p><i>"the infrastructures we have now are very old and their cost of maintenance if you compare their cost of maintenance to their efficiency, it is actually not advisable to continue with them but then we cannot just fold our arms" (Respondent P4)</i></p> <p><i>"you had a decay of infrastructure and all that. Also when road were being constructed the ministry of works did not consult the ministry of water resources or water board as the case maybe to be able to even identify where our pipes are so what happened is that we had a lot of damaged pipes and all in fact generally infrastructural decay now that is our challenge" (Respondent P5)</i></p> <p><i>"If you go to those offices there are no chairs, no furniture for now and it is because of limited cash so fund is challenge". (Respondent P6)</i></p> <p><i>"The sewage treatment plant was built with the mentality of the white man and with their own central sewage system in mind. That was why I showed you the Huber unit where we ignored that side in order to do our own locally made filtration process. We modified the plant design because customers throw condoms, sanitary pads, used blankets and towels inside the soakaway and the tank drivers suck it down here and pump it as well. Some of these things can cause serious blockages". (Respondent P9)</i></p>	<p><i>"every treatment plant that is built it has its own design period, and it has its own design capacity and all this design capacity, design period is related to population so when you are designing you now you design according to a particular population. Then you now extend for the future forecast. But now the rate in which things are happening you know and the last one we have which it was about is it 1987 in Maladi that was the Kaduna north all water works was built in 1972 that was in 90MLD, 90 million litres daily production that was the initial capacity but you know there must be depreciation with years" (Respondent K1)</i></p> <p><i>"we are forced to use our pumps you know on low voltage and you know most times our machines they break down as a result" (Respondent K2)</i></p> <p><i>Then I think the other one is the infrastructure most of the infrastructures there are ageing, they are aged. Especially at the plants the machines there are some machines that have spent over 20 years you know these things are supposed to have life span, where you know depreciation when you replace these things it is not always done so you do not expect the correct output because these facilities are aged so I believe they are the major challenges (Respondent K5)</i></p> <p><i>Yes we have a lot of infrastructure in the state we have about 9 plants and we give water across the state even though it is not adequate because of the rate of growth of population among the state and our future plans is to add more. Even now presently we are doing another treatment plant in Zaria. Before it is about 45 MLD now it's getting to 150 MLD now we will produce 150 million liters per day that is the new project that is being undertaken in Zaria major project to be able to meet the Kaduna demand also because if we did not have that capacity of plants in those areas we will not be able to meet the demand of the area.. (Respondent K4)</i></p> <p><i>Number one thing is the fact that the water demand is higher than our capacity to produce. So if we are produce 100% it can't meet the demand of Kaduna town okay. (Respondent K6)</i></p> <p><i>"We have about 12 or 13 treatment plants or so but I do not think they are operating at full capacity because why the equipment are old they are ageing. Like the rehabilitation now the pipeline rehabilitation in Zaria now. The pipes were laid as far back as 1939 so they are obsolete" (Respondent K3)</i></p>

### 3. Box of commentaries for Governance challenge

Utility One	Utility Two	Utility three	Utility four
<p><i>“Utilities should not be run as a department of another organisation. The Lawmakers need to pass the law as quickly as possible to make the utility board independent and capable. It is necessary for us as an organisation so we can address issues of staffing, issues of operation and issues of infrastructure independently.” (Respondent A1)</i></p> <p><i>“the legislative they are slow in the laws that is directly affecting this agency or this department. There is supposed to be an act to make us autonomous and it’s been lingering on for more than ten years, we are supposed to be a little bit autonomous so that we don’t have too many interference because water is essential, it’s very important. It is an essential commodity. But our legislative bodies have not taught it to be very important that we should be autonomous to do our own things” (Respondent A2)</i></p> <p><i>“in terms of our targets and our policies, the targets and achievements at the end of the year, we have lots of challenges and we are not being able to meet up our targets, I will say on an estimate not even up to 50% of our targets right now” (Respondent A3)</i></p> <p><i>“And then legislation for us legislation I think would help go a long way because we say our bill has been before the National Assembly they say it has passed first reading second reading but we need to have a law backing us because before we will be able to do certain things e.g. we cannot make arrests and things like that even when you find people that have done certain things they are not supposed to do we are limited in our action. So that can also be an inhibitor i.e. legislation” (Respondent A7) “then corruption which is everywhere” (Respondent A8) (Respondents A4-A8)</i></p> <p><i>“We also have government bureaucracy on the ground. When we require things that will enable us to carry out our analysis and water treatment we have to submit a document highlighting our needs. However, we have delays in receiving feedbacks and getting funds that will allow us work quickly (Respondents A18-A21)</i></p> <p><i>“Lastly on the challenge is on the issue of the act, establishing FCT water board that bill to be enacted by National Assembly because National Assembly happens to be like our own state assembly that bill has not been enacted it is a challenge. We cannot go to court sue in our name and people cannot sue us in our name because we do not have an act establishing us. People have to sue our minister. The act establishing our minister and the FCDA is what we are still using”. (Respondent A17)</i></p> <p><i>“I will also say legislation because since we do not have an act. We are not empowered to operate in the full capacity that we should. We cannot decide on our own infrastructural development. We are unable to take a loan from the bank to carry out projects like expanding services to this area. We are depending on another agency for that”. (Respondent A9)</i></p> <p><i>“FCT water board has not got its act therefore we are working under the government we are not independent. If we are independent we can say this is what we want to do in the next year” (Respondent A10)</i></p> <p><i>“Like presently now we cannot prosecute any of our customers defaulting customers because we do not have that legal power, we do not have that act establishing the board now so our bill has been in the National Assembly for the past two to five years it is still there. Presently there is a kind of problem in passing that bill which eventually if that bill is passed we have the legal powers to prosecute any of defaulting customers”. (Respondent A11)</i>  <i>“Because of the lack of autonomy it’s like even though you have a goal of your own you cannot really achieve it. You have a way to carry out a mandate well but you have a lot of limitations because you are not autonomous” (Respondent A12) water board generates revenue and you see at the end of the day all monies especially this TSA of a thing its good (Respondent A13)</i></p> <p><i>“ corruption too any of our staff that we discover that is trying to make some shear practices, we give them queries” (Respondent A15)</i></p> <p><i>“You see as we operate here, we are not 100% autonomous we are under FCDA engineering per say all Abuja infrastructure including water are being handled by our FCDA engineering services road, named with electricity, water what we water board do. If we need a water work now FCDA will construct it, hand it over to us to operate (handle it) as we have done in this instance Lower Usman Dam. Right now they are in Karishi building a water work in Karishi we that we are who they award it to, who supervise it, when will it be finished we don’t know. Once its finished water board take and manage, operate and manage” (Respondents A22-A23)</i></p>	<p><i>“Lagos state government has for some time placed embargo on employment and you know the older staff are reaching retirement age they are leaving and new staff are not recruited”(Respondent L1)</i></p> <p><i>“There is a big deviation from what we are doing right now and one of our main problems is called political interference you know it has affected us. Despite the fact that the water law has spelt out what we are supposed to be doing, political interference has really affected our operations”. (Respondent L2)</i></p> <p><i>Bureaucracy is a major challenge. At times that you might probably want to take decisions but because of the way it is structured, you are not allowed to it has to pass through the proper channel so that at times slows down the pace of our decision making at times so that aspect to our organization is a major challenge. (Respondent L3-L15)</i></p> <p><i>“Also political inclinations for example areas like Epe, Gbadagry, the corporation has not increased the tariff since 1999 because the government would not consider doing it because of its political inclination”. (Respondents L3-L15)</i></p> <p><i>“If you can get enabling laws too to really empower us in terms of effective collection of our revenue. Enforcement so to say it’s a challenge too because you are not making as much as expected so and when you don’t have that collections what do you use to maintain and sustain production level so that is also a challenge” (Respondents L3-L15)</i></p> <p><i>“Corruption is major because you cannot readily determine what goes into all these loans that we get and what they are put to, the bid is done properly and open in the presence of everyone and there is transparency of course we will expect that the best supply bid gets the job. But of course you know with corruption all these things will not be possible because of the self-interest of people”. (Respondent L16)</i></p> <p><i>“Like I told you earlier one of the major challenges is the legal framework. Political interference. If you look at the 2004 Lagos water law it said Lagos Water Corporation will be autonomous but today, we still go through the state government to go and beg for money to do things. For me one of the challenges which I know that we are facing is that if we have a very implementable legal framework and everybody key in line to it”. (Respondent L18)</i></p> <p><i>“People we serve generally believe that water should be free. Water is one of the campaign points for politicians. Some people expect that water should be free and if you give them water they will not pay.” (Respondent L19)</i></p> <p><i>“The politician are not actually helping us in that area because they believe that I mean they campaign to them that they will give them free water so at the end of the day, when they go, when they get in there they cannot provide because water is very costly”. (Respondent L20)</i></p> <p><i>“our politicians campaign using water as something that they will provide for the people not trying to explain to them that they will pay for it but they will promise them that once I enter into the office I will get you water” (Respondent L21)</i></p> <p><i>“From the policy statement and from the achievement I won’t say that we have achieved up to 50% of our goal and the reason is like I said from the beginning the cost at which we produce water is far higher than the cost at which we sell and what is the reason behind the difference is cost it is the political issue. Politically the politicians will come and tell you water is free and all that the moment you tell the populace the water is free” (Respondent L22)</i></p> <p><i>“a lot of politicians have been preaching or probably campaigning to people that oh I am going provide this service free, that free, this free and all that and in a state or in a country where politicians campaign to the people that water service is going to be free” (Respondent L23)</i></p>	<p><i>“Political influence and promises about water being free and politician seeing investment in water as a waste and other competing sectors”. (Respondent P4)</i></p> <p><i>“I think departments should be given a certain level of autonomy why do I say that a certain level of autonomy, because sometimes part of the draw back here is that from the field to when you get approval takes a while and I think that should not be done our system should move up to a stage whereby there are certain things that under certain threshold should be handled by department heads” (Respondent P5)</i></p> <p><i>“I have noticed approval processes take time even when approval has been given its passed to the account, they need to do their in-house budget sometimes it takes as much as three weeks before you even start” (Respondent P6)</i></p>	<p><i>The law that set us up, we were given a level of autonomy we were supposed to generate and spend that is what we do, so most times we are not able to you know generate enough you know buy chemicals, pay water bills, pay staff salaries and other things and so on. As a matter of fact we are not a profit making organisation we have to fall back on government, subventions because our collection rate is bad. (Respondent K2)</i></p> <p><i>“Our embargo you don’t need to sell and the people buy, and the tariff setting is set by the government you don’t have the control of setting the tariff so we get nothing from any other person apart from the government” (Respondent K4)</i></p> <p><i>Because we don’t fix our rates based on the prevailing circumstances for instance the tariff we have now, we are operating now was fixed in 2012 and you know between 2012 and now a lot of things have happened in the economy. Inflation and whatever but we have to cope because it is that. And the law states that we are supposed to review our rates from time to time by giving the government recommendations. The government will sit at the council, it is only the council that will approve so if it cost you for instance 100 naira to produce a cubic meter of water any normal business operator will immediately adjust his price in an ideal situation. But in our case the last time we had a tariff review has been since 2012 and the government expects us to operate like a business entity when we can hardly survive. (Respondent K5)</i></p> <p><i>Then two is the issue of governance again in terms of let it be established that this is the structure of the organisation and then define responsibility if the government need to put in subsidy. They should be defined that we are selling and so and so amount (Respondent K6)</i></p>

#### 4. Box of commentaries for Power as a challenge

Utility One	Utility Two	Utility three	Utility four
<p>“JICA has two projects they have non-revenue water and the solar energy. That solar energy is <b>when there is no light</b> they will be able to you know, there won't be problem in the pumping station, in the damn. There won't be problem in the LUD so that even with or without light the sun can generate energy for us to be able to do other things they want to do and it's a very good project. They have started since last year”. (Respondent A14)</p>	<p>Currently we have two major waterworks which is Iju and Adiyani and both of them have a capacity of 210(MGD) million gallons per day and then we have some other small mini and micro water works. And you know even to run these small micro and mini water works it's a lot of challenges and with the <b>non-stable power supply situation</b> in the country all of these has really been a challenge to the corporation (Respondent L1)</p>	<p>“One of our key challenges here is the <b>electricity, the power</b> is one of the things that we are trying to look into, it has been a big challenge for a long time now, we are supposedly working on it because even the cost of running your own power in Nigeria is very expensive so we are trying to see how we can do our best that is one” (Respondent P1-P3)</p>	<p>“Well actually <b>the major challenge is energy</b> because you know in this era we rely on energy in whatever production you are going to do. And you know the rate of escalating supply of energy in the country is seriously affecting any production industry, which Kaduna state water board is not an exception and if you are not getting energy throughout the day for your production you will have to get an alternative and even the alternative is expensive because when you go for diesel how much is diesel? And at times within an hour a drum of diesel will be consumed just imagine two hundred litres which is a drum and you can have a generator that can consume more than even one drum at a particular time, so you cost it at that rate you multiply by per litre so you see that the amount is very huge so that is also inhibiting us”. (Respondent K1)</p>
<p>“they decided to throw it to us now they are executing it practically now at the end of the day our <b>monthly energy bill</b> now which is on the increase we are expecting increase from the Federal government bow, <b>before now we will pay 8.5, 8.4 million per month</b>, with the help of that solar energy we will hope we are going to have minimum 40% reduction in our energy which will equally translate to 40% cost so if we are paying 8.4 what is 40% of 8? We are sure with this solar energy in place and we are using it our tariff will drop by 3 million. Is that not a factor” (Respondent A22-A23)</p>	<p>Our major problem is <b>power</b>, the PHCN has they are called now have been a big nuisance to us, a big torn in our flesh not providing electricity for us a major problem and having to power our treatment facilities with generator diesel is very expensive so in trying to find a solution we got a company to set up IPP chemical plant Oando but in the recent past we have problems with the plant and the plant has not been functioning and then they are not being cooperative so we are thinking of switching back to PHCN they are not cooperating with us so it's a big problem (Respondent L2)</p>		<p>like every other organisation in our industry in Nigeria we have the issue of, the <b>challenge of power supply</b> and I think it is the number one challenge. Apart from the metropolitan areas Kaduna and Zaria and maybe Kafanchan almost all our other water treatment plants are located in rural areas and there is hardly any power supply in those areas” (Respondent K2). So we have had to run those treatment plants on diesel generated power and very expensive doing that and the experience in those rural areas you hardly generate any appreciable amount of money from those areas but you can't stop them from having the water you know it's not their fault anyway. So most time we operate we have the challenge of power supply so our operational cost is always on the very high side you know so power is number one. If the problem of power is tackled, if we can have adequate power supply from the public supply I believe that will go a long way in solving some of our problems. Now as an off shoot of the power issue, of the quality of power that we have most times the voltage is not very good and we are forced to use our pumps you know on low voltage and you know most times our machines they break down as a result you know of that. So and that increases our maintenance cost and all that so and everything is tied to power that is the number one challenge. (Respondent K2)</p>
	<p><b>Electricity supply</b> is our major constraint. The state government has gone ahead to even come to our rescue with what they call you know independent power plant to power our major water works. But our 48 mini water works are not connected to the independent power plant and the cost of running diesel generators is expensive. (Respondents L3-L15)</p>		
	<p><b>Power supply</b> is a major inhibitor to us as we currently do our operations on gas which is really taking a lot from what we earn although it is being supported by government notwithstanding if the decision is going to be taken by us as a responsibility overtime then, of course, we may not be able to survive and sustain business. (Respondent L16)</p>		
	<p>Number one challenge we also face <b>will be power supply</b>. Because most of the equipment we use are using electricity and if there is no apart from Iju, Adiyani and Akute where we have a dedicated source of power IPP. Some of our mini water works are not linked to things like that so we have to depend on PHCN and when there is no light we have to either use generators and you know it is very expensive to run generators you have to either buy diesel at the rate at which they are selling and how much do we charge people to make up for it. So some of these are still the challenges we have. Challenge of power supply. (Respondent L17)</p>		<p>Those are the <b>major challenge Power</b>, revenue. We have right now low power shortage that is one of the challenges also. And the equipment also they must have told you the equipment are also old, they need rehabilitation, the pumps and those equipment that are the plants that is the major challenges. (respondent K3)</p>
	<p>“So other challenges like I said non-revenue water, water theft, illegal connection, <b>electricity problem</b> these are issues that can be managed if we see it that water business is business and that the legal framework supports” (Respondent L18)</p>		
	<p>“before 2010 we are solely relying on NEPA, PHCN, but now we have our own IPP Independent power plant being operated by APN that is a subsidiary OANDO and since then we have had a war constant <b>power supply though we have had challenge</b> in” (Respondent L20)</p>		
	<p>“Because electricity is our major input for the production and that <b>cost of electricity is on the high side</b> right away is on the high side” (Respondent L21)</p>		
	<p>“And also having identified <b>power as one of our challenges</b> also, the epileptic power supply has been a challenge to our assets” (Respondent L23)</p>		

## 5. Box of commentaries for poor staff management

Utility One	Utility Two	Utility three	Utility four
<p>“We have issues with staff placement. There is so much pressure on politicians especially from their relations to employ just anyone. Even if the man is qualified or not they just employ and send to us”. (Respondent A1)</p>	<p>When it comes to the manpower we have a lot of gap in here. The Lagos state government has for some time placed embargo on employment and you know the older staff are reaching retirement age they are leaving and new staff are not recruited so we have to make do with small manpower we have and that is one of the challenges. (Respondent L1)</p>	<p>“that we can make do with manpower but given the scenario we are going on full blast then I believe that we would still need manpower” (Respondent P1)</p>	<p>Our work personnel they are not sufficient we have about twenty engineers, six water chemists already you know that is an issue. Because as it stands we have twelve treatment plants and ideally every treatment plant is supposed to have its own chemist and we also have a central lab which you are supposed to have chemists running them apart from that we have the quality control department then like engineers, as I am talking about if you have those treatment plants you need mechanical engineers on all of the treatment plant, we need electrical engineers and you need civil engineers both there at the plant and also at the distribution they are not sufficient (Respondent K6)</p>
<p>“Incompetency is a major challenge. You cannot support someone who is incompetent and unwillingly to work. When people are timid and are not ready for the change, they would be unable to provide the desired result. Training and staff welfare are issues we also face.” (Respondent A2)</p>	<p>You cannot train your staff. Because you just do not have the money you are just barely managing to pay salaries sometimes we even have to borrow to pay salaries (Respondent L2)</p>	<p>“because we are not running twenty-four hours operations right now so there are few other places that we can make do with manpower but given the scenario we are going on full blast then I believe that we would still need manpower” (Respondents P2,P3) (Respondents P1-P3)</p>	
<p>“us then just like one person has said training and re-training of human beings human resources, capacity building, capacity support, capacity anything cannot actually be overemphasized” (Respondent A4). “but then with recent government policies like right now there is no training I think training has been put in the back a lot of government staff are not trained and that is affecting output in a lot of places because we need training over and over again so that is that” (Respondent A7) (Respondent A4-A8)</p>	<p>“The training is not adequate let me put it that way it is below average or very low let me put it that way. Training of staff is low in terms of rating so it would have been better but like I said it is where you have the fund that you can really do such” (Respondents L3-L15)</p>	<p>“We have competent hands available but compared to the work to be done yes I can say we are short-staffed which is a challenge”. (Respondent P5)</p>	
<p>“For staff, I would say they are efficient but they are not enough. Because we have to augment the currently employed staff with some causal staff who do activities like meter reading and bill distribution. Then in terms of professionalism across the organisation, we have more skilled people at the top who might be on their way out compared to junior cadre officers.” (Respondent A9)</p>	<p>“we are understaffed and we all know because of dwindling revenue we can't take as much as we want so manpower issue is also there” (Respondents L3-L15)</p>		
<p>“Also look at the staff welfare too, you know the human capital, the human aspect is important as an organisation. Presently as a revenue-generating organisation, we are supposed to have a salary structure different from other organisations as a kind of encouragement to us but presently our salary structure is so meagre”. (Respondent A11 – A13)</p>	<p>“Manpower we have shortage. Because since 2011 there has been an embargo on employment we've not been recruiting and despite the fact that we've not been recruiting some people have been retiring so our workforce has been reducing and so we are all leaving. We are all getting older whatever performance we are able to do as we age what I can do yesterday I might not be able to do it today so definitely that is going to affect us and some of the gaps left are now being filled with contract staff temporary staff and you know if they say you are contract you are temporary it means there are some benefits permanent staff can enjoy which you cannot enjoy and that psychologically would affect anybody. Although most of these contract staff are younger more agile but the fact that they are not permanent staff also affects their psychic and it can affect their performance. So manpower we are short we are ageing” (Respondent L17)</p>		
<p>“Our area offices have increased to 18 (eighteen) but we have only two information technology staff. They will not be able to man those areas. We need more competent hands in terms of well-trained engineers” (Respondent A15)</p>	<p>“Staff management is political. The last time we went for a meeting the management staff here is about 77. 77 staff now when you have a very bloated management staff you find out that management system there one cost of operation is going to be high because there are too much allowance to be paid, salaries high, vehicle allocation and these for the management. But where you look at a situation where the management is streamlined, a structure is in place, you have a reward system” (Respondent L18)</p>		
<p>“More technical staff are required”. (Respondent A16)</p>	<p>“you need to train and re-train and re-train to get the best out of your people. That is lacking here we used to have it but it's not there now. So you need to specify that the training of our people so that we can get the best out of them” (Respondent L19)</p>		
<p>“Training and re-training are what is lacking. And there are some training some people will embark on training by the time they come back probably they will have changed them to another department. Then the psychic of the staff need to change, their minds need to be reformed”. (Respondent A17)</p>	<p>“And just as I have said because we lack staff, we do not actually have people to go into the nook and crannies of the state where our connection is to check the water because. We don't have enough people to go round the area to actually let them know they need to pay for their water. Yes as far as training is concerned I think that is zero, because a lot of people have not received training in the past. As I am talking to you, I have not receive any training in the past ten years”. (Respondent L20)</p>		
<p>“One other thing that we will require will help us move forward is that if there is staff welfare, giving attention to the personnel that are there doing the work it makes the work attractive and appealing to the person involved”. (Respondents A18- A21)</p>	<p>“We have staff and one thing that we lack in this organisation is training” (Respondent L21)</p>		
<p>“Training. I have been here since 1990 and we are not carried along when it comes to training.” (Respondent A22-A23)</p>	<p>“Funding is our major problem and maybe in the areas of staff welfare development. Staff are not sent on training. The training aspect of it I think it should be looked into so that at least you can revive the performance if you are able to train them with the new technology and all that” (Respondent L22)</p>		
<p>“The staff are supposed to have a conducive environment for work it even adds to your psychology. The environment is not conducive”. (Respondent A14)</p>			

## 6. Box of commentaries for Informal service provision and Illegal connections

Utility One	Utility Two	Utility three	Utility four
<p>“in terms of the business aspect that is the customer issue a times they don’t pay there are a lot of illegal connections they pay incessant pipe burst and other things these three issues are very key that are setbacks” (Respondent A16)</p>	<p>(“Yes during construction for example you want to lay your pipes while some people will be happy that oh you are bringing water to our domain some will tell you look, <b>you cannot pass through my frontage of my compound</b> that will also require some negotiation and other talk to overcome such;. Another thing is that in some case during construction some set of people will say that we don’t need water its soldier we want, we have to go to round table conference to resolve that kind of issues;. Particularly as he mentioned during pipe laying people at times they don’t observe the required setback you are supposed to give on your property so you <b>find out they have even erected walls on the drain</b> giving no room for you to make use of that setback that should ordinarily be allowed or provided so you just have to re-negotiate with them that okay maybe whatever we destroy we damage we are going to re-instate even though officially they are not supposed to”) Respondents L3-L15</p>	<p>“when <b>road were being constructed the ministry of works did not consult the ministry of water resources</b> or water board as the case maybe to be able to even identify where our pipes are so what happened is that <b>we had a lot of damaged pipes</b>” (Respondent P5)</p>	<p>“The pipelines also since we have a lot of extensions, population growth has increased so we tend to be extending again and again that is also another challenge and we experience vandalism, vandalism is affecting it we cannot extend into bushes when you extend into bushes the <b>vandals they follow it and remove it</b>” (Respondent K1)</p>
<p>“The people that affect us negatively are the people that are into illegal connections and they are there all over the place”. Respondent A1</p>	<p>“And also we have been facing a lot of <b>water theft illegal connection onto our mains and all of that. Encroachment unto setback areas</b> it has been difficult for us to extend service to some areas because there have been encroachment onto government laid down setback areas” (Respondent L23)</p>	<p>“in developing Africa because the water utility service was not a critical concern of government, and so management or services were epileptic so most people have gone ahead to <b>provide water for themselves and those water we realise are not potable water</b>, they are not clean water and the government is concerned about their citizens and do not want to lose people because of contaminated water” (Respondent P7)</p>	<p>“others you know even when they are disconnected because reconnecting water is so easy unlike electricity which is more technical they tend to you know go back in the night to reconnect we still get <b>some people that vandalise our water structures like water metres</b> and things like that you know in the past we used to use water meters that had some brass components in them and so we had some people that will go out to vandalise these water metres in order to remove the brass component and sell as scrap although we have learnt our lesson and we are using almost 100% plastic metres now so I think we have gone over that” (Respondent K2)</p>
<p>“informal service providers sometimes they could be a hindrance because they are not organised it is not something that is structured yet. we should be able to control their activities but if they carry on providing water supply from sources that we do not approve it could endanger people”. Respondent A9</p>	<p>“and if people don’t see you and they have just been charged what they do is by-pass they just call an outside plumber and bypass thereby your money is lost and we are losing revenue” (Respondents L3-L15)</p>	<p>“Sometime <b>human activities you know this Nigeria where you see people cutting trees or going to wash upstream</b>. So we get this water from the river if they wash upstream, it might come to our fitting so this maybe is the only challenge” (Respondent K3)</p>	<p>“if you put the metre <b>they will break the meter</b> because they feel that the rate is higher. The rate is too much for them. So when you come to read the metre they will tell you that the consumption is not accurate. It’s the challenges here and there” (Respondent K4)</p>
<p>“The unscrupulous people who go about doing illegal connection of water. There are some properties that by-pass the meter. They could recharge 4000 and if you do not go and check for the next three months they will not buy anything” (Respondent A10)</p>	<p>“Another challenge is that in some areas, the public at times they damage some of our assets. At times they may not have water so they just go to most of our pipes and assets there. There are some that instead of putting their soak-away pit in their compound they just put it outside where they know our mains” (Respondent L3-L15)</p>	<p>“if you put the metre <b>they will break the meter</b> because they feel that the rate is higher. The rate is too much for them. So when you come to read the metre they will tell you that the consumption is not accurate. It’s the challenges here and there” (Respondent K4)</p>	<p>“if you put the metre <b>they will break the meter</b> because they feel that the rate is higher. The rate is too much for them. So when you come to read the metre they will tell you that the consumption is not accurate. It’s the challenges here and there” (Respondent K4)</p>
<p>“There are some people that normally break our pipe and they start selling water or using it for car wash”. (Respondent A15)</p>	<p>“What has happened we have these local plumbers they want to take water from our pipe to somebody they won’t contact us they want to do it secretly in the process we have infiltration some people they pass wrong pipes through drains can you imagine through drains so when the pressure in the pipe system comes down water from the drain enters” (Respondent L19)</p>	<p>“there are some partners that impact negatively because maybe their users of water and their response some of these stakeholders are <b>the flower operators, the garden operators, they sell flowers the car wash operators, block industry operators</b> they impact negatively on the business. Because these are people that waste water a lot I know where they sight these their businesses are mostly in strategic places where they are sure they will attract their customers and where most cases our facilities are there like pipelines are there. So they always have water supplied but the abuse is so much. But when you make attempt to recover fairly reasonable rate from them by maybe installation of meters they vandalise it so the effect is really very negative on us”. (Respondent K5)</p>	<p>“there are some partners that impact negatively because maybe their users of water and their response some of these stakeholders are <b>the flower operators, the garden operators, they sell flowers the car wash operators, block industry operators</b> they impact negatively on the business. Because these are people that waste water a lot I know where they sight these their businesses are mostly in strategic places where they are sure they will attract their customers and where most cases our facilities are there like pipelines are there. So they always have water supplied but the abuse is so much. But when you make attempt to recover fairly reasonable rate from them by maybe installation of meters they vandalise it so the effect is really very negative on us”. (Respondent K5)</p>
<p>“We are supposed to be in charge of the boreholes. because of our own vested responsibility to be able to control them we do not have that anymore, that is why they could be negative to us because even if there is any disease in Abuja nobody is going to ask if it is informal provider or government provider. They will say it is us”. (Respondent A4-A8)</p>	<p>Also <b>the informal service sector</b> impacts us immensely, though these set of people I would not say are totally negative if you permit me because those who are into sachet water for example have not enabled us in a way provide good water for our consumers. Because <b>some of them vandalise or illegally tap</b> into our mains to get water and then will package and resell to consumers and since we do not get value for money for which this theft has been carried out of cause it is negative to our business. (Respondent L16)</p>	<p>“People that <b>have flowers and car wash are high consumers of water that don’t even pay</b> and if you are going to check their connection you discover that they didn’t go through the channel so even though in most cases we try to work on that and ask them to go and register because they impact negatively on the system. They shouldn’t be even using this water to wash cars and water flowers so you discover that the negative impact mostly comes from the beneficiaries” (Respondent K6)</p>	<p>“People that <b>have flowers and car wash are high consumers of water that don’t even pay</b> and if you are going to check their connection you discover that they didn’t go through the channel so even though in most cases we try to work on that and ask them to go and register because they impact negatively on the system. They shouldn’t be even using this water to wash cars and water flowers so you discover that the negative impact mostly comes from the beneficiaries” (Respondent K6)</p>
<p>At times people that hinder our activities are like some of all these Julius Berger, Arab Contractors when they are doing their road construction at times they rupture our pipe and at last we lost some revenue and some water there;</p>	<p>At times people that hinder our activities are like some of all these Julius Berger, Arab Contractors when they are doing their road construction at times they rupture our pipe and at last we lost some revenue and some water there;</p>	<p>At times people that hinder our activities are like some of all these Julius Berger, Arab Contractors when they are doing their road construction at times they rupture our pipe and at last we lost some revenue and some water there;</p>	<p>At times people that hinder our activities are like some of all these Julius Berger, Arab Contractors when they are doing their road construction at times they rupture our pipe and at last we lost some revenue and some water there;</p>
<p>We also have some vandals, pipeline vandals, some hoodlums anyway that might try to excavate the pipe to go and sell or others they are also some of them within the city and we also have a kind of people who try to connect our water without us knowing and so it results to leakage and we will not know from time to time unless we are able to one day just storm into it and you disconnect (Respondents A11-A13)</p>	<p>We also have some vandals, pipeline vandals, some hoodlums anyway that might try to excavate the pipe to go and sell or others they are also some of them within the city and we also have a kind of people who try to connect our water without us knowing and so it results to leakage and we will not know from time to time unless we are able to one day just storm into it and you disconnect (Respondents A11-A13)</p>	<p>We also have some vandals, pipeline vandals, some hoodlums anyway that might try to excavate the pipe to go and sell or others they are also some of them within the city and we also have a kind of people who try to connect our water without us knowing and so it results to leakage and we will not know from time to time unless we are able to one day just storm into it and you disconnect (Respondents A11-A13)</p>	<p>We also have some vandals, pipeline vandals, some hoodlums anyway that might try to excavate the pipe to go and sell or others they are also some of them within the city and we also have a kind of people who try to connect our water without us knowing and so it results to leakage and we will not know from time to time unless we are able to one day just storm into it and you disconnect (Respondents A11-A13)</p>

## 7. Water is a social good

Utility One	Utility Two	Utility three	Utility four
<p>“When we first came to Abuja and I want to say I was one of them really. We were enjoying free water. So when the issue of payment of tariff came in a lot of people were not too happy – this is a God given product why should we pay for it? So up till now there are some (people) customers that feel that they should not pay for water so they represent a negative impact on us”. (Respondent A1)</p>	<p>“We have a lot of people that do not actually want to pay when they receive the water they state they have not been supplied water”. (Respondent L20)</p>	<p>“The second challenge is the attitude of the citizens. There is a mind-set thing about our service being another government thing which will not succeed. That is also a challenge in trying to get citizens buy-in because that is half the battle if you get their buy-in then sales will pick up”. (Respondent P5)</p>	<p>“A lot of consumers consider water supply as a social good so that is really posing a lot of problems” (Respondent K1)</p>
<p>“the management issue is a serious issue then in terms of the business aspect that is the customer issue a times they don't pay” (Respondent A16)</p>	<p>“some class of customers they have been patronising us for our services but lately most of them they now leave our services for another something at alarming rate because for instance now I don't even think I can't remember the time when the hotels when they pay us for water any longer” (Respondent L21)</p>	<p>“Most of our stakeholders especially the schools say our charges are very high so they are very reluctant to pay”. (Respondent P8)</p>	<p>“Secondly we have the challenge of revenue generation or payment of bills like I told you earlier some people feel that it is their right that government is supposed to provide, that water is a social service” (Respondent K2)</p>
<p>“They reduce revenue because (illegal settlement people) because people like that, because the way they take the water illegally they may not inform us that they have come across the line, they will not want to pay (they don't want to be accountable) except you discover them”. (Respondent A18-A21)</p>	<p>“Politically the politicians campaign that water is free. When we try to get money from customers they will say water is free so why are you billing us? We have been at the verge of increasing tariff some years back but we are because by the political impact” (Respondent L22)</p>	<p>“Before now water is given to them free so some people have not come around to really appreciate what we are doing they feel we are ripping them off”. (Respondents P1-P3)</p>	<p>“Well revenue collection is one because people here the attitude is poor. They don't like paying for water in Nigeria. They don't like paying for water. They want water but they wouldn't pay for it that is a major issue”. (Respondent K3)</p>
	<p>“a lot of politicians have been campaigning to people that they are going to provide this service free. In a state or country where politicians campaign to the people that water service is going to be free” (Respondent L23)</p>	<p>Now there are those of them that will not want to pay, we may call them bad stakeholders but they want the services so the negative stakeholders will be those that don't want to pay, those that want to steal (Respondent P4)</p>	<p>most people think that water should be free but our product is pressured and quality so if we are going to push it to you we will treat it first on the quality and push by pressure to you it is at a cost, so people are expected to pay. But rarely will you discover that most domestic customers are not ready to pay as cheap as it is you get it (Respondent K6)</p>
	<p>“Also political inclinations for example areas like Epe, Gbadagry, you are expected to serve them and not generate so much from them for example the corporation has not increase its tariff since 1999 because the government won't consider doing it because of its political inclination so those areas are quite challenging to the organization; So response of customers towards paying their bills you know it's not encouraging so probably” (Respondents L3-L15).</p>	<p>You have created a law that people should go buy the public water right now everybody in this city has provided water for themselves are you going to shut down their water? How are you going to do it? Enforcement of the law who is going to enforce the law. We are not an enforcement agency. We would have to depend on the enforcement agency to do that. If they are not leaving to their responsibility what happens? People will continue to use water provided for themselves which are not clean and healthy water”. (Respondent P7)</p>	
	<p>“Political interference. If you look at the 2004 Lagos water law it said Lagos Water Corporation will be autonomous but today we still go through the state government to go and beg for money to do things. For me I believe water is a business perhaps because of my exposure it is purely a business now even if you say it's a social good fine government can pay somebody will pay” (Respondent L18)</p>		<p>“Actually there are so many difficulties regulating revenue under water sector because it is a commodity that when you give somebody in a critical situation of Nigeria where people are not literate about the importance of water because it's a political government they believe that it's a commodity that they can give at a subsidised rate and social services so far where government came in and subsidised some part of it so certainly we try to make sure that people consume water by employing them to use meter” (Respondent K4)</p>
	<p>“It's just that in this part of the world, people can tamper with anything anyhow. People can tamper with your meter and do whatever but we are trying to see what we can do about that. You see the key thing now even in Nigeria as a whole now, we need money that is just the key thing without money you can't do a lot of things. And the situation now is such that you need money to put into the system when the system runs very well then people can be encouraged to start paying because when your services are not reliable forget it they won't pay” (Respondent L19)</p>		



## 8. Population growth and rapid urbanisation

Utility One	Utility Two	Utility three	Utility four
<p>“All the places like Sunnyville, Lokogoma they are almost more than were we are now but they don’t get our water. Ordinarily that should have been a serious goal a serious goal for us to meet that is one”. (Respondent A1)</p>	<p>You know we have a lot of problems with our ageing infrastructure, population explosion and also with availability of freshwater. (respondent L2)</p>	<p>“that we can make do with manpower but given the scenario we are going on full blast then I believe that we would still need manpower” (Respondent P1)</p>	<p>Then practically some places are not covered just like I have already told you before that the investment is not enough to meet up with the urbanisation so there are areas that ideally we should cover them with the pipe network but the level of investment is not enough we don’t have funds. (Respondent K6)</p>
<p>“I want to talk on informal settlement of slums and shanties. In places where the settlements are not planned, people can just go probably they want to build they might start digging and some pipes might get broken” (Respondent A4-A8)</p>	<p>“The main issue is that even if the government wants to finance water the whole budget of the state will not be able to given the population in the state” (Respondents L3-L15)</p>	<p>“because we are not running twenty-four hours operations right now so there are few other places that we can make do with manpower but given the scenario we are going on full blast then I believe that we would still need manpower” (Respondents P2,P3) (Respondents P1-P3)</p>	<p>“Yes we have a lot of infrastructure in the state we have about 9 plants and we give water across the state even though it is not adequate because of the rate of growth of population among the state”. (Respondent K4)</p>
<p>“this is still based on some of the challenges that we already had gone over before. Infrastructure not being enough and then of course population growth putting pressure on the supply” (Respondent A9)</p>	<p>“when we plan to supply water on a larger scale as we would need to see or study areas where there is population growth especially as regards the inflow of people into Lagos every day and then once we realise that they are moving into particular areas and they realise that our supply may not be enough to take care of them it requires us to probably expand our current base in supply and also ensure that water or improved water is given to areas where we have higher population growth that is linking it to population growth as it is here” (Respondent L16)</p>	<p>“We have competent hands available but compared to the work to be done yes I can say we are short-staffed which is a challenge”. (Respondent P5)</p>	<p>“Another major challenge is that there is a fast increase in urbanisation. In the last ten years, there has been a massive movement of people into urban areas. The investment is not enough to reach those people both in terms of quantity and the distribution network”. (Respondent K6)</p>
<p>“The line for Tanks 1 and 4 is supposed to be coming straight to the city that is along Kubwa road but because of tapping here and there the pressure and flow is not as high as it is supposed to be” (Respondent A1)</p>	<p>“But now we can only cover maybe about I think 12 and 13 percent of the state. That shows that we are far away from where we should be. Yes because our coverage number one our network coverage is very limited” (Respondent L17)</p>		
<p>Because some of the facilities that were meant to serve a certain number of people have been overrun and they were based on calculations of population growth rate but they have not been accurate. Population growth which will also dovetail to urbanisation rate is a challenge”. (Respondent A9)</p>	<p>“We have letters from various resident association they want our water and they are ready to pay but unfortunately we are still not yet able to meet the demand gap but we are trying our best” (Respondent L19)</p>		
<p>“Currently illegal settlements are growing around our treatment plan area which is affecting our activities because it is downstream”. (Respondent A19)</p>	<p>“still we are still unable to distribute it to the customers to let them know that we are on ground to serve them I believe the process has not yet been completed until we are able to take it to the needy customers” (Respondent L21)</p>		
<p>“You will agree with me that Abuja is rapidly growing and if you say want to provide water to these people that means your response has to go with the rate at which the population is growing. However, we are unable to move at a pace that allows us to meet the demand of the city due to government bureaucracy and lack of funds;</p>			
<p>“Then he talked about people putting rubbish into our water. Luckily for us our treatment plant is built downstream of the town and our catchment is upstream of the town so activities of the town does not impact it but currently illegal settlements are going around there which is now causing it to affect us otherwise it won’t be affecting us because it is downstream”. (Respondent A18-A21)</p>			
<p>“I want to talk about the informal settlement of slums and shanties. In places where the settlements are not planned, people can just go probably they want to build they might start digging and some pipes might get broken in the process”. (Respondent A6)</p>			
<p>“The city is expanding so we need more staff and we need more distribution mains because what we have cannot meet the current population growth and city expansion”. (Respondent A16)</p>			
<p>“We know that Abuja being the Federal capital territory being the capital city of Nigeria people troop in every day, as a result, it increases demand” (Respondent A10)</p>			

Box of commentaries for support from institutional bodies

Utility One	Utility Two	Utility three	Utility four
<p><i>“Well we have some International Organisations that have been of assistance before I came here I was told that the World Bank came and if you know Gwarinpa in Abuja most of the reticulation there was done by the World Bank. Currently we have JICA i.e. Japan International Corporation Agency they are assisting us on the issue of reduction of Non-revenue water” (Respondent A1)</i></p>	<p><i>“in spite of the fact that we say we do not have any funding at least we have had some funding from the World Bank and from the AFD which we have been using to do some expansion projects, rehabilitation of the treatment plants, capacity building for the staff that were on ground and these have really helped to improve the system although we still need more”. (Respondent L1)</i></p>		<p><i>well the positives they are so few we have had this cooperation with the international development partners, World Bank, African development bank, the Islamic development bank they have been supportive mostly in our projects. You know most of our water treatment plant have been constructed in the 70’s and some in the 80’s and because of the population growth and all that our capacity, running even at full capacity we are not able to supply 50% of the town you know with water supply and so we have had to construct new water treatment plants and all that so we had support from our you know development partner World Bank and African Development Bank they have helped us in the era of projects. Respondent K2</i></p>
<p><i>“Then factors that have enabled us to progress to the best of my knowledge except if we have donors, grants for example Abaji water work under FCT, Abaji” (Respondents A22-A23)</i></p>	<p><i>“Then the world bank also has helped us a great deal by extending loans to us the same thing with the African development bank (AFD) and well some commercial banks that has also helped us in our time of need you know when you have short falls and cash flow these are our stakeholders who have helped us”. (Respondent L2)</i></p>		<p><i>This funds from lending agencies and donor agencies are really helping because most of the projects you see, the regional schemes, and the rehabilitation schemes are funded mostly by these lending agencies the donor agencies that is just the important thing. The World Bank, The African development bank, the Islamic development bank they help fund and finance this water supply water projects. Respondent K3</i></p>
	<p><i>“Like I said earlier the World Bank and other Financial Organisations support us to get funds to achieve our objectives”. (Respondent L16)</i></p>		
	<p><i>“My concern has always been the foreign donors who always run and around and want to give money to us to do water they never ask the one they have given you before what happened to it”. (Respondent L18)</i></p>		
	<p><i>“Another benefit is that when we are pushed to the wall the government always come to our aid. That is the State government because if people are not getting water the consequences can be serious. Before you know it there will be epidemic, before you know it there will be health issues and that one will affect them there so we have to make sure that at any point in time if the need arises they want to come and assist us”. (Respondent L19)</i></p>		<p><i>Before it is about 45 MLD now it’s getting to 150 MLD now we will produce 150 million liters per day that is the new project that is being undertaken in Zaria major project to be able to meet the Kaduna demand also because if we didn’t have that capacity of plants in those areas we will not be able to meet the demand of the area. So the government is doing their best to see that (Respondent K4)</i></p>
	<p><i>“Involvement of all these donor organisations has really assisted us to go in fact, most time when they come to our aid in terms of rehabilitation it assists us. It is a major form of assistance to us and I have noticed that those assistance came when the government are not really available you understand when you are expecting something from the government and it does not come and you have them as a backup you understand, it is a major factor”. (Respondent L22)</i></p>		<p><i>Two development partners on ground working with us we’ve secured some facilities credit facilities but it’s mainly in Zaria for Zaria and its environs tomorrow we are even going for a stakeholders meeting because they are going the flag off the distribution and transmission work on the 15<sup>th</sup> its Tuesday I think but so far the plant is ongoing. The new plant we have a new plant 150 million litres per day in Zaria which is almost 90% completed. The dam has been done but it was done by the federal government. Then that’s why we signed this contract for the expansion. For the transmission we will do some transmission you understand it’s the tanks the reservoirs and the transmission mains to distance. Then the distribution that one, is handled is funded by the Islamic development bank the transmission. I think its 60 million dollar credit then the African development bank I think its 90 million dollar it’s for the distribution main network or pipe network around Zaria and its environs. They build the dams, they build the water works, they lay the pipes you know then we have development partners and the world Bank, IDP in fact most of the projects water expansion that are done in Kaduna state you discover that most of them are done with partnering with these development partners. Respondent K5</i></p>
	<p><i>“And we are also relying on this rating of the State government of the entire Lagos state government and by virtue of that a lot of people have been showing interest to partner with us and all that, the environmental agency, the World Bank, the Agence Francaise de Developpement AFD and other international developmental agencies so these are enablers and the challenges that are mitigating or helping us as a business”. (Respondent L23)</i></p>		
	<p><i>“And in addition to that still with the help of the government we are able to obtain investments to do some expansion. And even apart from government’s investment in it even if we are not making profit they still keep investing in the organization so it’s a factor that is still assisting getting government support financially that is also a factor”. (Respondents L3-L15)</i></p>		<p><i>they are also a major financial usually its loan we take from them like the project I am talking about is an African development bank project and also the one from Islamic development bank but we are taking loans from them through the federal government so on that I think they impact well on us. there are times that we usually have problems on subsidy let’s say we have to make salary payment sometimes you see government come into it and intervene like presently government is also paying for electricity Respondent k6</i></p>

## Box of commentaries for staff commitment

<b>Utility One</b>	<b>Utility Two</b>	<b>Utility three</b>	<b>Utility four</b>
<p><i>“We have some of our staff that are very competent in fairness to them. They are willing to work and willing to develop themselves. You find out that people are committed and passionate about the job. You know many of them spent 35 years, 20 years and 13 years in this place so they hold it as their own” (Respondent A1)</i></p> <p><i>“The performance of our staff especially our maintenance crew I will assess them as very good because once we have issue of maintenance, they act promptly and handle the situation except where the issue of maintenance is really high and then you need funding to replace a part or so and that funding is not provided by government and then you see we now have to wait. But the staff are well trained, in their various fields and they are capable. On a whole the staff are well trained and their performance is fair. I will rate us maybe 60-65%” (Respondent A3)</i></p> <p><i>“and then competency of workers too that is an enabler because we have a wide variety of staff, a lot of them are well trained” (Respondents A4-A8)</i></p> <p><i>“The factor that has helped us to achieve our goal I think the most important one is the staff dedication to work. Most of us you see here are ready to work and we are putting all our best”; (Respondent A18-A21)</i></p>	<p><i>“the enablers that have helped us is that we have identified that there are dedicated people in the service that actually want the sustainability of the system so this organisation is trying to make sure that those people still remain in service”. (Respondent L23)</i></p> <p><i>“So human resources forget we have and they are dedicated I need to be clear with that they are dedicated” (Respondent L18)</i></p> <p><i>“and then we have committed staff very committed. In fact now we are short staffed and we are just about getting approval to engage some people. Presently between now and the end of this year a lot of people will move out again from the system the few that we have now they are trying their best so we are lucky to have committed staff”. (Respondent L19)</i></p> <p><i>“Like I said we have dedicated hands that they are ready to work and they are on ground”. (Respondent L22)</i></p> <p><i>“But in terms of competence most of our people are competent. Most of them have had exposures they’ve been exposed to although even now because we have been constrained by cash by fund and we’ve not been having training has we ought to but even despite that most of our engineers are competent” (Respondent L17)</i></p>	<p><i>“We have competent hands available but compared to the work to be done yes I can say we are short-staffed which is a challenge”. (Respondent P5)</i></p>	

## No discrepancies with implementation of policies and laws

<b>Utility One</b>	<b>Utility Two</b>	<b>Utility three</b>	<b>Utility four</b>
<p><i>Yes, our mandate is to produce the most purest water on the earth and then two for now we stand high in terms of ranking (amongst the states in Nigeria) just like I said earlier concerning water quality we don't compromise. But in an organisation there are some people if they don't understand the mandate they will not tag along with your vision. Those are people who try to sabotage the effort but with this, I can say that maybe 5% or thereabout are not tagging along due to their own perception about the vision we have;</i></p> <p><i>We have a mandate I think we are pursuing it, everybody is focusing on it except these few shortcomings that we have mentioned that is hampering the achievement of the mandate. Those issues that we have mentioned, lack of the funds, morale of staff too that will encourage them;</i></p> <p><i>You have a way to carry out a mandate well but you have a lot of limitations because you are not autonomous. (Respondents A11-A13)</i></p> <p><i>“If I understand the question I don't think there is anyone I know. So I don't know if there is any discrepancies if we have anything to say on discrepancy”. . (Respondent A18-A21)</i></p>	<p><i>“There is no disparity in that because or policy or mission statement is just to produce water to the populace at affordable rate and in a consistent manner which is what our target has been and we are pursuing so there is no disparity no contradiction to that policy statement”. (Respondent L3-L15)</i></p> <p><i>“There is nothing wrong with our policy. The policy is there but it is because there are no infrastructure in place. The policy is that we should give everybody in Lagos water especially the metropolis but because like you have ten children you know you have to feed the ten children but you don't have enough money to feed them so it whatever you can give them that you give them so it's either the children are not feeding well or that they might eat once a day or something that is what it comes to” (Respondent L17)</i></p> <p><i>“That is just the way I see the whole thing but sincerely speaking if we can get the 2004 water law implemented to the fullest I think we will be in a better position and the best in the world. Like I said if you are able to have a very good legal framework everything will fall in line”. (Respondent L18)</i></p>		

## Discrepancies with implementation of policies and laws

<b>Utility One</b>	<b>Utility Two</b>	<b>Utility three</b>	<b>Utility four</b>
<p>“We don’t have the strength to be able to enforce the laws on them. Yes the policy is there but we are incapacitated we are not able to follow the policy in practice” (Respondent A1)</p> <p>“But on the negative side I would say yes there is policy on ground, we have a water supply master plan, but of course it’s not being followed strictly there is always a gap. The time frame for achieving all of those plans have even elapsed due to maybe poor funding which is negative and then poor projection too” (Respondent A9)</p> <p>“Our bill is before the national assembly so it’s still on, those are the acts establishing the board”. (Respondent A11-A13)</p> <p>“You see as we operate here, we are not 100% autonomous we are under FCDA engineering per say all Abuja infrastructure including water are being handled by our FCDA engineering services road, named with electricity, water what we water board do”. (Respondent A22-A23)</p>	<p>“Enforcement so to say it’s a challenge too because you are not making as much as expected so and when you don’t have that collections what do you use to maintain and sustain production level so that is also a challenge”. (Respondent L3-L15)</p> <p>“So human resources forget we have and they are dedicated I need to be clear with that they are dedicated” (Respondent L18)</p> <p>“and then we have committed staff very committed. In fact now we are short staffed and we are just about getting approval to engage some people. Presently between now and the end of this year a lot of people will move out again from the system the few that we have now they are trying their best so we are lucky to have committed staff”. (Respondent L19)</p>	<p>. “Two second major challenge its enforcement of the law. You have created a law that people should go buy the public water right now everybody in this city has provided water for themselves are you going to shut down their water? How are you going to do it? Enforcement of the law who is going to enforce the law. We are not an enforcement agency. We would have to depend on the enforcement agency to do that. If they are not leaving to their responsibility what happens? People will continue to use water provided for themselves which are not clean and healthy water”. (Respondent P7)</p>	<p>Normally you know human factors can always occur I think our policies fairly not too bad, but though there are some lapses like I said for instance water work is supposed to be a corporation and I think from my little knowledge of public operations, the ownership matters and mode of operation matters but I think it’s not fully a corporation so to say but now we are working on a law a new water board law. I think it’s in the house of assembly waiting and it’s supposed to be Kaduna state water corporation (Respondent K5)</p>

## Box of commentaries for asset management maturity – Infrastructure assets

<b>Utility One</b>	<b>Utility Two</b>	<b>Utility three</b>	<b>Utility four</b>
<p>“One major aspect of the problem of water supply is the issue of infrastructure which we have no power over it. As I am talking to you now the water is there in dam I told you we have one Gurara damn but the issue of transporting the water to where it is needed is a major challenge”. (Respondent A1)</p> <p>“Our physical infrastructure is obsolete I told you. I mentioned our physical infrastructure in terms of our waterlines they are more than 30 years, 35 years but we are still using them. They need to be replaced”. (Respondent A2)</p> <p>“Well we did an assessment for the rural water supply, we did an inventory assessment but that was 2012, and we had functional status of the water schemes was about 60% that is the functional status which means about 40% were not functional due to one reason or the other”. (Respondent A3)</p> <p>“The infrastructural provision on ground is not even enough to serve everyone. For our physical infrastructure, office equipment and distribution I will rate it average”. (Respondent A9)</p> <p>“For the physical infrastructure we do not have enough, like the area offices they are not in good condition and you know, a staff is supposed to have a conducive environment for work it even adds to your psychology”. (Respondent A14)</p> <p>“Yes we have distribution network but it is not enough. The distribution network is supposed to be in phases one, two three four. It is only phase one that is fully completed now the rest of the phases have not been done. The production aspect is enough but the distribution we do not have enough”. (Respondent A16)</p> <p>“Each of the treatment plant has its own separate conveyance pipeline that we call trunk line. Phase one has its own, phase two has its own. Phases 3 and 4 are still under construction it has not been laid. Phase 1 and phase 2 trunk line can only accommodate 10,000m3 per hour if you produce anything above that from Lower Usuma dam then you are in trouble. The other challenges is on the distribution mains, in all the developed phases that we have in the city, we do NOT have a distribution main it is only in phase one of the city development that is where distribution mains has been almost completed. In phase two, phase three this is where we have the highest population of people alright there is no distribution mains there. Mostly people depends on</p>	<p>Most of the mini and micro waterworks are doing either quarter or maybe 30% or at the most 50% of their capacity. Most of them need rehabilitation. even when rehabilitated it is except you upgrade it is difficult to take it back to its original design state so currently, well I will say maybe it is doing maybe 60% of its capacity so if it does more, it will still need to be maintained regularly and you know like I told you, funding is a major problem and you know these plants are actually run 24/7 and so you can imagine the level of deterioration. Respondent L1</p> <p>Well all our assets need to be rehabilitated especially the smaller water treatment plants. The groundwater plants all need to be rehabilitated because they are underperforming some of them are not even performing at all due to one reason or the other like borehole problems. Then we also have problems with dozing pumps and things like that so. Our network is over a hundred years old you can imagine trying to adapt and change a network like that to suit the Lagos of today you know from 1810 or something like that no for 1910 to 2016 in those days they had network from Iju right down to Ikoyi.. (respondent L2)</p> <p>most of them the equipment there are ageing. If you have a tap and you do not maintain it well at the right time, when the tap starts leaking it will start dropping water if you don’t fix that it will become a time that the tap will not even lock gain and water will start gushing out. In addition, our network coverage is very limited. (respondent L17)</p> <p>Most of the pipes that they are laying now no fire hydrants, no this they just lay pipes and when you see the pipes you see that the quality is bad.I knew at inception most of those waterworks, those small ones you saw at the inception the design capacity should be either one million or two million. At the day they are commissioning it was not producing one million. So that calls for questioning asset management or maintenance or wrong design so a lot of things are serious challenges and subsequent government keeps spending money on those plant what do you get from it.. (respondent L18)</p> <p>All the parameters you mentioned I can say at least as far our assets is concerned are positive they have been able to sustain us through. And luckily since those items were of the highest standard as at the time of installation too so we are getting value for money. They stand</p>	<p>We have stopped using one borehole because the saline intrusion in it is too much and it will really disturb operation so we just stopped using it. This is the second borehole we have been using it for quite some time but one thing is that if we had two boreholes it will be faster for us to generate more water so now it’s like if let’s say we had two boreholes running in 4 hours it might reach a lot of people in four hours but now in four hours but now with four it might not reach some people so you get customers complaining we don’t have water but there is light you know that is the issue for that kind of a thing. To answer that (Respondent P1-P3)</p> <p>the infrastructures we have now are very old and their cost of maintenance if you compare their cost of maintenance to their efficiency, it is actually not advisable to continue with them but then we cannot just fold our arms and wait till the world bank project has come, So the equipment are very old and they are no longer if you look at the cost-benefit ratio (Respondent P4)</p> <p>For our dozing pumps we use sodium carbonate for PH correction but unfortunately our dozing pumps are not working for now. The steering is very stiff. All our dozing pumps are leaking. If you switch it on the whole place will be filled with water. The person meant to fix it has not come. (Respondent P8)</p>	<p>Every treatment plant built has a specific design period and design capacity and all this design capacity, design period is related to population so when you are designing you now you design according to a particular population. Then you now extend for the future forecast. But now the rate in which things are happening you know and the last one we have which it was about is it 1987 in Maladi that was the Kaduna north all waterworks was built in 1972 that was in 90MLD, 90 million litres daily production that was the initial capacity but you know there must be depreciation with years. Now the second one which has about 150 MLD is now, it was built 1987. In 1987 to date population in Kaduna it has shooted since because of so many factors even Abuja that is close to you know some people they prefer to be every month travelling from Kaduna to there. (Respondent K1)</p> <p>The pipelines also since we have a lot of extensions, population growth has increased so we tend to be extending a lot. We also experience vandalisation, vandalisation is affecting it we cannot extend into bushes when you extend into bushes the vandals they follow it and remove it (respondent K1)</p> <p>Well, the state of our infrastructure you know let me state something, our infrastructure are fairly in good shape yeah but our performance mostly is not tied down to our infrastructure. If other factors were okay power supply and all that then I think we will have been doing very well. Because I know our pumps, our water treatment structures and everything are in fairly good shape you know but unfortunately there are factors that are beyond our control. So our structures are in a fairly good shape but our capacity our production capacity, our utilisation is quite low because of some factors. I will say at the moment our biggest plant is producing at about 60% capacity utilisation. I will say that yeah and the other ones are far less where we have to use diesel supply but our pumps machines structures are in very good conditions when we go there probably because they are not being used optimally so they are still in fairly good conditions so I will say 60% for our structures. (Respondent K2)</p> <p>Number one thing is the fact that the water demand is higher than our capacity to produce. So if we are produce 100% it can’t meet the demand of Kaduna town okay. Yes some changes have been made we</p>

their borehole individual boreholes that they will have built their compounds". (Respondent A17)

"For now production has more infrastructure than distribution department because the new plant 3 and 4 which I manage has a capacity of 20,000 right now we are utilising at 35 to 40% so plant 3 ten, plant 4 ten I produce 3,500, 3500 at times 4000 which means 35 to 40% capacity we cannot produce more than that because we do not have facility to evacuate it". (Respondent A22-A23)

"Physical infrastructure I will rate it one, as in very poor. There are other offices maybe an office like this, there are some offices you enter six, seven staff sharing an office smaller than this no air conditioning and its very hot, so all sorts of things. Sometimes there is no power supply and you have to be on seat. Broken tables, broken chairs, broken furniture. You need to work your computer is broken". (Respondent A7)

the test of time. They even outlived more than the years they were designed for. Like the pipes that came from the Iju that were laid in 1910 by the colonial masters they are still serving us till date. So likewise the tertiary ones too, except few areas where there have been blockages here and there you know but they were able to serve till the life span of those assets so they have been okay. As per the adequacy of network we have on ground, although we have not covered the entire state but the areas we have covered I know we have enough network because we have over 2000 kilometres of piped network. For the trunks 400mm. in some areas, the public at times they just ruthful damage some of our assets you know At times they may not have water so they just go to most of our pipes and assets there. There are some that instead of putting their soak-away pit in their compound they just put it outside where they know at times our mains are there or our mains will pass that place so they make some of these to also give us bad pipes (Respondents L3-L15)

Physical asset and infrastructure. Water distribution systems piping I will say 3, its moderate. Water treatment plants, I think on water treatment plants if one has to really talk about it we have, three major water works Iju, Adiyari and Isashi. So looking at water treatment plants with respect to considering the three major water works and looking at the biggest of all I will say if at the conclusion of Adiyari then we should have high rating for water treatment. For pumps and pumping stations 2, reservoir and storage tanks well 2 is also here. Booster stations well we have. I think the issue of booster stations will depend on design of the major water works we are looking at. If we are looking at booster stations and boosting stations it only means that after our survey we will have been able to identify where we think there is likely to be a low pressure based on where our supply is coming from and we think it requires going further and booster station may be put at a particular point to go farther than current areas we feel we need to cover and for that we have rated that 2. (Respondent L16)

If I am going to rate it I will rate it very low the reason is that the maintenance culture is not there that is the main source of our problem. The maintenance culture. It's not that the property is not there but no matter how good a thing is if you don't maintain it you can't get the best out of it. Most of our structures now between 20 to 30% why? No maintenance. (respondent L19)

we have a total capacity for now is about 210 Million gallons but presently even the management are focusing on what? Upgrading Iju and Adiyari to its maximum capacity that is 45 per 70 presently they are just alternating because the pump which is the intermediary that should actually push out the water a lot of them are not having a standby (respondent L20)

Everything does not work on a full capacity and still we are still unable to distribute it to the customers to let them know that we are on ground to serve them I believe the process has not yet been completed until we are able to take it to the needy customers. (respondent L21)

Adiyari phase 1 is of 70 million gallon design capacity over the years the maintenance has not been as at when due and all that you understand? So the production capacity has dropped you understand? (Respondent L22)

The performance of that our asset will be rated as average because the management of asset both physical and human resources is interwoven together the asset might be there yes but the asset are not robots you need people and manpower to run them, to operate them to put them in a proper perspective so we are not having enough hands to operate those assets so that's why I said the performance of those assets are average. And also having identified power as one of our challenges also, the epileptic power supply has been a challenge to

have some projects there were some rehabilitation made but that is not sufficient enough to take care of all that we need.. (Respondent K6)

That is the issue I told you we have about 12 or 13 treatment plants or so but I don't think they are operating at full capacity because why the equipment are old they are ageing. So equipment installed like years back. Like the rehabilitation now the pipeline rehabilitation in Zaria now. The pipes were laid as far back as 1939 so they are obsolete so that is why the government now obtained credit from ADB. They now financed the rehabilitation and replacement of the entire distribution network in Zaria. And the equipment also they must have told you the equipment are also old, they need rehabilitation, the pumps and those equipment that are the plants that is the major challenges. (respondent K3)

Yes we have a lot of infrastructure in the state we have about 9 plants and we give water across the state even though it's not adequate because of the rate of growth of population among the state and our future plans is to add more. (Respondent K4)

Then some of the short term measures are we should be able to fix some pumps in the water works and do some short indignations like we have some pipes that are asbestos especially in Kaduna and Zaria that were asbestos pipes that were laid over 30 years ago and you know all these asbestos pipe can block and we have identified all these places. We need to replace these pipes with PVC pipes so that those areas will get water if they get water more revenue will come. These are short plans. (Respondent K5)

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*our assets some of our assets are ageing quite fast so which have depleted our capacity utilisation so on the average I will say our asset can be categorised as an average utilised one. (Respondent L23)*

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**Box of commentaries for maintenance maturity**

<b>Utility One</b>	<b>Utility Two</b>	<b>Utility three</b>	<b>Utility four</b>
<p><i>“We are talking of a Utility like water sector as we are talking now your phone alerts of a pipe burst somewhere and we need to go and take care of it but we don’t have the resources because of the fact that we have to depend on an another arm of government to take care of our operations” (Respondent A1)</i></p> <p><i>“The only challenge we have in terms infrastructure management managing these infrastructures most of our lines are old they require replacement basically what we are doing</i></p>	<p><i>“We do not have a maintenance programme. a few years back the maintenance department was scrapped and since then our assets have just been going downhill and we only rehabilitate when they grind to a halt” (Respondent L2)</i></p> <p><i>“There isn’t that daily or routine maintenance probably like in the developed countries where you flush your system you know here we are still underserving the populace so we don’t have that luxury of water to waste but over there (abroad), you see it’s a daily occurrence or weekly they open the containers, they flush the system but we are</i></p>	<p><i>“We are hoping that our routine maintenances will also get better in terms because it is static there are innovations and current trends if we get them, we will be putting them into what we do”. (Respondent P1-P3)</i></p>	<p><i>“We are trying in maintenance the only thing is that because we are not financially buoyant we cannot go for preventive maintenance. So you only carry out corrective maintenance.” (Respondent K1)</i></p>

is like waiting for it to happen before you replace”. (Respondent A2)

“Basically we are supposed to be having the preventive and the corrective unfortunately because of the fund issue we only do corrective maintenance”. Respondent A16

“Our maintenance is not yet computerised fully” (Respondent A9)

“But when you look at response time to the maintenance in terms of ability to do it we have competent staff in terms of ability you can rate us 100% but in terms of equipment and materials because of lack of money we do not have material again so our response time has been increased”. (Respondent A17)

“So the challenges we face again is that most of our planned maintenance have turned out to become break down maintenance. Because we do not have fund to carry them out as at when required and it is reducing equipment life span”. (Respondent A22-A23)

“You see maintenance though Africa generally, we have a very poor maintenance culture and if you want to maintain well, see the procedure in government when it is time for you to carry out your routine maintenance as per the infrastructure you write”;

“We have various like buildings and all that. Previously we had some scattered area offices with buildings but due to lack of maintenance of the asset all of them have gone bad and that’s why most of the staff are staying outside there are various issues attached to assets if you are talking about asset maintenance”; (Respondent A11-A13)

not doing that here. But when you have any damage, any blockage anything that calls for attention, you do the needful” (Respondent L3-L15)

“Also the maintenance of the equipment, all the asset the maintenance is a major issue. We all know that preventive should be the first priority preventive maintenance but with what we are getting in terms of revenue we are not able to meet up our obligations in that regard so maintenance of the asset and our facilities they are also major challenges on our part” (Respondents L3-L15)

“What we do most of the time is corrective maintenance which means until when those pump or equipment breakdown that we want to attend to it, and we attend to it also based on funds availability”. (Respondent L20)

“If I am going to rate it I will rate it very low the reason is that the maintenance culture is not there that is the main source of our problem. The maintenance culture”. (Respondent L19)

Adiyan phase 1 is of 70 million gallon design capacity over the years the maintenance has not been as at when due and all that you understand? (Respondent L22)

“For the physical infrastructure all assets have a life span and for every asset you have you have periodical maintenance that should be done on them. For example the Iju and Adiyan which are the major treatment plants we have, Iju is 40MGD while Adiyan is 75MGD. For example for Adiyan, Adiyan was rehabilitated five years ago. And you know if the operating capacity is 75MGD and it has been on stream for I think about 30 years now definitely it can’t do 75MGD anymore it would have depreciated” (Respondent L1)

### Box for commentaries on information management maturity

Utility One	Utility Two	Utility three	Utility four
“We are supposed to have gone pass our staff going from house to house manually distributing bills. By now we are supposed to go electronic in such a way that people can receive it on their phones and pay on their phones but most of the things we are doing now they are still manual”. (Respondent A1)	“Metering system so far as not been effective most of our meters are not supporting tariff and they are also not supporting revenue. The meters are supposed to be accurate and effective for recording consumption appropriately but most of the meters are not doing that So for metering I guess it is 1”. (Respondent L16)	“We are still using a very old manual system that is why in our design we are going for SCADA with SCADA, even if manpower is not many, one man can control and monitor the whole system consisting of the boreholes, pipeline and the pumps”. (Respondent P4)	“We should improve our billing facilities in other towns in Kaduna. It is only in Kaduna city and Zaria that we utilise our billing system. If we can improve our billing, we should be able to get more money.” (Respondent K5)
“Our information system is just fair; it is just ok but we need to improve it. Myself and my colleague we are currently trying to improve on our own because the board does not subscribe to that, they are not interested in it”. (Respondent A2)	“information gets lost so they keep asking for the same information giving them the same information they have asked all the time”. (Respondent L20)		
“The board is looking to run the AMR and the prepaid. we are phasing out the conventional and we are doing it gradually”. (Respondent A2)	“We are trying to involve a better and much more effective GIS to ensure that we do less of physical output on the field. If we have electronic data via the internet it enables us to see the areas we cover and also graphically see how water moves and where there are leaks and blockages. But as it is we are just evolving on that so would measure it as 1”. (Respondent L16)		
“We do not have any funding to go round and do frequent inventories but we try to update the previous inventory when we can. There was a time UNICEF was trying to help us with the water information management system and the sanitation information management system.”. (Respondent A3)	“In terms of our information management for us the distribution department I will just say average I won’t say too good. Just average. Whereas I won’t want to dabble into other department affair they should be able to rate their own performance” (Respondent L3-L15)		
“Major challenges like the information system we are using here or like the way we collect our data there is still some laxity in it. If actually they can overhaul the whole system it will improve our revenue generation” (Respondents A11-A13)			
“We can give you a record of what we are doing hourly base. Because we do analysis and it is recorded as it is done. We keep it we have a database we store”. (Respondent A4)			
In our department, I will rate us 9 out of 10 for record-keeping. We keep records for our analysis for raw water or treated water from the treatment plant for the city and rural areas. However, for the whole organisation overall out of ten, I will like to rate us a one. I am defining one as very poor. Because there is no reason why an organisation should still be passing files from office to office. Files still get missing, a lot of things get missing. Records in a lot of offices are not being kept properly. (Respondent A7)			

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*“We still have problems with the availability of data as it is right now we are not digital in the management of our system. The management is looking at improving systems such as telemetry, GIS. there were times that they deployed them but because of lack of funding it went obsolete” (Respondent A9)*

*“now in terms of our billing system, we are upgrading to e-bills where customers can assess their bills online and then for ease of payment we will deploy an online platform for collating information about customer payment so that it reflects easily on their bills”. (Respondent A9)*

*“We want to increase the tools and even the servers they have almost become of age they need to be replaced. Most of our systems are not really obsolete I will say but IT needs upgrading per time”. (Respondent A15)*

*“We do not have documentary evidence for asset management. If you look at the manual of that generator it should tell you it has worked for 24 hours and you must replace the oil. So the culture of documenting is not something we do”. (Respondent A17)*

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#### Box of commentaries for stakeholder engagement maturity

<i>Utility One</i>	<i>Utility Two</i>	<i>Utility three</i>	<i>Utility four</i>
<i>“There was this radio enlightenment programme (jingles) that we used to do before but you know presently everything is being reviewed but I am sure maybe when they pass budget it will be” (Respondent A18-A21)</i>	<i>We normally call a stakeholders meeting. Where we will call all the people who are stakeholders for the meeting in one room. To address them to tell them the impact of the project. To tell them the advantage to them to tell them the disadvantage of the project to them if any and how we will remedy some of these disadvantages. Yes from the ones we have done it has been very effective especially when we embark on the works, you know Lagos is an urban city and you know when you are working in a city like Lagos especially for example when you talk</i>	<i>Yes we have stakeholders meetings of different category because we have not actually gone into full distribution our stakeholders’ meeting it’s not as frequent as it should be however we do engage stakeholders, right now we are at the stage where we are communicating the change before it was a free public service utility with just government fund 100 percent and we distribute water now we will start billing by the new engagement, by the new law act we’re going to be giving sufficient provision so we are like a commercial profit oriented company and so, we will start billing that is a change so we need to communicate this</i>	



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about network rehabilitation where you will be laying pipes when the contractor is bringing in pipes you know we have a lot of miscreants in Lagos the area boys, they will want to stop the vehicle they will want to extort money from the contractor sometimes they will drive them from site but because we have had this stakeholders engagement sometimes we involve people who know them especially the CDAs that is the community Development Association so because they know about these projects and what they benefit for them so in these areas they assist. (respondent L1)

There is definitely room for improvement for example when we have projects we talk, we hold town hall meetings and we give out information and we also give out our phone numbers for feedback and so on. I am not sure that our feedback is really very effective for example we had a stakeholders meeting at Victoria island because we have a project, mains extension project in Via we had a town hall meeting at the local government office and we had people from the public asking questions about the project itself and generally about our services but after that I am not sure we are really engaging them as we should especially on questions that were asked and going forward with the project because its not only when you are about to start a project that you should engage your stakeholders it should be on a continuous basis. So the town hall meetings should be continuous especially because the project is ongoing there has to be communication between us and the stakeholders (respondent L2)

We make use of what they call, there is what they call Community development association CDAs then the higher level of that is CDC so when we have problems like that or even before your commencement it's advisable you engage them and then the CSOs which one of my colleagues mentioned earlier. the Civil Society Organizations you engage them (respondents L3-L15)

"so there have been a lot of public engagement of the populace for them to understand and to see from the point of view of the organisation and for them also to appreciate the importance of water supply through the public utilities. So the organisation has been trying to engage the populace of such we just finished about four numbers of stakeholders engagement in Surulere, in Itire, Iwaya, in Yaba, Ebute-Metta as well Victoria Island and the people actually appreciated the importance of our service" (Respondent L23)

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change management to the public you have to get their buy-in before you can be so we are engaging them in town-hall meetings, we talk to them, we tell them what we are doing, we engage them in radios jingles and all that to prepare them for the billing so we do have town hall meetings we get feedbacks and all that. (Respondent P7)

we don't have any design method yet that we have put in place for that because we are still thinking of wooing them and what we initially thought some of us feel that it was going to be a little harsh not to start you know those measure but to follow them gently so that we can get them on still coming to the connections that is why if we go round you could still see some of them or those of them that had originally come in they are still on the line even though they don't have metres yet yeah but we had proposed that we sever those ones from connections until maybe they realise that okay the service is good they can come and then we charge them for online. But because we are in the process of trying to make them to get this provision, the metres some of us think it is harsh that way so we leave it at that. So I wouldn't say that we have a process that we have established for that (Respondent P1-P3)

we are planning to do is to make sure that we send out letters to all our stakeholder and we do some radio announcement and we also maybe use jingles you know to inform them about the water they are taking why it is necessary for them to test it that is what we intend to do. (Respondent P8)

#### Box of commentaries for staff management maturity

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##### **Utility One**

"Another challenge is human resources/ personnel issues my experience here is still linked to the issue of autonomy. Now like I said I am two years here now as a personal commitment government has never sent me overseas for training I was enjoying it in the other place I came from but

##### **Utility Two**

"The training is not adequate let me put it that way it is below average or very low let me put it that way. Training of staff is low in terms of rating so it would

##### **Utility three**

##### **Utility four**

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here training I sought for online personally sometimes the government will not pay me” (Respondent A1)

have been better but like I said it is where you have the fund that you can really do such”(Respondents L3-L15)

“but then with recent government policies like right now there is no training I think training has been put in the back a lot of government staff are not trained and that is affecting output in a lot of places because we need training over and over again so that is that”. (Respondent A4- A8)

“Because the greatest asset of an organisation is the manpower it is not the machine or whatever, it is the people. You understand what I am saying so you need to train and re-train and re-train to get the best out of your people. That is lacking here we used to have it but it’s not there now. So you need to specify that the training of our people so that we can get the best out of them” (Respondent L19)

“Training and re-training are what is lacking. And there are some training some people will embark on training by the time they come back probably they will have changed them to another department. Then the psychic of the staff need to change, their minds need to be reformed”. (Respondent A17)

“Talking of being enough we are not enough. Manpower we have shortage. Because since 2011 there has been an embargo on employment we’ve not been recruiting and despite the fact that we’ve not been recruiting some people have been retiring so our workforce has been reducing and so we are all leaving” (Respondent L17)

“One other thing that we will require will help us move forward is that if there is staff welfare, giving attention to the personnel that are there doing the work it makes the work attractive and appealing to the person involved”. (Respondent A21)

“Training. I have been here since 1990 and we are not carried along when it comes to training.” (Respondent A22-A23)

“Also look at the staff welfare too, you know the human capital, the human aspect is important as an organisation. Presently as a revenue-generating organisation, we are supposed to have a salary structure different from other organisations as a kind of encouragement to us but presently our salary structure is so meagre”. (Respondent A11 – A13)

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### Box of commentaries for Project Maturity

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**Utility One**

**Utility Two**

**Utility three**

**Utility four**

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“There is one that they are trying to do which we are against it not exactly that we are against it but we felt the priority should be different. Ok they are trying

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to construct phases 5 and 6 of the treatment plant now I told you the plants we have now they are more than adequate what we are supposed to be talking about is the distribution infrastructure but because of the capital intensity of the project which is where FCDA will be able to do their own business, they are more interested in that than the infrastructure itself. But we that are operators we know that that is not the priority very big project it will not be less than 30 billion naira project. But it's a goal we have no choice" (Respondent A1)

"Yes, we have some ongoing projects, there are some that we are unable to further or continue because of lack of funds. There are a lot of ongoing projects that we are unable to finish either due to financial constraints or it is still hanging or it is ongoing. (Respondent A15)

The ageing treatment plant the rehabilitation is already ongoing but it could have been finished about a year or two years ago but unfortunately, because of lack of money, it could not be completed on time. The trunk main has been awarded but unfortunately, the contractor was unable to complete it because of money". (Respondent A17)

"The second plant is under rehabilitation since 2010 and it was supposed to last for 18 months. From 2010 to date, the rehabilitation is ongoing and it is just 23% completion about 77 undone because of lack of funds". (Respondent A22-A23)

We have some of the projects which are ongoing though some of them are kind of stale due to lack of funds like the issue of data collection or data integration which we have issued out the contract but up till today there is no payment as regards to that and the contractor has been up and doing then we also this damn rehabilitation project ongoing;

We have series of projects ongoing just to make us achieve our aim but if you present it in the budget they will say no remove it there is no fund. (Respondents A11-A13)

And then we have Adiyen two which is the 75MGD already this is being financed by the state government and it is planned to finish it will be completed by the end of this year 2016 and the associated reticulation it is going to serve Ikorodu area, Ojo, Festac that is the major places it is and then it is going to serve the rest of this area Agege, Victoria Island and so on. So these projects are already construed and the associated pipeline which is about 2,000km. (respondent L1)

a lot of projects which started under the previous administration of his excellency Babatunde Raji Fashola we commenced the construction of a 70 MGD new plant in Adiyen called Adiyen two. We also engaged a transaction adviser to advise the government as well as the Lagos state water corporation on the viability of Odumola project which intend to be for 1, 2 and 3 the government also intend to extend water to Ibeshe an area called Ibeshe and all that. We have a lot of programmes that have been highlighted to you know there is no way you can have an organisational change for you to be able to improve the organisation you use projects to initiate it. So to identify a lot of projects that will help us to lift up from where we are presently and one of them is Adiyen, Ibeshe, Odumola, and Ishasi. The project is running smoothly and example of them is Adiyen 2 it has commenced as we speak and the project is actually meant to be complete this year but for a change of government there have been some delay for some time and the new administration too have appreciated the importance of that plans, they are looking into way of expediting the completion process also. And also one of the plans which I mentioned is Ishasi which has been rehabilitated is also due for commissioning and other plants that have been planned also and going to be presented for the government to commence in initiating those projects so that we can take off too as well. Odumola is about to take off. The consultant is about rounding up their report upon which you now know the next stage of engaging the contractor for physical works. (respondent L23)

a key project in our master plan that you can say has started is the Odumola project. Right now it is still at the very elementary stage we have procured a transaction adviser. The transaction adviser has done the technical report he is now going on to the next stage to do the business case before he does the concept design before he now puts together the bid document and then we start sending out request for expression of interest and all that. So we are still at the second stage of the transaction adviser putting together the business case. Then the second project is the Adiyen two project it is ongoing and it is about 60% completed. That one too has suffered delay because it is supposed to, the water treatment plant itself, the network and the power plant is meant to be completed by June this year but definitely, we are not going to meet up in June. The water treatment plant itself will not be completed till December this year and we have not even started work on the network, we have not started work on the power plant and we are also supposed to procure an operator by management contracting. We started talking to some companies but we have not really gone far with our negotiation with the companies. (respondent L2)

Now they want to do prepaid metering but there is no study to show the cost-benefit you understand. In 2007 I was one of those who went to South Africa to go and study the prepaid meter in 2008 then another group went 2010, we had reported by the time they procured the prepaid meter, it was not what we recommended and it took this organisation serious financial burden because they borrowed to go and finance them the meter is still there, they have not finished in fact the contract is a serious problem as at now. The same Organisation is now also procuring prepaid meter I don't know whether you understand now there is analogue meter of about 18,000 still available. Now they already have prepaid meter they are still procuring so they want to buy another one again. These are best practice like you in the indicator some best practice in the water sector you have a volumetric measurement these are where you are sure of accountability everybody pays for what he consumes you understand but here was it done with the basis for making sure that customer pays for what he consumes? Was it even economically viable? Why do we have to put prepaid meter that costs more than 50,000 when you can have a prepaid meter less than that but it is doing the job. (respondent L18)

Oh yes a lot has been commissioned in the past about two Mosun, Ogunola, Oke-ode and Ike-ode commissioned first. Ishasi which is 4 million gallons per day and Ota about 24 million gallons per day will be commissioned May and June and Adiyen phase 2 which is 70 million gallons per day is in the process that will have been commissioned in January but unfortunately you know a budget, a past administration planned that it will be commissioned but unfortunately because of the last election, but I know that before the end of this year it will be commissioned and that will actually affect the people of Lagos positively because a lot of people that do not have water along Ipaja axis, Ikorodu they will have water. They are linked to the Lagos state water master plan and we

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still have other ones like Odomola, which is also about 70 million gallons per day they are also linked with the Master plan. (respondent L20)

We have a lot of projects already on the border the Adiyen phase 2, Odumola they are all in the master plan which as I said the funding is not available, what is being done presently by the state is the head works that is the water works it is ongoing and hopefully by 2017 maybe that one should be completed it will then remain the network, to take the pipes out, the distribution pipes which the fund yet we are looking for investor so that they can come and do it and then give us plan how they want to recoup their money;

The main issue is that even if the government wants to finance water the whole budget of the state will not be able to given the population in the state that is why we have adopted private sector participation so that as government is doing something, the private sector also will look at areas to intervene based on the global master plan so as we get increase in population then we increase also access to water. That is why the corporation now chose about 3 zones to do pilot scheme but unfortunately we were not lucky because those meters or let me say because we contracted it out to a contractor to do installation and the management for us and we have just terminated their appointment because they are not giving us value for money (Respondent L3-L15) That is why the corporation now chose about 3 zones to do pilot scheme but unfortunately we were not lucky because those meters or let me say because we contracted it out to a contractor to do installation and the management for us and we have just terminated their appointment because they are not giving us value for money (respondents L3-L15)

As regards the production well effort is on ground now at least to go for another major water works, Adiyen Phase II and that Odumola I believe by the time those ones are completed and fully on ground I believe the water can get to some axis of Lagos state where much more revenue can be generated for instance now that of Odumola alone if it is fully implemented and we concentrated on the Via and Victoria Island axis, Ikoyi axis Lekki. One of the key plan is the ongoing Adiyen phase II, Adiyen phase I is of 70 million gallon design capacity over the years the maintenance has not been as at when due and all that you understand? So the production capacity has dropped you understand? But I'm sure with the full implementation of Adiyen phase 2 we will get a good result you understand? So that will help us a lot to at least move forward. (Respondent L21)

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#### Box of commentaries for maturity of mitigating processes

<b>Utility One</b>	<b>Utility Two</b>	<b>Utility three</b>	<b>Utility four</b>
<p>"I think we have units, like urban water monitoring units. They monitor they check as much as we do our best to make sure the water is okay from the treatment plant. We have people who follow it to town to the consumer point. Then we also have people who monitor rural water, who monitor boreholes within the FCT as a whole;</p> <p>So we have all monitoring units that are monitoring these even in the tanks and sometimes even at the consumer's tap to ensure that the water gets there very safe and its okay for people to consume;</p> <p>Like some of us that some units that go round to check the catchment the tributaries we need mobility we don't have to go borrowing or using your own car to do government job. I think that is it providing whatever we need as at when we need it that is the most important thing for us" (Respondent A18-A21)</p> <p>"The same JICA they came to us, they say they want to help us to maximise our revenue generation so they identified the solution. So when we are talking of production and a plant manager is a plant manager we only know what we produce here, when we send it out to the field, to the real people who are using it, who send it to your tap, to your doormat. How do they account for that water? So JICA said from their own experience in their country they want to give us bulk meter". (Respondent A22- A23)</p>	<p>"We read it at certain intervals and based on what enters your place we will be able to charge you accordingly so by that you cannot tell us that you are not getting water because your meter is telling us some water has passed through. It's just that in this part of the world, people can tamper with anything anyhow. People can tamper with your meter and do whatever but we are trying to see what we can do about that". (Respondent L19)</p> <p>"The effort that we have put in place in past is engaging the state task force to assist them in getting some of them arrested we prosecute. Effort to rid them off has not been yielding good result but I am very sure in few years to come or in a short while we will find a good solution to their problems" (Respondent L22)</p>		<p>"we try to make sure that people consume water by employing them to use meter. So that by the time you consume what you have consumed you know you have consumed but the use of meter has been a lot of crisis for us. Because of if you put the metre they will break the meter because they feel that the rate is higher. The rate is too much for them. So when you come to read the metre they will tell you that the consumption is not accurate". (Respondent K4)</p>

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Box of commentaries for innovative funding arrangements

<b>Utility One</b>	<b>Utility Two</b>	<b>Utility three</b>	<b>Utility four</b>
<p><i>“Well, for us to improve on this I think we have to have more funding and then more technical staff are required”. (Respondent A16)</i></p> <p><i>“With good leadership and fund because majorly fund is needed in this kind of organization to grow. I think we should be levelling with other international countries” (respondent A14)</i></p>	<p><i>“Lagos Water Corporation what the corporation has done is to draft out a PPP plan which is called the Lagos Water Corporation Master Plan and in this master plan you will see the strategies the corporation intends to get the private investors to invest in this sector and a couple have yielded some results”. (Respondent L1)</i></p>		<p><i>“Personally, I believe that we are supposed to find alternative ways of generating revenue. I think we can go into the business of pure water it will help a lot because we have all the facilities. You can see how pure water people are flourishing even though some of them do not have a clue about how to produce water. But we have the skill, we have the infrastructure and all facilities we have them. We also have our own marketing department all we need to do is exploit all these areas I have talked about and we should be able to succeed. I believe, the management should look into that aspect. Even bottled water as well. When people realise it is from water board, they will prefer us because we are professionals. We have water chemists, engineers. Every skill is available. Because of this, I strongly believe people will prefer to buy from us than from somebody who is just after money alone. If this is done that will be an improvement”. (Respondent K1)</i></p> <p><i>“We need good training in revenue collection and generation and PPP arrangement. It can be a PPP arrangement with some private sector people so that they can come in with their new ideas on how to get this money from customers especially the ones that do not want to pay. I believe it will go a long way in helping us”. (Respondent K2)</i></p> <p><i>“We should improve our billing facilities in other towns in Kaduna. It is only in Kaduna city and Zaria that we utilise our billing system. If we can improve our billing we should be able to get more money. Also, our tariff is so poor, it is very low, I believe it is the lowest in the country and we cannot do business like that. The government needs to review the tariff. The tariff is overdue for review and with that we should be able to do other things. The last time we conducted a study with the monetary and evaluation team which was 5 years ago, we discovered that the cost of producing a cubic meter of water then was N56 (Fifty-six naira) but we are charging N32 (Thirty-two naira) per cubic meter. The only saving grace we have is the tariff for commercial customers who are charged N100 (One hundred naira). However, the issue with the commercial customers is that they are few in Kaduna especially with the collapse of industries”. (Respondent K5)</i></p> <p><i>“There is what is called the new public management. However, we are operating as a government business. We are supposed to adapt to the new method of management. The personnel also need to be well informed about the current trends of business thinking because we generate money. We produce services we generate money so that is another area we need to seriously work on”. (respondent K5)</i></p>

Box of commentaries for staff management – Areas for improvement

<b>Utility One</b>	<b>Utility Two</b>	<b>Utility three</b>	<b>Utility four</b>
<p><i>With proper training, I do not see any problem they can only grow better. Hopefully, proper training will happen in the next 5 to ten years. There is a new government now that is interested in the job itself, I have a feeling that the current government is interested in the job and when you have a government that is interested in the job then the civil servants they are likely to progress. (Respondent A1)</i></p> <p><i>Then more competent hands in terms of well-trained engineers that will be on-site (Respondent A15)</i></p> <p><i>Well for us to improve on this I think we have to have more funding and then more technical staff are required. (Respondent A16)</i></p> <p><i>Training and re-training. Training and re-training alright. Simple we have been lacking that. And there are some training some people will embark on a training by the time they come back probably they will have changed them to another department so for them to be able to re-train those who are at home to train them on what they have gone for so we have a problem. (Respondent A17)</i></p> <p><i>“One area that we also appreciate is if there will be opportunities for peer review with composite organisations that is as in checking our quality assurance for double assurance. I think he has mentioned welfare”. (Respondents A18-A14)</i></p> <p><i>“Then we also look at the staff too they have the area managers at least there should be a policy in place to see that targets are given to area managers although it is there but it is not implemented. Targets should be given to the area managers and they should be able to meet up to and when above their targets there should be a kind of incentive to them. It will be a kind of booster so that they will be able to do more”. (Respondent A11-A13)</i></p> <p><i>“training and re-training of human beings human resources, capacity building, capacity support, capacity anything cannot actually be overemphasized. When human resources is outdated in information definitely it becomes an inhibitor and when we cannot maybe at par (power) with others you may not be at when you are talking about nations internationally (respondents A4-A8)</i></p>	<p><i>“like I have told you there are still a lot of gaps and even those who are in the system they will need training that is to bring them up in terms of best practices some people have been in the for a very long time and you know the system there are a lot of new developments out there which people need to be aware of. This is in terms capacity building”. (respondent L1)</i></p> <p><i>“Even if not very good and we also mentioned about staffing. Which could be a factor so, we also need adequate staffing”(respondents L3-L15)</i></p> <p><i>“Yes even on our staff we need to do more for training. We need to expose our people more to international standards and medically too we need to educate them we need to give them more health and because it is a healthy person that can perform and because our salary is not so much some of our staff they cut corners on their health”. (respondent L17)</i></p> <p><i>“our staff they need to go for training no matter how good you are on a job at least at certain intervals because technology is not static its dynamic we need constant training even in human resources and water management there are new ways and new methods of doing things people need to be updated. Because the greatest asset of an organisation is the manpower it is not the machine or whatever, it is the people. You understand what I am saying so you need to train and re-train and re-train to get the best out of your people. That is lacking here we used to have it but it is not there now”. (respondent L19)</i></p> <p><i>“I was talking to some people that if they give me this organisation to man, First thing that I need to do is human side, you understand first. So for me human factor first attitudinal change or change management so that is just it”. (Respondent L18)</i></p> <p><i>“Yes, first of all, we need to have up to date staff. The MD was told the last time we were in Alausa to get in touch with the head of Service. You have a department there that can actually do the staffing for you. There are some areas where we will need to transfer people to ensure they are in the right position. Also we need to ensure people will be sent to the right place before we actually engage them in whatever duties”. (Respondent L20)</i></p> <p><i>“there should be regular training that is human capacity. You build them”. (Respondent L21)</i></p>	<p><i>I think there will need to be some improvement in that, because like with us here we are just starting, I mean training and all those things (Respondent P1-P3)</i></p> <p><i>Someone like me I do not know whether I will continue here after next year because I will be leaving them. We need new skill we need new hands with the experience and all. To actually carry this project to a design perception that will help. (Respondent P4)</i></p>	<p><i>“On the human resource angle we need massive training of our staff. Massive training, re-training. We need to introduce them to new practices. So we need to train our staff at least to a certain level so that they are able to perform.”, (Respondent K2)</i></p> <p><i>We need total quality control in terms of staffing. Our work personnel are not sufficient. Currently, we have only about twenty engineers, six water chemists who are managing twelve treatment plants. Ideally, every treatment plant is supposed to have a chemist assigned to it. We also have a central lab which is supposed to have chemists managing it. Apart from that we have the quality control department needs chemists too. In the case of engineers, we need mechanical engineers, electrical engineers and civil engineers assigned to all our treatment plants and distribution department. So I believe our staff are not sufficient”. (Respondent K6)</i></p>

Box of commentaries for preventive maintenance as an improvement

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<i>Utility One</i>	<i>Utility Two</i>	<i>Utility three</i>	<i>Utility four</i>
	<p><i>“These infrastructures with the pipe mains that are buried under the earth and some others like our generators or like our filters in our major waterworks sometimes that are not adequately taken care of even when they are specified to be done at a particular period. So all these would ordinarily improve and ensure we sustain our supply if properly looked at”. (Respondent L16)</i></p> <p><i>“A preventive maintenance programme is necessary. We should have we used to have but some few years back the maintenance department was scrapped and since then our assets have just been going downhill and we only rehabilitate when they grind to a halt, now literally grind to a halt” (respondent L2)</i></p> <p><i>“Because most of the mini and micro waterworks are doing either quarter or maybe 30% or at the most 50% of their capacity. Most of them need rehabilitation we also need to maintain them periodically”. (respondent L1)</i></p> <p><i>“We do not have daily or routine maintenance like developed countries where you flush your system. We are still underserving the populace so we do not have that luxury of water to waste but in developed countries, it is a daily or weekly occurrence. They open the containers, they flush the system but we are not doing that here” (respondent L3-L15)</i></p> <p><i>“Number one we need to fix most of our waterworks they are not performing at the optimum. Because most of them the equipment there are ageing and you know even if you build a house, if you do not maintain it well at the right time it will not last long. When a tap is leaking, if you do not fix it immediately, there will be a time where you will not be able to lock the tap and water will be wasted”. (Respondent L17)</i></p> <p><i>“We need to improve our maintenance” ( Respondent L19)</i></p> <p><i>“We hope to improve the way we maintain our waterworks. However, for now we cannot carry out routined maintenance because we are short-staffed. In Iju waterworks for example, we only have about 3 staff that are both mechanical and electrical. They are not enough to maintain all the equipment”. (Respondent L20)</i></p>		<p><i>“the kind of maintenance that all of these is going to you know get better we are hoping that our routine maintenances will also get better in terms of basically as we continue every area will get improvement, because no area is supposed to be static there is innovations and if we get them, we will be putting them into what we do”. (Respondents P1-P3)</i></p>

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Box of commentaries for governance – improvement

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<i>Utility One</i>	<i>Utility Two</i>	<i>Utility three</i>	<i>Utility four</i>
<p><i>“of course if you have the right kind of leadership I want to say that they could be a revolution the organisation could have moved up to be more effective and productive. Yes I believe there will be improvement”. (RespondentA9)</i></p> <p><i>“the act, establishing FCT water board needs to be enacted by National Assembly because we cannot on our own as FCT water board go to court and sue anybody because we do not have an act that establishes us”. (Respondent A17)</i></p> <p><i>for us legislation I think would help go a long way because our bill has been before the National Assembly they say it has passed first reading second reading but we need to have a law backing us because before we will be able to do certain things n. (Respondent A4-A8)</i></p> <p><i>With good leadership and fund because majorly fund is needed in this kind of organization to grow. I think we should be levelling with other international countries (respondent A14)</i></p> <p><i>You know there is one thing I want you to understand. FCT water board has not got its act therefore we are working under the government we are not independent. If we are independent, we can say this is what we want to do in the next year. (Respondent A10)</i></p> <p><i>“We need to have autonomy and a fixed asset policy. We went to our parent body to give us fixed asset policy they do not have”. (Respondents A11-A13)</i></p>	<p><i>“Give Water Corporation seed money, give the Water Regulatory Commission the approval to set an economic tariff and then hands off operations, you have given them the approval to increase their tariff, given them the free hand to manage the assets, all I would expect water corporation to do is to remit some money to government as rent for the infrastructure that government has invested in Lagos Water Corporation that is what we need” (Respondent L2)</i></p>		<p><i>“The number one thing is to do a robust law. Once you do a robust law you institutionalise let there be complete definition, let the method of governance be defined. if this is what we are supposed to deliver it should be clear. A robust law is tenable because you can constitute a board and people will know what they need to do”. (Respondent k6)</i></p>

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11/6/2017

Verification form for water companies in Nigeria

## Verification form for water companies in Nigeria

Verification Exercise for Improving the Asset Management Practices of Nigerian Urban Water Utilities.

### Executive Summary

This report seeks to verify the key themes obtained from conducting a research in four State Water authorities in Nigeria. The overall aim of the research is focused on improving the asset management practices of Nigerian Urban Utilities and the following objectives were developed to achieve this aim:

- To examine the Nigerian Water context: identify its risk and opportunities
- To establish management practices adopted in the Nigerian Urban water Utilities
- Validate a developed asset management model adaptable to the Nigerian water context

### Evaluation Methodology

The results in this report were gotten by interviews conducted with senior management personnel from four (4) different utilities in different geographical locations (Abuja, Lagos, Port-Harcourt and Kaduna). The rationale for the selection of four (4) utilities was for establishing maximum diversity that could adequately present the uniqueness of the Nigerian water context. In addition, the study covered four (4) different utilities to ensure that the attained results were reliable, valid and transferable to other Nigerian utilities. Consent was sought at an organisational level for the utilities. Next, seventy-five (75) senior-level water professionals in the different utilities were invited to take part in the study through personal invitations. Only sixty-one (61) respondents took part in the study while the remaining fourteen (14) respondents were unable to attend the interviews even after much follow up due to busy schedules and unforeseen circumstances. Interviews were recorded, transcribed and analysed to establish the key themes and findings presented in the next sections. The key findings were also used to inform the development of the proposed asset management framework which will be adaptable to the Nigerian Urban water context. You have been given this

Kaduna). The rationale for the selection of four (4) utilities was for establishing maximum diversity that could adequately present the uniqueness of the Nigerian water context. In addition, the study covered four (4) different utilities to ensure that the attained results were reliable, valid and transferable to other Nigerian utilities. Consent was sought at an organisational level for the utilities. Next, seventy-five (75) senior-level water professionals in the different utilities were invited to take part in the study through personal invitations. Only sixty-one (61) respondents took part in the study while the remaining fourteen (14) respondents were unable to attend the interviews even after much follow up due to busy schedules and unforeseen circumstances. Interviews were recorded, transcribed and analysed to establish the key themes and findings presented in the next sections. The key findings were also used to inform the development of the proposed asset management framework which will be adaptable to the Nigerian Urban water context. You have been given this report to kindly verify and confirm that you agree with the key findings and the developed framework in the outlined in the next 6 sections.

\* Required

1. Email address \*

[Redacted email address]

2. The research has identified key challenges which impact the performance of urban water agencies in Nigeria. Please confirm your level of agreement by selecting the most appropriate scale which corresponds to your desired response for each key challenges below. \*

*Mark only one oval per row.*

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Personnel management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Personnel management issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Policy implementation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Aged Infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Attitude to payment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
lack of resources	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autonomy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Population increase	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Power Failure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Political Issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

8. The following factors have been identified as major enablers influencing the performance of urban water utilities. Please confirm your level of agreement by selecting the most appropriate scale which corresponds to your desired response for each enabler. \*

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Infrastructure Provision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Competent Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Willingness to Pay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Staff Commitment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Credit Facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Stakeholder Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Customer Feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Legislation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

9. The research has identified the following areas for improvement in urban water utilities in Nigeria. Please confirm your level of agreement by selecting the most appropriate number which corresponds to your desired response for each improvement area below. \*

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Automated Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

The figure below shows the framework serves as a guide to aid Nigerian State Water Agencies in decision making.

There are 5 critical steps which utilities should take based on the information from the field study and Literature review which are shown in the implementation cycle in the figure below and they are:

1. Water utilities need to identify key challenges affecting sustainable water service provision based on their context e.g (key challenges previously identified above such as funding, aged infrastructure and others). Major gaps in service provision also need to be identified.
2. Strategies also need to be developed to address any gaps in sustainable water service provision ( State Water Master plans, Water Policies, budgets)
3. Water Companies need to right assets available at the right time in the right quantity and quality to address existing gaps and deliver strategies which have been set up - human assets (key stakeholders - FMWR, Staff, Contractors, customers, informal service providers) financial assets - capital investment, operational and production costs, tariffs, taxes, government subsidies, grants from donors and generated revenue physical infrastructure (water treatment plants, water distribution pipes, reservoirs and storage tanks, booster stations, office buildings and equipment) information assets (data about other assets (human, financial and physical assets) should be stored properly and analysed properly for the right information to be available) be required to deliver such plans.
4. Bench-marking tools and performance evaluation systems (key performance indicators) are needed for assessing and monitoring performance. IBNET indicators, IWA indicators, Sustainable development goals and competency maturity matrices (level of service coverage, water quality, production capacity, revenue generation) are tools which are used to develop measurable targets that can show where a utility currently stands in service provision and where they need to be. They put a measurable value on performance.
5. Outputs from Bench marking systems are achieved goals and targets which shows where a utility currently sits in performance and also shows where a utility needs to be based on bench-marking assessment. Lessons can be learnt and implemented to start the whole implementation process again as existing gaps can be established after a performance review.

SUPPORT SYSTEMS are shown below under the cycle and are being fed into the implementation cycle. It should be noted that without these systems, utilities will continue to struggle to deliver sustainable water services. It is advisable that these systems will first of all need to be in place before the process of delivering services should occur. They are classified as 3 components  
Institutional systems - Legislation and policies and governance systems (state water laws and state



only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
elements of the framework are relevant to Nigerian Urban water utilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
the framework covers most critical aspects of the Nigerian water Sector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
the framework is easy to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
the framework is adaptable to Nigerian Water Context	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
the framework shows relevant relationships and links between elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

A COPY OF A VALIDATION FORM

customers

6. Others please specify \*

I disagree because the industry is yet to start exploring these indicators. Revenue generation is a mirage in Nigeria and no enabling framework in place and continuous abandonments have led to vandalism.

7. The following performance criteria have been identified as important for evaluating the performance of water companies in Nigeria. Please confirm your level of agreement by selecting the most appropriate scale which suits your desired response for each indicator.

\*

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Production Capacity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Revenue Generation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Service Coverage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Water Distribution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Competency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Water Production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Autonomy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provision of Adequate Resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others please specify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Political will power,*



10. The research has identified the following management processes for improving the performance of urban water utilities. Please confirm your level of agreement by selecting the most appropriate scale value which corresponds to your desired response for each improvement area below. \*

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring and Review	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Policy Implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Public Relations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Staff Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Information Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Stakeholder Engagement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Metering Systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Public Sensitisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*They are agreeable indicators but Review of service is not implementable in Nigeria.*

Skip to question 10.



## **Information Sheet and Consent Form**

**Name of School:** School of Civil Engineering, University of Leeds.

**Project Title:** Asset management: a way forward to improving the performance of Nigerian Urban Water Utilities

You are invited to participate in a research study conducted by the University of Leeds. Before deciding on whether to participate, it is important that you understand the intent of the study and what it will involve. Your participation in this study is voluntary and you can choose not to take part without giving any explanation. You have 2 week to decide whether you will be participating or not. Please take time to read the detailed information under-listed carefully. In case you have any questions or require further clarification, please contact the researcher (see the contact details on page 3).

### **What is the purpose of this study?**

The intent of this study is to show how the formal application of asset management can be used to improve the performance of urban water utilities in Nigeria. “Asset Management” for the purpose of this study is defined as the coordinated activities an organisation uses to realise value from its physical infrastructure, work personnel, information systems and financial assets throughout their whole life-cycle ( from the period you think of creating or acquiring the asset until you are no longer in need of it).

Ensuring people have access to potable water supply is very important for their welfare and survival and most countries have proper systems in place for meeting rising demands of their people. The provision of sustainable water services in Sub-Saharan African countries like Nigeria has been a major challenge. This challenge is high on the agenda of international organisations and governments as they seek to meet up with other water utilities which adopt sustainable management practices like asset management for delivering improved water services. Asset Management (AM) is predominantly used in urban water Utilities in developed countries and successful AM practices have been established in places like UK, Australia, Canada and South Africa. Established successful practices in these countries have occurred as a result of the existence of sound regulatory, institutional and legislative platforms.

Gaining insights on how to transfer legacies from Countries with successful AM practices to developing countries like Nigeria where regulatory, institutional and legislative platforms are questionable and vague justifies the relevance of this study. Thus, the researcher intends to develop a framework that guides Nigerian State water agencies like yours, on how they can manage their assets (i.e. human, financial, physical and information assets) for delivering sustainable water services and achieving stakeholders’ satisfaction. Basically we will be finding out from you about the extent to which external and internal environmental, social, economic and environmental factors impact your operations as water utilities. Secondly, we want to ask about the operations, processes and control systems used by your organisation as well as their maturity levels. Finally we would ask you to indicate performance gaps in your operations and control systems.

### **Who is conducting the study?**

The research is conducted by a PhD research student (Imonikhe Oseigbowa) at the School of Civil Engineering, University of Leeds, as part of the requirement for a PhD.

### **Who is being asked to participate?**

Suitable participants for this study would be senior management officials of urban utilities who have a vast understanding of the technical and management processes that are used to ensure the delivery of sustainable water services.

### **What will be involved if I take part in this study?**

If you choose to participate, the researcher will explain the study in detail and ask you questions to confirm you are eligible to take part in the study. You will then be asked to sign a consent form to show you have agreed to participate in the study.

In the course of the study, you will be asked to participate in two sessions. The first will be a survey session which will involve completing a short questionnaire for about 20 to 30 minutes. This will give you an understanding of what is required for the study and will also prepare you towards the main interview which will be at a different date. The interview is designed to identify what technical and management processes you have in place for ensuring the provision of required water services. The interview session is expected to run between 45 and 60 minutes. The choice of date, time and place will be chosen based on your convenience whilst avoiding any risk to either the researcher or yourself.

### **What are the advantages and disadvantages of taking part?**

Potential benefits for participants include the opportunity to share their views, contribute to knowledge and proffer solutions for the current operations of the water utility company.

Participants could also benefit from improved service delivery and increased efficiency in terms of performance as a result of the study.

The risks to participants are minimal although reasonable duty of care is expected from the researcher

### **Can I withdraw from the study at any time?**

All participants can withdraw from the study before or during the data collection process but once the data/information has been written up and analysed it will preserve anonymity in a way that participants cannot be identified individually. At this point of write-up/submission participants would no longer be able to withdraw their data.

### **Will the information I give be kept confidential?**

Yes, all the information you provide will be kept confidential. Participants will be given different codes instead of using their real name so they cannot be identified by any other

person apart from the researcher. Information on all participants will be kept securely. Anonymous coded data will be kept for a period of up to 3 years after the end of the study in case further examination of these data is needed, but after this time it will be destroyed. Participants' personal data including names, contact details etc., will be destroyed after 1 year. The researcher will follow data handling procedures set out by the University of Leeds and the Data Protection Act 1998.

### **What will happen to the results of the study?**

The findings of the study may be published in academic journals or presented at research conferences and permission will be sort before the researcher submits publications. Participants who would like to receive information about the outcomes of the study will be sent copies of the research findings.

### **Who has reviewed this study?**

The study has been reviewed by the University of Leeds Research Ethics Committee and ethical approval has been granted. Consent has also been sort from the Federal Ministry of Water Resources of Nigeria and your organisation as well.

If you agree to participate and would like more information or have any questions or concerns about the study, please contact the researchers:

- **Imonikhe Oseigbowa (PhD Student)**  
**Mobile phone:** 09080971045  
**Email:** [cn12omi@leeds.ac.uk](mailto:cn12omi@leeds.ac.uk)
- **Mr Kris Moodley (Research Supervisor)**  
**Landline:** +44 (0)113 3432329  
**Email:** k.moodley@leeds.ac.uk

Please take time to decide whether or not you wish to take part.

**Thank you for taking time to read this information.**

**Participant ID Number: .....**

## CONSENT FORM

Consent to take part in the research titled: Asset management: a way forward to improving the performance of Nigerian urban water utilities

Name of researcher: Imonikhe Oseigbowa M	Add your initials next to the statements you agree with
I confirm that I have read and understood the information sheet explaining the above research project and I have had the opportunity to ask questions about the project.	
I understand that my participation is voluntary and that I am free to withdraw before or during the data collection process without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any particular question or questions, I am free to decline. I understand that once the data/information has been written up it would preserve my identity such that I cannot be identified individually. At this point of write-up/submission I would no longer be able to withdraw my data.	
I give permission for members of the research team to have access to my anonymised responses. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research. I understand that my responses will be kept strictly confidential	
I agree for the data collected from me to be used in relevant future research.	
I agree to take part in the above research project and will inform the lead researcher should my contact details change.	
I would like to receive a copy of the results of the above study	

Name of participant	
Participant's signature	
Date	
Name of lead researcher	
Signature	
Date	

When completed: One copy for participant and original copy for research file.

**Thank you for agreeing to take part in this study.**

Questionnaire: Asset Management: A Way Forward To Improving The Performance Of  
Nigerian Water Utilities

**Questionnaire S/No:**

**Participant's Ref No:**

**Utility Contact Details:**

**Participant's Personal Information**

Name:

Department:

Level / Ranking in Organisation:

Job description:

Years of Experience:



## Validation form for water companies in Nigeria

Validation Exercise for Improving the Asset Management Practices of Nigerian Urban Water Utilities.

### Executive Summary

This report seeks to validate the key themes obtained from conducting a research in four State Water authorities in Nigeria. The overall aim of the research is focused on improving the management practices of Nigerian Urban Utilities and the following objectives were developed to achieve this aim:

- To examine the Nigerian Water context: identify its risk and opportunities
- To establish management practices adopted in the Nigerian Urban water Utilities
- Validate a developed performance management model adaptable to the Nigerian water context

### Evaluation Methodology

The results in this report were gotten by interviews conducted with senior management personnel from four (4) different utilities in different geographical locations (Abuja, Lagos, Port-Harcourt and Kaduna). The rationale for the selection of four (4) utilities was for establishing maximum diversity that could adequately present the uniqueness of the Nigerian water context. In addition, the study covered four (4) different utilities to ensure that the attained results were reliable, valid and transferable to other Nigerian utilities. Consent was sought at an organisational level for the utilities. Next, seventy-five (75) senior-level water professionals in the different utilities were invited to take part in the study through personal invitations. Only sixty-one (61) respondents took part in the study while the remaining fourteen (14) respondents were unable to attend the interviews even after much follow up due to busy schedules and unforeseen circumstances. Interviews were recorded, transcribed and analysed to establish the key themes and findings presented in the next sections. The key findings were also used to inform the development of the proposed asset management framework which will be adaptable to the Nigerian Urban water context. In the next 3 sections listed below please kindly validate the findings and the developed framework which have been established from the research.

Email address \*



The research has identified a specific set of challenges which impact the performance of urban water agencies in Nigeria. please evaluate the impact of each challenges using the likert scale provided below \*

	No impact	weak	Moderate	strong	very strong
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Personnel management issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Policy implementation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Aged Infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Attitude to payment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
lack of resources	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autonomy	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Population increase	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Power Failure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Political issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Others please specify (Challenges)

lack of maintenance culture

## Verification form for water companies in Nigeria

Verification Exercise for Improving the Asset Management Practices of Nigerian Urban Water Utilities.

### Executive Summary

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### Evaluation Methodology

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\* Required

1. Email address \*

cvnobi@yahoo.com

2. The research has identified key challenges which impact the performance of urban water agencies in Nigeria. Please confirm your level of agreement by selecting the most appropriate scale which corresponds to your desired response for each key challenges below. \*

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Personnel management issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Policy implementation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Aged Infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Attitude to payment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
lack of resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Autonomy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Population increase	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Power Failure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Political Issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>



11. Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Elements of the framework are relevant to Nigerian Urban water utilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
The framework covers most critical aspects of the Nigerian Water Sector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
The framework is easy to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
The framework is adaptable to the Nigerian Water Context	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
The framework shows relevant relationships and links between its elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

### Details

I hereby confirm that the details provided by me for this exercise are true and accurate

12. Name

13. Department

14. Years of Experience

Verification form for water companies in Nigeria

15. Organisation

Send me a copy of my responses.

The following factors have been identified as major enablers influencing the performance of urban water utilities. Please confirm your level of agreement by selecting the most scale which corresponds to your desired response for each enabler. \*

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Infrastructure Provision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Competent Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Willingness to Pay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Staff Commitment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Credit Facilities	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stakeholder Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Customer Feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Legislation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

<https://docs.google.com/forms/d/1bJ6D0842hgmgYoAgjPsi0yrMvsl8wwMyZjyrRvzGtzk/edit#response=ACYDBNgq1gca1XNBw83D8-Tsif4UIBwgE...> 4/9

12/15/2017

Validation form for water companies in Nigeria

Others please specify (enablers)

The research has identified the following areas for improvement in urban water utilities in Nigeria. Please confirm your level of agreement by selecting the most appropriate number which corresponds to your desired response for each improvement area below. \*

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Automated Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Partnering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Staff Welfare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Alternative Power Generation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Planned Maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
PPP	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autonomy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

The research has identified a specific set of challenges which impact the performance of urban water agencies in Nigeria. please evaluate the impact of each challenges using the likert scale provided below \*

	No impact	weak	Moderate	strong	very strong
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Personnel management issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Policy implementation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Aged Infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Attitude to payment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
lack of resources	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autonomy	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Population increase	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Power Failure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Political Issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Others please specify (Challenges)

lack of maintenance culture

<https://docs.google.com/forms/d/1bJ8D0642hgmgyoAgjPsi0yrMvsl8wwMyZjyrRvzGtzk/edit#response=ACYDBNgq1gca1XNBw83D8-Tsif4UIBwgE...> 1/9

12/15/2017

Validation form for water companies in Nigeria

The research has identified the following stakeholders as having a major influence on the performance of urban water utilities. Rank their level of importance by selecting the most appropriate level which corresponds to your desired response for each stakeholder. \*

	Not important	Slightly Important	Moderately Important	Important	Very Important
Customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Non Governmental Organisations/ International Donors	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
State Government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
FMWR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Contractors and Suppliers	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Informal Service Providers	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communities and Groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

## Verification form for water companies in Nigeria

Verification Exercise for Improving the Asset Management Practices of Nigerian Urban Water Utilities.

### Executive Summary

This report seeks to verify the key themes obtained from conducting a research in four State Water authorities in Nigeria. The overall aim of the research is focused on improving the asset management practices of Nigerian Urban Utilities and the following objectives were developed to achieve this aim:

- To examine the Nigerian Water context: identify its risk and opportunities
- To establish management practices adopted in the Nigerian Urban water Utilities
- Validate a developed asset management model adaptable to the Nigerian water context

### Evaluation Methodology

The results in this report were gotten by interviews conducted with senior management personnel from four (4) different utilities in different geographical locations (Abuja, Lagos, Port-Harcourt and Kaduna). The rationale for the selection of four (4) utilities was for establishing maximum diversity that could adequately present the uniqueness of the Nigerian water context. In addition, the study covered four (4) different utilities to ensure that the attained results were reliable, valid and transferable to other Nigerian utilities. Consent was sought at an organisational level for the utilities. Next, seventy-five (75) senior-level water professionals in the different utilities were invited to take part in the study through personal invitations. Only sixty-one (61) respondents took part in the study while the remaining fourteen (14) respondents were unable to attend the interviews even after much follow up due to busy schedules and unforeseen circumstances. Interviews were recorded, transcribed and analysed to establish the key themes and findings presented in the next sections. The key findings were also used to inform the development of the proposed asset management framework which will be adaptable to the Nigerian Urban water context. You have been given this report to kindly verify and confirm that you agree with the key findings and the developed framework in the outlined in the next 6 sections.

\* Required

### 1. Email address \*

cvnobi@yahoo.com

### 2. The research has identified key challenges which impact the performance of urban water agencies in Nigeria. Please confirm your level of agreement by selecting the most appropriate scale which corresponds to your desired response for each key challenges below. \*

Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Personnel management issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Policy implementation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Aged Infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Attitude to payment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
lack of resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Autonomy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Population increase	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Power Failure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Political Issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

11. Mark only one oval per row.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Elements of the framework are relevant to Nigerian Urban water utilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
The framework covers most critical aspects of the Nigerian Water Sector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
The framework is easy to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
The framework is adaptable to the Nigerian Water Context	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
The framework shows relevant relationships and links between its elements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

### Details

I hereby confirm that the details provided by me for this exercise are true and accurate

12. Name

13. Department

14. Years of Experience

7 Verification form for water companies in Nigeria

15. Organisation

Send me a copy of my responses.

The following factors have been identified as major enablers influencing the performance of urban water utilities. Please confirm your level of agreement by selecting the most scale which corresponds to your desired response for each enabler. \*

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Infrastructure Provision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Competent Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Willingness to Pay	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Staff Commitment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Credit Facilities	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stakeholder Support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Customer Feedback	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Legislation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

<https://docs.google.com/forms/d/1bJ6D0842hgmgYoAgjPsi0yrMvsl8wwMyZjyrRvzGtzk/edit#response=ACYDBNgq1gca1XNBw83D8-Tsif4UIBwgE...> 4/9

12/15/2017

Validation form for water companies in Nigeria

Others please specify (enablers)

The research has identified the following areas for improvement in urban water utilities in Nigeria. Please confirm your level of agreement by selecting the most appropriate number which corresponds to your desired response for each improvement area below. \*

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Automated Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Partnering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Staff Welfare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Alternative Power Generation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Planned Maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
PPP	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autonomy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

The research has identified a specific set of challenges which impact the performance of urban water agencies in Nigeria. please evaluate the impact of each challenges using the likert scale provided below \*

	No impact	weak	Moderate	strong	very strong
Funding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Personnel management issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Policy implementation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Aged Infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Attitude to payment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
lack of resources	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Autonomy	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Population increase	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Power Failure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Political Issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Others please specify (Challenges)

lack of maintenance culture

<https://docs.google.com/forms/d/1bJ8D0642hgmgyoAgjPsi0yrMvsl8wMyZjyrRvzGtzk/edit#response=ACYDBNgq1gca1XNBw83D8-Tsif4UIBwgE...> 1/9

12/15/2017

Validation form for water companies in Nigeria

The research has identified the following stakeholders as having a major influence on the performance of urban water utilities. Rank their level of importance by selecting the most appropriate level which corresponds to your desired response for each stakeholder. \*

	Not important	Slightly Important	Moderately Important	Important	Very Important
Customers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Non Governmental Organisations/ International Donors	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
State Government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
FMWR	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Contractors and Suppliers	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Informal Service Providers	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communities and Groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>