

LAGOS WATER CRISIS

Alternative Roadmap for Water Sector



October | 2016

LAGOS WATER CRISIS

ALTERNATIVE ROADMAP FOR WATER SECTOR

ENVIRONMENTAL RIGHTS ACTION/FRIENDS OF THE EARTH, NIGERIA

Environmental Rights Action (ERA) is a Nigerian advocacy non-governmental organisation founded on January 11, 1993 to deal with environmental human rights issues in Nigeria. ERA is the Nigerian chapter of Friends of the Earth International (FoEI). The organisation is dedicated to the defence of human ecosystems in terms of human rights, and to the promotion of environmentally responsible governmental, commercial, community, and individual practice in Nigeria through the empowerment of local people.

www.erafoen.org

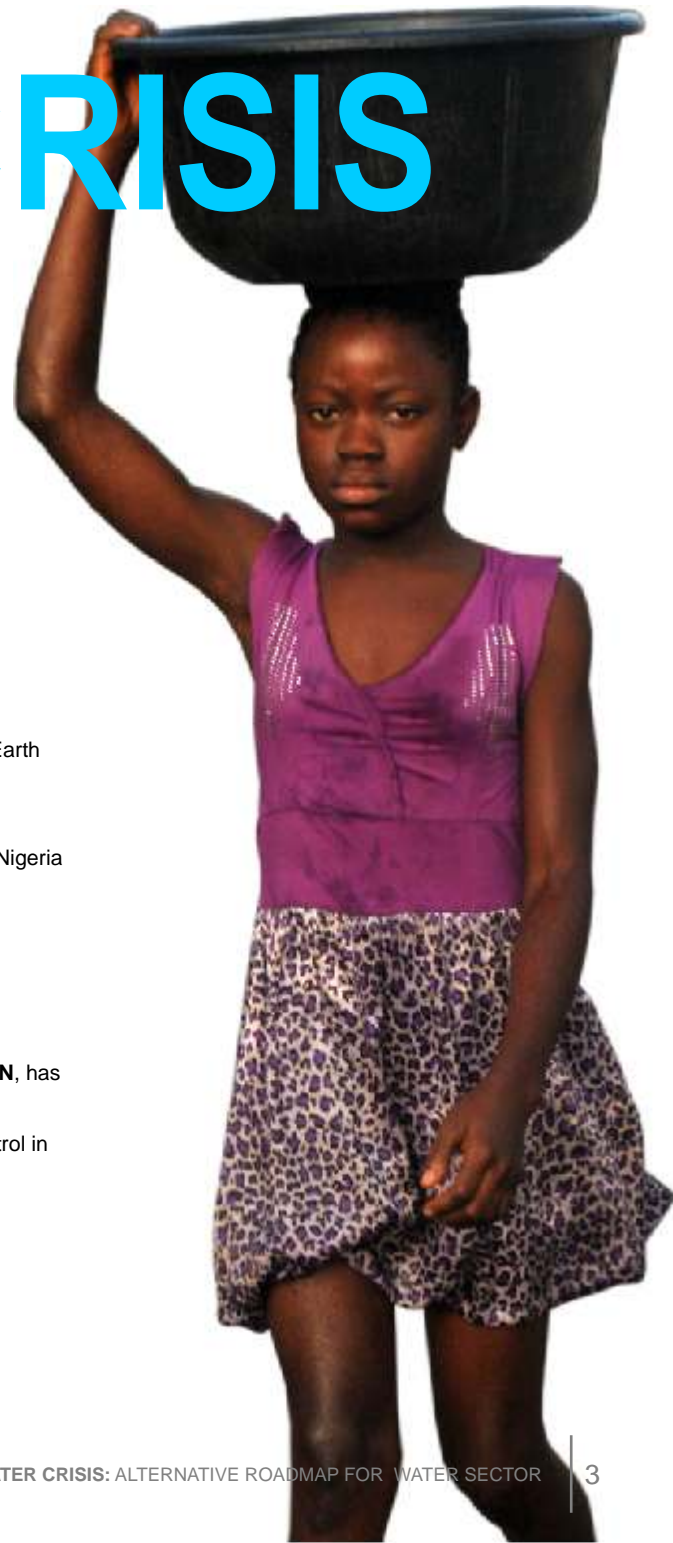
Our Water, Our Right

ERA/FoEN, through **THIS IS LAGOS: OUR WATER, OUR RIGHT CAMPAIGN**, has mobilized local communities, labour unions, rights activists, and social justice crusaders to call for transparency, accountability, and democratic public control in the management of public water infrastructure.

© ERA/FoEN 2016

ISBN: 978-978-956-819-2

Photo Credit: ERA/FoEN



ACKNOWLEDGEMENTS

Environmental Rights Action/Friends of the Earth, Nigeria appreciates the kind assistance and/or financial support of all the organisations that participated in this report together: Corporate Accountability International, Transnational Institute, Public Services International Research Unit, Public Services International, and Amalgamated Union of Public Corporations, Civil Service Technical and Recreational Services Employees (AUPCTRE). We also acknowledge the support of the African Women Water, Sanitation, and Hygiene Network (AWWASHN).

Authors:

Akinbode Oluwafemi, Environmental Rights Action/Friends of the Earth - Nigeria (www.erafoen.org)
Philip Jakpor, Environmental Rights Action/Friends of the Earth - Nigeria
Susanna Bohme, Corporate Accountability International (www.stopcorporateabuse.org)
Satoko Kishimoto, Transnational Institute (www.tni.org)
Emanuele Lobina, Public Services International Research Unit (www.psiru.org)

Additional research support provided by:

Ben Ezeamalu and Tunji Buhari



- Executive Summary
- Health and Economic Toll of Lagos Water Crisis
- Roots Of The Crisis
- What Lagosians Need From the Water System
- International Lessons For Building Robust Public Water Systems
- The Way Forward In Lagos
- References

EXECUTIVE SUMMARY

Lagos Water Crisis: Alternative roadmap for public water sector points the way out of the water crisis in Lagos. It reviews the impact and reasons for the failure of the current water system, providing models from around the world for adaptation to the Lagos context, and makes specific recommendations that can be implemented by the Lagos State Government and Lagos State Water Corporation over the short and long term. This way forward will ensure a well-functioning, democratically governed water system in Lagos.

Health and economic toll of Lagos water crisis

Lagos is surrounded by water from the Gulf of Guinea to the polluted Lagos Lagoon. Provision of adequate potable water to its over 21 million residents remains a huge challenge. The Lagos State Water Supply Master Plan estimates daily water demand in the city at 540 million gallons per day (MGD) and production by the Lagos State Water Corporation (LSWC) at 210 MGD. Acute water shortage in the state has affected all aspects of daily life in Lagos, particularly for low-income people. The dire situation has compromised sanitation and public health. In addition, the high cost of sourcing water has further impoverished Lagos residents.

Roots of the crisis

The Lagos water crisis does not have a single cause, but rather a number of primary drivers. These include:

1. Ageing and insufficient water infrastructure.

The two major water treatment plants in Lagos, Iju and Adiyin, produce 70 percent of water for Lagos, but both are in disrepair and neither is functioning at highest capacity. Electricity supply is a problem as the Akute Power Plant, which is meant to supply the waterworks, has also suffered stoppages and underproduction. Likewise, the network of water mains and service lines in Lagos is inadequate to serve the large city population. Fewer than 10 percent of households have connections and fewer than 30 percent of people have access to community standpipes. Even these connections do not always provide an active water flow.

2. Decades of policies that did not work.

The policies pursued in Lagos since the late 1980s have failed to expand and update this ageing infrastructure. These policies have largely promoted privatisation, lately in the form of “public-private partnerships,” or PPPs. Worldwide, PPPs have repeatedly failed to provide needed investment and have led to skyrocketing rates, job cuts, and other anti-people practices.

In Lagos, the influence of international financial institutions and international donors with a pro-privatisation approach, notably the World Bank Group, have led to the stagnation and deterioration of Lagos' water infrastructure. The World Bank Group has encouraged PPPs and other forms of privatisation despite ample evidence of the failure of these approaches. The failures outlined in this document are also emphasized by Public Services International (PSI) General Secretary Rosa Pavanelli, in her January 2016 letter to Lagos State Governor Akinwunmi Ambode.

Lagos officials have also adopted this approach. Over the past decade, Lagos State decision-makers have attempted to address the water crisis by implementing policies at various levels that, like the World Bank Group efforts, facilitate private sector participation in the water sector. The hope behind these policies is that private corporations would contribute capital and expertise to Lagos' water system. However, these strategies have failed.

Today it is evident that Lagos decision-makers have devoted substantial effort, time, and money to pursuing private sector “partners,” which has prevented the adoption of policies capable of expanding access to safe, affordable water.

3. Inadequate budget allocation.

The budget allocation must be drastically increased to expand access. For years, the Lagos State budget has not provided adequate funding for maintaining and expanding the water system and resolving the Lagos water crisis. According to the Lagos State Water Supply Master Plan, US\$2.5 billion is required to achieve needed access, beginning with US\$737.66 million in the 2010-2016 period.

4. Failure to ensure meaningful public participation.

No state agency, nor the LSWC, has established formal mechanisms for meaningful public participation, such as water board, citizens' utility board, participatory budgeting, or social dialogue process. This absence means that there is no regular, formal channel for Lagosians to actively and meaningfully participate in water provision policy. Indeed, officials have sought Lagosians' assent to plans and priorities of the LSWC and World Bank, rather than ensuring active, free, and meaningful participation that could guide or shape water policy.

5. Poor labour practices.

Currently, there are no effective channels in place to allow workers to give input on issues affecting their work and work environment or to raise grievances. This has resulted in conditions that hurt workers as well as the water system. The system is understaffed and workers lack appropriate tools and training to excel at their jobs.

6. Regulatory failures.

Serious questions have been raised relating to failures of regulation governing water sector activity in Lagos, including both the efficacy of regulators and the enforcement of regulations. Specifically, the water crisis in Lagos is exacerbated by the fact that the Lagos State Water Regulatory Commission (LSWRC) has conflicting mandates, has been largely inactive, and is, like the LSWC, charged with securing private sector involvement. Additionally, questions have been raised as to whether procurement within the LSWC is transparent and competitive.

What Lagosians need

Interviews with Lagosians show that leaders and community members alike want a system that upholds the human right to water while integrating broad public participation in decision-making. The idea of water privatisation is roundly rejected by civil society, community members, women's groups, as well as the labour unions. The change that Lagosians have asked for is possible. In order to chart a way forward for Lagos, we can look to international models and adopt those that hold promise to effectively reverse the water crisis. We should avoid adopting the international model that has largely failed - PPPs.

International lessons for Lagos

Examination of public water successes provides many lessons and models of how Lagos could reinvent public water to bring an end to the water crisis. Governments worldwide have maintained or taken back public control of their public water systems. Their successes depend on innovation and reforms in a number of areas and include several aspects of successful water systems, such as funding mechanisms, budgetary allocation, democratic oversight and accountability, affordability and rate structure, civil society engagement and coordination, public-public partnerships (PUPs), and others.

1. Reinventing public water is possible.

There are many examples of effective and efficient public sector water and sanitation services in developed, transitioning, and developing countries. In fact, the most prominent examples of efficiency are often found in the public sector, not the private sector. For example, public operator Phnom Penh Water Supply Authority (PPWSA) increased coverage from 20% to 90% in less than 20 years.

2. Reinventing public water is preferable.

The international experience shows that public operations enjoy a comparative advantage over the private sector in relation to promoting universal access to water and sanitation. Unlike the private sector, the public sector is not subject to the profit maximisation imperative. This gives public sector management the flexibility to maximise the reinvestment of resources into the system for the achievement of social objectives such as the expansion of service coverage.

Proponents of water privatisation make enticing promises, but the industry has a poor track record of delivering on those promises. One of these promises is that of superior private sector efficiency. Numerous international studies have demonstrated that there is no evidence that the private sector is more efficient. Another promise is that the private sector will raise money more cheaply than government, but experts have found that in most cases, government borrowing is less expensive.

3. Using public finance is preferable.

The public sector has better access to loans and other forms of infrastructure finance, as it pays lower rates of interest than the private sector. Public financing is the main source of financing for water and sewage infrastructure in the world, currently and historically. There are a number of tools for public finance available to all levels of government, including concessionary loans, municipal bonds, revolving funds, and public banks.

4. The human right to water must be protected and fulfilled.

Financial sustainability is important, but states must also protect and fulfill the human right to water, as recognized by the United Nations. The human right to water requires, among other things, that drinking water be affordable and accessible and that water governance include active, free, and meaningful public participation. Publicly owned and run water utilities with transparent governance and citizen involvement are best positioned to fulfill these requirements because they can place the needs of residents first.

5. Public collaboration delivers the needed capacity, while competition does not.

PUPs are collaborations between two or more public authorities or organisations. Based on solidarity, they are formed to improve the capacity and effectiveness of one partner in providing public water supply and/or sanitation services. The absence of commercial considerations allows public partners to reinvest all available resources into the development of local capacity, to build a mutual trust which translates into long-term capacity gains, and to incur low transaction costs.

6. Re-establish public commitment to serve public interests, instead of giving up responsibility.

Public water requires political will and well-informed leadership in order to develop water systems that are beneficial to the people.

7. Reinventing public water is good for democratic governance.

Public operators are able to strengthen transparency and accountability through the adoption of advanced forms of democratisation and public participation. Examples of democratic governance include labour-management cooperation, social dialogue, participatory budgeting, and popularly elected deliberative bodies.

8. How Lagos public water can become world class.

LSWC should be reformed radically while retaining full public ownership and management to avoid the problems of water privatisation and PPPs. While Lagos citizens are not satisfied with the current situation, and understandably so, a reformed public LSWC could become world class by adopting the best practices from successful public water utilities in the Global North and South, strengthening its management and operations through PUPs and international solidarity, and strengthening decision-making through democratic governance.

The way forward in Lagos

A number of reforms within the Lagos State Water Corporation and at the level of state policy and budget can ensure Lagos is able to establish a position as a leader for affordable, accessible, and democratically accountable water provision.

1. Protect and fulfill the human right to water as an obligation of the government, representing the people.

The Lagos state government can affirm its commitment to the right to water through a strong resolution by the State House of Assembly and by ensuring adequate public funding and democratic oversight to meet the water needs of all Lagosians.

2. Reject all forms of water privatisation, PPPs, and commodification of water, revising laws accordingly.

Officials and the leadership of the LSWC must acknowledge that PPPs are a form of privatisation and promise to reject all forms of privatisation, including public private partnerships. Officials must review and revise all pro-privatisation policies and laws for the water sector that currently promote PPPs or outright privatisation of water to ensure Lagos does not enter into harmful PPP arrangements or traditional privatisation schemes like concessions. Instead, plans and legislation should include strategies for public funding and financing, as well as effective democratic governance, as laid out in this document.

3. Increase budgetary allocation to the water sector.

A consistent and adequate budgetary allocation to the water sector will allow the attainment of universal access that Lagos residents deserve. An adequate budget for LSWC could be achieved with a mix of resources and approaches, including:

- a. Equitable and innovative taxation.
- b. Innovative tariffs that ensure water is affordable to all while generating needed revenue.
- c. Designating bond funds from the recently approved N500 billion bond issue for use in the water sector over the next five to ten years.
- d. Replicating proven public financing models from around the world.

4. Integrate broad public participation in developing plans to achieve universal access to clean water.

Lagos officials should institute formal channels for citizen input and oversight to ensure all Lagosians have a say in water policy. We recommend the formation of a deliberative body with elected members with proportional representation from each local government area.

5. Ensure a focus on public financing and democratic governance of water is reflected in any projects funded by international financial institutions or international development funds.

Lagos officials should certify that projects funded by or carried out with international funders are driven by the priorities of local people, and ensure public control of water by rejecting PPPs, concessions, or other forms of privatisation. Officials should reject hidden conditionalities that promote private sector participation in water.

6. Improve labour relations in LSWC.

The Lagos State Government must ensure LSWC workers have effective formal channels to raise workplace issues with management. Worker-management cooperation should allow workers to participate in making decisions, thus bringing the knowledge and expertise into rebuilding a strong LSWC. Workers should also be able to address grievances without fear of retribution.

7. Pursue Public Public Partnerships (PUP).

The Lagos state government should immediately set up a task force to explore opportunities available in PUPs.

8. Promote good governance and eliminate corruption.

Lagos State Government should promote good governance at the LSWC. There should be accountability for all public funds invested in that agency, including assurance that procurement rules, labour contracts, and fund disbursement are carried out fully and in accordance with the law, and with full and complete transparency.

Ending the Lagos water crisis

Lagos today has a water system that falls far short of covering the entire population of the growing city. However, we have the knowledge and the resources to repair the damage done by failed policies and turn a new corner. If Lagos officials listen to the people and respond to their demands by rejecting PPPs and committing to adequately funding a democratically accountable public water system that works, we can end the crisis together.



HEALTH AND ECONOMIC TOLL OF LAGOS WATER CRISIS

Lagos is the most populous city in Africa and the centre of economic activity in Nigeria. With a population of over 21 million people and growth rate of 6 to 8 percent annually, the United Nations (U.N.) recently estimated that Lagos will become the ninth largest megacity in the world.¹

Currently, Lagos accounts for over 60 percent of industrial and commercial activities in Nigeria, and has been able to diversify its economy from oil revenue handouts from the central government.² Lagos generates over 75 percent of its revenue internally, and in 2010 its GDP stood at US\$80 billion, making it the 11th largest economy in Africa. Lagos' economy ever since has recorded steady and exponential growth.³

Lagos is surrounded by water from the sea and lagoon. Yet provision of adequate potable water to its over 21 million residents has remained a huge challenge. The Lagos State Water Supply Master Plan estimates daily water demand in the city at 540 million gallons per day (MGD) and production by the Lagos State Water Corporation (LSWC) at 210 MGD.⁴ However, the LSWC's website lists total production capacity at only 163 MGD.⁵ By 2020, water demand is expected to hit 733 MGD.⁶

Acute water shortage in the state has affected a gamut of daily life, particularly among the poor. Echoing the sentiment of many Lagosians, a resident of Epe in Eredo Local Government Area, Mrs. Bisi Fasasi, painted a gloomy picture of the water situation in her community. *"We don't have water. There is no water anywhere. Everybody depends on borehole..."*

*We don't have food and water yet they still say we should come and pay for water.
Then why did we vote for them? What exactly will government do for us in our community?
We pay for electricity and yet no electricity ...
Government should make water free.
Water is very essential to our daily lives.
We don't want our children to suffer.*

Because water and sanitation are two key drivers of public health, the water crisis' impact on public health is dire. Indeed, it puts the state's booming population at risk of diseases like cholera, dysentery, diarrhea, and salmonellosis, in addition to escalating cases of typhoid and malaria fever.

In February 2016, 25 children from Otodo Gbame, Ikate Eti-Osa Local Government Area of the state, died after drinking the community's pathogen-infected water, according to the Lagos Commissioner for Health, Dr. Jide Idris.⁷



Governor Akinwunmi Ambode

Photo Credit: LASG

The dangers include long-term exposure to toxins. In a 2012 report published in *Resources and Environment*, some borehole water samples investigated in Lagos were said to contain high concentrations of heavy metals like lead and cadmium at levels far above the World Health Organization (WHO) maximum acceptable concentration (MAC).⁸

Adequate water treatment could help control heavy metal exposure.



The negative effects of shortfall in water are not limited only to public health. The high cost of sourcing water has also further impoverished Lagos residents. For most Lagos residents the main sources of water supply are water vendors popularly known as 'mai ruwa'. The vendors themselves buy from water tankers or houses that have boreholes and sell at an additional cost to buyers. The price of a 20-litre keg of water sold by the 'mairuwa' was N20 before the hike in fuel prices in early 2016, at which point the prices rose to N50-70.⁹ The average family could use up to seven or eight jerry cans daily which translates to N10,000-17,000 monthly in a nation where the average middle class family income is N75,000 - N100,000.¹⁰ This high price threatens the accessibility of water, which improves the quality of life and makes citizens healthier for economic activities and development.

The human and economic toll of the water crisis makes it urgent that we find a way forward. To do so, we must examine the roots of that crisis and its impact on everyday Lagosians. Just as important, we must look at positive models from around the world that we may draw on to develop our own efficient solutions. Together, we can ensure that Lagos water is not only accessed and appreciated in our city, but also recognized as a model around the world.

ROOTS OF THE CRISIS

Over the past several decades, expansion of the public water system has not kept pace with the rapid growth of the metropolis.

Today, ageing treatment works and distribution systems are not adequate to serve the population of 21 million.

Here we provide a brief overview of the primary drivers of the Lagos water crisis. These include:

1. Ageing and insufficient water infrastructure.
2. Decades of policies that did not work.
 - The influence of the international financial institutions and international donors with a pro-privatisation approach.
 - Failed state- and national-level policies that promote “public-private partnerships.”
3. Failure to ensure democratic governance and meaningful public participation.
4. Inadequate budget allocation.
5. Poor labour practices.
6. Regulatory failures.



Photo Credit: ERA/FoEN

These are the factors that must be addressed and reversed if we are to end the Lagos water crisis and ensure safe and accessible water for all Lagosians.

1. Ageing and insufficient water infrastructure.

Water treatment

LSWC has reported a total water production capacity of 210 million gallons per day (MGD), but plant-by-plant figures provided by LSWC list total production as much lower, at 163 MGD.¹ Workers' reports of power and equipment failures suggest production may be lower still.

According to LSWC, the two major waterworks in Lagos; Iju and Adiyon, produce 70 percent of the water in Lagos. The remaining mini and micro water works make up for the balance.²

- **Iju waterworks:** Presently, raw water from Odo Ogun (Ogun Intake) at Akute is pumped daily into Iju waterworks for production and delivery across Lagos. When it is working under optimal conditions and at full capacity, Iju can produce 45 MGD. Workers report epileptic power supply and production well under capacity.
- **Adiyon waterworks:** Adiyon is the largest water production plant for Lagos, with a listed capacity of 70 MGD. Here, workers report non-functional pumps and poor power supply.



Ageing structure at Adiyen Waterworks

Photo Credit: ERA/FoEN

Reported Status of Micro and Mini Water Works

1. Surulere mini waterworks (not functioning)
2. Ipaja Shasha waterworks (not functioning)
3. Ikorodu Lagos road waterworks (epileptic)
4. Shomolu waterworks (epileptic)
5. Iwaya waterworks (not functioning)
6. Agodo Egbe waterworks (epileptic)
7. Igando waterworks (not functioning)
8. Victoria Island waterworks (epileptic)
9. Alexander waterworks (not functioning)
10. Ikoyi waterworks (functioning)
11. Victoria Island Annex waterworks (not functioning)
12. Badiya waterworks (collapsed)
13. Amuwo Mile2 waterworks (not functioning)
14. Agric Ojo waterworks (not functioning)
15. Mende Maryland waterworks (epileptic).

Information on status reported by workers who shared information on the condition they would not be named.

- **Other waterworks:** Expansion of other mini and micro water works spread across the state has been ongoing for years. Those projects have been mostly stalled and poorly funded. Whereas no information is available on the Lagos State Water Corporation website as to the status of these plants, LSWC workers have reported they are either not functioning or epileptic.

Akute Power plant

In 2010, then Lagos State Governor, Babatunde Fashola, commissioned the Akute Power plant, a pilot public-private partnership (PPP) project built to feed electricity to the Adiyen and Iju facilities. The 12.15-megawatt plant was built by Akute Power Limited, a subsidiary of Oando PLC.³ Akute has worked irregularly, according to staff. The problem of insufficient gas supply to the plant has also been cited as a reason for the poor or epileptic electricity output.

Distribution network

The network of water mains and service lines in Lagos is inadequate to serve the large city population. Less than 10 percent of households have connections, with fewer than 30 percent of people having access to community standpipes.⁴ Even these connections do not always provide active water flow.

According to the LSWC's Master Water Supply Plan, Lagos has 180 km of transmission mains and 2215 km of distribution mains, with fewer than 200,000 connections.⁵ Mains installed in 1910, 1943, and 1962 are old and damaged, and do not carry adequate supplies for the dramatically increasing population in the areas they serve.⁶ In the absence of adequate government investment to provide adequate water and piping supplies, private individuals have connected to mains with pipes of uncertain quality and workmanship.⁷

Along with the installations of the mini-waterworks, additional tertiary distribution networks have been laid on a continuing basis.⁸

Other areas are not reached by piped networks at all. The need for connections to the distribution network far outstrips its actual capacity.⁹

2. Decades of policies that did not work.

The policies pursued in Lagos since the late 1980s have failed to expand and update this ageing infrastructure. These policies have been encouraged by the World Bank and adopted by some Lagos officials.

The influence of international financial institutions and international donors.

The World Bank Group has exercised influence over water policy and projects in Nigeria for several decades, consistently promoting water PPPs and other privatisation models, even as its own research has shown a high failure rate for privatisation projects in the water sector.¹⁰

World Bank Group projects in Lagos have encouraged PPPs and other forms of privatisation, contributing to the stagnation and deterioration of Lagos' water infrastructure by inhibiting the adoption of other, more effective policies.

World Bank Group promotion of private sector involvement in Lagos and at the national level includes:

- In 1988 and 1999, the World Bank Group's private sector arm, the International Finance Corporation (IFC), advised the Lagos state government to “reform” the water sector and privatise Lagos State Water Corporation.¹¹
- Beginning in 2002, the World Bank funded the first National Urban Water Sector Reform Project, which encouraged water privatisation in the form of a PPP.¹²
 - Although this project failed, some of its central recommendations were included in the 2004 Water Law (see below).¹³
- More recently, the Second National Urban Water Sector Reform Project (2NUWSRP), a World Bank-funded US\$220 million water delivery infrastructure project in Lagos and Cross River states, included US\$7.75 million toward securing a private sector contract for the operation of Lagos water treatment works.¹⁴ This goal was dropped last year when, after increasing civil society outcry against a PPP in Lagos, the World Bank decided it was “not the intention of this project to continue with [the PPP] any more.”¹⁵

Additionally, the Public Private Infrastructure Advisory Facility (PPIAF), a World Bank Group trust fund, has devoted:

- ? US\$365,000 toward “assisting the Lagos State government in facilitating an appropriate market structure for the private provision of water and sanitation services.”¹⁶
- ? US\$461,251 toward “establishing a regulatory framework for privatising the water sector through a concession contract that transfers more financial and commercial risk to the private sector.”¹⁷

Various World Bank Group entities have also carried out a number of other capacity-building and strategic input projects at the national or regional level, with direct or indirect impacts on Lagos.¹⁸

While the World Bank has spent millions of dollars pushing PPPs and other forms of privatisation in Lagos, the state's water crisis has only worsened. The Second National Urban Water Sector Reform Project was considered only “moderately satisfactory” by the World Bank.¹⁹ A 2006 report by the Bank's Independent Evaluation Group showed other projects did even worse, noting the “failure of the Bank's assistance to the Nigerian water supply sector” over a 25-year period (1979-2004) in which “seven out of seven projects had been rated as unsatisfactory, with unlikely sustainability and with negligible or modest institutional development impact.”²⁰ This is further evidence that a focus on PPPs has diverted money and attention away from true solutions and spurred the Lagos water crisis.

Failed policies that promote “public-private partnerships.”

Over the past decade, Lagos State decision-makers have attempted to address the water crisis by implementing policies at various levels that, like the World Bank efforts, facilitate private sector participation in the water sector. The hope behind these policies is that private corporations would contribute capital and expertise to Lagos' water system. However, these strategies have failed. Experience elsewhere shows that private sector participation, or public-private partnerships, do not bring the benefits anticipated. PPPs are a form of privatisation with a track record of failure to fund or improve public water service.

Failures of PPP privatisation approach

A “public-private partnership,” or PPP, is a form of privatisation in which a private, generally for-profit, corporation takes over some aspect of provision of a public good or service that is traditionally provided by the government, assuming some level of risk and with remuneration dependent on performance indicators. Like other forms of privatisation, PPPs are bad for people, water systems, and democracy.

Advocates of water privatisation often contend that private sector involvement will attract funds needed to improve water systems, but the facts tell a different story.

- The bulk of financing for water and sanitation infrastructure in sub-Saharan Africa has come from public sources and international aid. Public sector capital expenditures in 2001-2006 were more than 100 times that of the private sector.²¹
- A 2009 review of 15 years of water PPP projects concluded that “in most of the developing world, the bulk of the large capital outlays required to expand access in the near future will have to come from public sources.”²²

- o For example, in neighbouring Ghana, the World Bank supported a failed water privatisation scheme that handed a contract to manage the water utility to the private operator Aqua Vitens Rand Ltd. (AVRL), while requiring little capital investment from the corporation. While the burden of investment was left on the public sector, the contract led to rate hikes and layoffs. Following growing outcry, at expiry of the contract in 2011, the Ghanaian government did not renew the management contract.²³
- While some PPPs do involve private *financing*, private corporations always expect to make their money back plus a profit. That cost is shifted to ratepayers, leading to astronomical tariff hikes in Manila, Philippines, where rates rose approximately 850 percent under a PPP with Manila Water Company as the corporation charged households to cover corporate costs including income tax and promotional expenses.²⁴

While PPPs do not bring the funding desperately needed in Lagos, they do bring other problems:

Corruption. The bidding process for long-term, multi-million dollar contracts is extremely vulnerable to corruption, meaning PPPs exacerbate the risk of malfeasance.

- o Corruption has been alleged in PPPs involving some of the world's largest private water corporations.
 - o In 2015, the former head of Veolia's Bucharest, Romania operations was charged with bribing officials to grant rate increases. Veolia also allegedly paid media outlets to prevent negative coverage and hired spies to make sure its own employees kept its activities secret.²⁵
 - o In Nagpur, India, multiple corruption allegations have been made against the private "partner", a Veolia venture, including an inquiry into charges of accepting bribes to lower water bills.²⁶

- **Job loss.** A study of water utilities in 48 countries from Latin America to Africa to East Asia found average "employment decreases" of 22 percent among water utility workers after a PPP.²⁷

- **Threats to democracy and national sovereignty.** The private water industry works to roll back democratic protections.

- o In the United States, the water industry has supported legislation weakening existing popular vote requirements before water system sales or leases.²⁸
- o After Argentina terminated an unsuccessful private water contract, the corporations brought a case in the World Bank's arbitration forum, and were awarded more than US\$400 million for breach of contract after failing to meet their own infrastructure investment promises.²⁹

The problems with PPPs and other forms of privatisation mean that more than 180 cities worldwide have brought their water systems back under public control.³⁰

The failures of PPPs outlined in this document are also emphasized by Public Services International (PSI) General Secretary Rosa Pavanelli in her January 2016 letter to Lagos State Governor Akinwunmi Ambode.³¹

Lagos State has taken a number of steps meant to facilitate the failed PPP model here. Despite these policies, PPPs have not provided the solution to the Lagos Water crisis. A new model is required.

In 2004, the **Lagos Water Law** created the Lagos State Water Corporation and Lagos State Water Regulatory Commission, charging both agencies with securing private investment in water systems.³² The law, “passed secretly and hurriedly by the State House of Assembly without a public hearing”³³ created an enabling environment for PPPs.³⁴

The current **Lagos Water Master Plan** for the years 2010-2020 was developed by the Lagos State Government, ostensibly to guide its actions and policies so as to bridge the gap between demand and supply of water in the state. Sadly, the document is heavily skewed towards privatisation. It calls for almost US\$2.5 billion worth of projects to be funded through public-private partnerships.³⁵ In arriving at its pro-private approach to water supply, the document highlighted the three “vectors” that drive investment in water to include “Population,” “Water Resources,” and “Willingness to Pay,” without any reference to the right to water, sanitation, or public health.³⁶ It was a document carefully produced to commodify water and spur profits for corporates and their allies. The plan is stalled as the PPP approach has failed and expected funding has not materialized. Failures forced a revision of the original master plan including: “short and medium term phases extended; total cost increased, total production capacity decreased and distribution networks planned increased.”³⁷

The 2013 **Lagos State Development Plan** also fails to prioritize the raising, allocation, and utilization of available resources, instead prioritizing financing through the adoption of PPPs, stating the government will “need to implement significant public-private partnerships (PPPs) in the Water Sector to ensure sufficient private spending for water supply. The State will need to access funding through concessions and BOOT [Build, Own, Operate, Transfer] PPP contract arrangements across service areas.”³⁸

A **State PPP Office** established in 2008 and a **PPP bill** signed into law in 2011 have not been successful in improving Lagos' water crisis.³⁹ Meanwhile, the privatisation of electricity in Nigeria has also been unsuccessful at providing reliable electricity to the majority of the people.⁴⁰

3. Inadequate budget allocation.

An overabundance of faith in the PPP model has meant that Lagos decision-makers have failed to take the steps to ensure adequate public funding to repair and expand water systems.

For years, the Lagos State budget has not provided adequate funding for maintaining and expanding the water system and resolving the Lagos water crisis, and the budget allocation must be drastically increased to expand access. According to the Lagos State Water Master Plan, US\$2.5 billion is needed to achieve needed access, beginning with US\$737.66 million in the 2010-2016 period.⁴¹

Over those years, the Lagos State budget has fallen hundreds of millions of dollars short of devoting those funds to water. (The budgets for 2010-2016 included US\$334.7 million for Lagos State Water Corporation, excluding 2011, for which no budget is available at Lagos State Ministry of Economic Planning and Budget.)

The budget has fluctuated over those years. While the budget in 2008 included N13.2 billion for Lagos State Water Corporation, this declined to N10 billion and N7.9 billion in 2009 and 2010, respectively. The highest amount included for Lagos State Water Corporation since at least 2008 was in 2012 for N22.8 billion, representing 4.6 percent of the budget. In 2013, the figure dropped to N20.1 billion, or 4 percent and in 2014, the figure dropped yet again to N19.8 billion, representing 4.1 percent of a smaller overall budget. In 2015 and 2016, the budget included N16.2 billion, or 3.3 percent, and N17.6 billion, or 2.7 percent, for Lagos State Water Corporation, respectively.⁴²

Adding to this discouraging figure is the fact that LSWC has had repeated difficulty accessing the funds allocated it in the budget. In June 2016 the new managing director stated that LSWC has not been able to access funds approved in the budget.⁴³

Far from being a solution to this state of affairs, the PPP strategy officially pursued since 2004 has failed to secure the tens of billions of naira sought, despite several years of effort. As noted above, private sector capital outlays in the African water sector are rare. This has been true in Lagos as officials have repeatedly tried but failed to secure private investment.

Governor Ambode has touted his 2016 budget as “*the People’s Budget*” and has said it is “tailored towards the realization of our mission of delivering on our promise of ‘Lagos Works for all.’”⁴⁴ While the current budget falls short on water, with proper priorities, Ambode’s Lagos *can* work for all. Lagos State is among the largest African economies, surpassing most of the continent’s nations. The state’s internally generated revenue was US\$1.3 billion in 2015 and its GDP was US\$90 billion in 2014.⁴⁵ Lagos’ economy is growing, and with the appropriate financial and social policies, the State can fund the water infrastructure needed to ensure all Lagosians have affordable access to safe water.⁴⁶

4. Failure to ensure meaningful public participation.

The causes of the water crisis extend to the Lagos State Government’s failure to ensure free and meaningful public participation in water policymaking. No state agency or the Lagos State Water Corporation has established a formal mechanism for such participation, such as water board, citizens’ utility board, participatory budgeting, or social dialogue process. This absence means that there is no regular, formal channel for Lagosians to actively and meaningfully participate in water provision policy.

Over a number of decades, key laws and policies in the water sector have been pushed through with apparent disregard for democratic procedure. For example, the 2004 Lagos Water Sector Law, which explicitly defined the LSWC as responsible for “identify[ing] and implement[ing] projects for the provision of water services which may be undertaken with private sector participation...”⁴⁷ was without opportunity for meaningful public input.⁴⁸

The same secrecy and systematic exclusion of civil society participation in water policy have persisted. In 2015, the LSWC, with funding from the World Bank, instituted a “Stakeholder/CSO Interaction Policy” that explicitly sought to obtain Lagosians’ assent to plans and priorities of the LSWC and World Bank, rather than ensuring active, free, and meaningful participation that could guide or shape water policy in Lagos.⁴⁹

The policy acknowledged that in Lagos **“Water is still widely considered more of a social good than as an economic good.** Consequently authorities believe that raising the price of water or charging for it where it has been historically free would lead to serious objection or social unrest.”⁵⁰

However, rather than letting the widely shared public belief in water as a social good drive policy priorities, the LSWC set out to change that attitude and force a definition of water as an “economic good” on Lagos people, noting, “This is a challenge that must be faced with a persistent enlightenment campaign that needs to be supported by the civil societies” (emphasis in original).⁵¹ It is evident from this text that officials were not seeking input from Lagosians, but rather setting out to change widespread beliefs regarding water as a social good. However, Lagosians' “widespread belief” in water as a social good is compatible with the United Nations' recognition of the “right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights.”⁵²

Rather than mount an “enlightenment campaign” to change Lagosians' belief in water as a social good, the Lagos State Government should have instituted formal mechanisms for democratic participation so people could help shape water policy in the state.

5. Poor labour practices.

Failure to ensure meaningful participation in water system governance extends beyond civil society to include the very workers who operate, monitor, and repair Lagos' water infrastructure.

Currently, there are no effective channels in place to allow workers to raise grievances or give input on issues affecting their work and work environment.

In this context, a number of worker concerns remain unresolved:

- Workers lack the appropriate equipment and tools to do their jobs safely and effectively. Notably, safety kits are not sufficient for workers to work safely, especially those working closely with chemicals.⁵³
- Workers face hazardous conditions resulting in injury.
 - Control panels at Akute Dam are malfunctioning, constituting a hazard to workers. One worker recently lost a hand when working with a control panel.⁵⁴
- Understaffing puts a burden on workers and endangers the system.
 - Hundreds more workers are required to ensure proper operation of the system.
 - AUPCTRE has written to the governor that at the Akute plant, eight workers are doing the job of 40. This leads to inadequate maintenance, inefficiency, and increased likelihood of malfunctions, and may expose workers to occupational hazards.⁵⁵
- Management of Lagos State Water Corporation is seriously indebted to health partners contracted to provide services to workers. The scheme is funded by LSWC to help its employees, but the management is indebted to the health partner.⁵⁶ Urgent attention is needed to ensure regular treatment of workers in the health facility.
- Workers require additional training to equip them to operate and maintain the modern technology needed to bring the Lagos system to global standards.

- Under prior management, the LSWC failed to remit workers' pension and death benefits (worth a total of N450,405,030) and to pay pension contributions or insurance premiums (worth a total of N304,514,974).⁵⁷ In 2014, LSWC management admitted failure to pay into workers' pension and brought to light that the funds had been diverted for at least three years' worth of required contributions to retirement saving accounts, including money taken from workers' own paychecks.⁵⁸

6. Regulatory failures.

Serious questions have been raised relating to failures of regulation governing water sector activity in Lagos. It is unclear whether regulators are constrained by conflicts of interest in their mission, and whether the water utility is following regulations in all its activities.

Conflict at the Lagos State Water Regulatory Commission.

The water crisis in Lagos is exacerbated by the fact that the key regulatory agency has conflicting mandates, has been largely inactive, and, like the LSWC, is charged with securing private sector involvement.

The Lagos State Water Regulatory Commission was established by the same 2004 Lagos Water Law as the Lagos State Water Corporation. Its two primary duties are to ensure:

- (1) Water and sewerage functions are properly carried out in the state;
- (2) Operators in the sector secure reasonable returns on their capital to finance the proper carrying out of those functions.



However, these mandates conflict. As we have seen above, the PPP approach, which rests on the assumption that operations can profit from water system investments, is antagonistic to ensuring water and sewer services are available and functioning well for all Lagosians. A regulatory agency's mandate should be limited to ensuring safety, accessibility, and lawful operation of the systems it oversees, not to ensuring the profitability of private interests.

Although LSWRC is supposed to regulate LSWC, there is evidence of ties between the two agencies that suggest an appropriate distance has not been maintained between them.

- In 2013, the LSWC issued a bid for consultant services to the LSWRC, to be paid from World Bank funds funneled through LSWC. It is inappropriate for a regulated utility to funnel funds to the agency in charge of regulating it, and raises suspicions of impropriety.
- One project manager/senior engineer at Lagos Water Corporation held a simultaneous position as procurement officer for LSWRC.

The lack of clear boundaries between the LSWC and LSWRC, as well as the conflicted mandate of the LSWRC, has prevented the appropriate development of the water system in Lagos.

Procurement Policies

Questions have been raised as to whether procurement within the LSWC is transparent and competitive. LSWC officials have made a number of announcements regarding seeking or negotiation with private actors but have not published information on PPP procurement, raising questions about compliance with Nigerian policy of providing for “transparent, efficient, and competitive procurement procedures for PPP-type contracts” as well as the Lagos State Public Procurement Agency’s objective to “ensure probity, accountability and transparency.”⁵⁹

For example, in June 2016, Managing Director Muminu Badmus stated “LWC has completed arrangement with investors to implement commercial water distribution kiosk projects as a pilot scheme to install, manage and generate revenue from the venture.”⁶⁰ We were unable to find any record that a competitive bidding process had been carried out, Request for Qualifications (RFQ) documents had been published in the media or on the LSWC website, the LSWC had held a pre-application meeting, or any other steps of the two-step bidding process as laid out in the PPP Manual for Lagos State.⁶¹

Despite the LSWC's central goal of securing a PPP for water in Lagos, there is very little evidence of the utility's participation in open, competitive bidding processes.

A way out of the failure?

For the last several decades, the policies pursued in Lagos have resulted in a water crisis with enormous health and economic costs for the city. However, the roots of the failure described here are not irreversible. By listening to Lagosians' needs and pursuing a new direction in the water sector, the crisis can be reversed.

WHAT LAGOSIANS NEED FROM THE WATER SYSTEM

In this section we look at what a cross section of Lagos residents believes good public water management should look like. In clear terms, most of the respondents want a system that upholds the human right to water while integrating broad public participation in decision-making. The idea of water privatisation is roundly rejected across the spectrum of civil society, community people, women's groups, as well as the labour unions.



Anti-water privatization activists at a rally

Comrade Solomon Adeniran Adelegan, President of Amalgamated Union of Public Corporations Civil Service Technical and Recreational Services Employees (AUPCTRE) argues that the union has consistently voiced concerns about the false promises of PPP in the water sector “PPP is the bedrock of corruption, lack of transparency, contract and financial manipulation, poor service quality; under-investment, and unbearable tariffs that will make water inaccessible to the majority of Lagos citizens”. Adelegan is not the only one who holds such a view. **Idowu Adelakun**, Chairman, Nigeria Labour Congress (NLC), Lagos State Council, asserts that the opposition of the union to water privatisation is because it “has never worked and it will not work.” He cites the example of the privatisation of the Power Holding Company of Nigeria (PHCN) as an example, urging us to “see what we are facing in the country now” in its aftermath.

He recommends that the sure way of providing water for Lagosians is for government to ensure increased budgetary allocation and accountability. “The money the government puts in must be accounted for,” Adelakun says, urging proper accountability to avoid past mistakes. “In a situation whereby the former [managing director of LSWC] spent 16 years there and at the end he cannot account for anything”. The money from The World Bank and the government must be accounted for.

Biodun Bakare, AUPCTRE State Secretary, Lagos State Council, also shares this view but is quick to add that power lies in the hands of the people and workers: “No matter the amount of threat, workers remain resolute and will keep fighting for the just cause and water cannot be allowed to be privatized in Lagos State. Because the burden of privatisation will only be on the poor masses.”

Betty Abah, Executive Director, CEE-Hope, pushes her argument to the realm of human rights, which she says cannot be jeopardized for profit. Abah insists that, “water is a basic human right ... a cosmopolitan city like Lagos should be able to provide, if nothing, something as basic as water to its citizens.” She maintains that water is basic and should be provided “to the people that live in the state, to the people that pay taxes, the people from which [Lagos] gets its resources.”

She further points out that this right is not something that is negotiable, but, if possible, should be provided free or affordably. “As far as corporations are concerned, it's all about profits, money. It's not about human rights, it's not about the interests of the people.”

Olugbemiga Ugbagbor, a community leader from Ijede LCDA, rejects water privatisation outright, drawing a parallel with a PPP arrangement in the transportation sector which has not improved service. In his words, “If we now privatise water, only God knows what will happen. Even the quality of water to be supplied will be questionable because any investor will want to maximise profit. And if there is no water, maybe due to one problem or the other, for a week, you know the long-term effect of it. The implication is very grave.”

Funmi Ajayi from Koshofe area of Lagos also draws a similar parallel between the power sector privatisation and the likelihood of the water sector privatisation going that way. She refers to the fact that the Nigerian government had, while unbundling the National Electric Power Authority (NEPA), created the current Power Holding Company of Nigeria (PHCN). Nigerians were promised 24/7 electricity once privatisation of the sector was up and running. She said, “they privatised NEPA; now there is no light for us to use. And we are paying exorbitant fees. Now [they] want to privatise water, which is for common man.”

Vicky Uremma Onyekuru, Executive Director of the Child Health Organization, notes that beyond the economics, women are likely to take on more burden if the privatisation of water is to occur. She also frowns at Lagos experimenting with a system that has failed in other climes where it has been tried.



Betty Abah

Photo Credit: ERA/FeEN

“ It is unimaginable. Water belongs to the community. Without water, you cannot survive and that is why it is communally owned and managed. During Jakande and Otedola era there was water everywhere. They have not told us what happened, now they want to infect us with diseases. Privatisation is evil. ”

- Mr. Oluwatosin Onamade

Francis Abayomi, Director of the Peace and Development Project, would like to see an increase in budgetary allocation from the Lagos State government. “I can confidently say that almost 90 percent of residents provide water for themselves by way of boreholes and some other means... There is a huge gap between what we see as budgetary allocation every year and compared to what the citizens benefit from in the system ... How much have people benefited from [PPP] projects before now?”

He goes on to say, “There is no assurance that Lagosians will benefit from what the government is trying to do [by pushing PPPs].”



Photo Credit: ERA/FoEN

Another resident from Ikorodu, Ijede Local Government, **Mr. Oluwatosin Onamade** simply described privatisation of water as evil and a plague that will lead to loss of lives. “It is unimaginable. Water belongs to the community. Without water, you cannot survive and that is why it is communally owned and managed. During Jakande and Otedola era there was water everywhere. They have not told us what happened, now they want to infect us with diseases. Privatisation is evil,” he said.

Patrick Olusegun Tinka, who is a pastor and the founder of the Triumphant Foundation for Widows and Orphans, said, “I’m a Lagosian, I’m from Badagry so I understand what water is to existence.”

“Where I come from, Badagry, we are used to water, we see water every day. And for [the Lagos State government] to now come and sell the water that God has given us is abnormal.”

“The pipes they had laid for over 30 to 40 years are there rotting, and the money they collected that time as due for water works and the rest, where are the money? ... I believe that if government is sincere in what they are doing, they have other means by which they can provide [water] as a social responsibility to their citizens.”

“And God himself as the Creator of heaven and earth see clearly that it’s good for man to have water freely and that’s why He gave us the example in the book of Genesis where He put four sources of water into the Garden of Eden, telling us that water is very essential to human existence. And He also placed water freely underneath the earth for man to use.”

“The PPP on water, as a Lagosian I think it’s a sellout, an indirect way of enslaving the people of Lagos State.”

INTERNATIONAL LESSONS FOR BUILDING ROBUST PUBLIC WATER SYSTEMS

This chapter highlights international experiences relevant to building robust public water systems. It lays out some key principles of best practices and points to case studies where various public water systems have worked. We describe some exemplary public water system achievements, including successes with funding mechanisms, democratic oversight and accountability, affordability and rate structure, civil society engagement/coordination, public-public partnerships (PUPs), and more. We don't present the cases below as an ideal; instead, we highlight strong points which we can learn from and consider further exploring.

No public water utility is perfect and success is subject to untiring efforts and renewing public commitment. The following examples show how, through a combination of in-house restructuring (public sector reform with no change in public ownership and public control), democratisation, and public-public partnerships (PUPs), the comparative advantage of the public sector enhances the realisation of the human right to water and sanitation in both the Global North and South alike.

Key messages:

1. Reinventing public water is possible.
2. Reinventing public water is preferable.
3. Using public finance is preferable.
4. The human right to water must be protected and fulfilled.
5. Public collaboration delivers the needed capacity; competition does not.
6. Commit to serve public interests, instead of giving up responsibility to privateers.
7. Reinventing public water is good for democratic governance.
8. How Lagos public water can become world class.

1. Reinventing public water is possible.

There are many examples of effective and efficient public sector water and sanitation services in the Global North and South, judging on various criteria.¹ In fact, the most prominent examples of efficiency are often found in the public sector, not the private sector.

For example, leakage is often used as an indicator of overall efficiency. Reducing leakage implies saving on electricity and other costs, and so the lower the leakage level the higher the efficiency of the utility. When it comes to leakage, the most efficient water operators in the world are found in the public sector. In the Netherlands, where all water supply operators are publicly owned, leakage losses are below 6%.² In Japan, where virtually all water supply operators are public, the average leakage level is 7.5%.³ These low levels of leakage are highly unusual under privatisation. In England, the average leakage level of privatised water companies was around 22% as of 2013.⁴

In addition, the international experience shows that even the worst-performing public utilities can be turned around and become efficient without renouncing public ownership and management.

Case 1: Phnom Penh, Cambodia



Authorities inspecting newly installed facility

The in-house restructuring of public operator Phnom Penh Water Supply Authority (PPWSA) began in 1993 after the downfall of the Khmer Rouge regime.⁵ A drastic improvement happened in fewer than 15 years. Originally the improvement relied strongly on the leadership and commitment to social justice of the director, Ek Sonn Chan, who was appointed in 1993.⁶ At the time of his appointment, only one-fifth of the city had access to piped water, water flowed only for 10 hours a day, and more than half was lost through leaks.

In-house restructuring took place in conjunction with a series of public-public partnerships (PUPs) and twinning arrangements,⁷ and service coverage increased from 20% in 1993 to 70% in 2004, and reached 90% in 2010.⁸ From 1993 to 2005, water production capacity increased 3.6 times, water leaks went down to 10%, and water pipes extended from 280KM to 1230KM.⁹ PPWSA expanded access to water supply in Phnom Penh at a pace and to an extent which is unparalleled by improvements made under privatisation. PPWSA is now considered one of Asia's outstanding public utilities, with a reputation for organisational excellence, people-oriented service, and high levels of service performance.

2. Reinventing public water is preferable.

The international experience, in both the Global North and South, shows that public operations enjoy a comparative advantage over the private sector in relation to promoting universal access to water and sanitation (or the human right to water and sanitation). This advantage ultimately lies in the fact that, unlike the private sector, the public sector is not subject to the profit maximisation imperative. This gives public sector management the flexibility to maximise the reinvestment of resources into the system for the achievement of social objectives such as the expansion of service coverage.¹⁰

On the other hand, the proponents of privatisation make enticing promises, but private water corporations have a poor track record delivering on these promises.¹¹ One of these promises is that of superior private sector efficiency.¹² Numerous international studies demonstrate that there is no evidence that the private sector is more efficient.¹³ Another promise is that the private sector will raise money more cheaply than government.¹⁴ As a matter of fact, the OECD advises that “the cost of capital of the private partner is usually higher than that of government,” and the IMF has stated that “when PPPs result in private borrowing being substituted for government borrowing, financing costs will in most cases rise.”¹⁵ This is why PPPs are not necessary to solve the problems of countries in crisis.¹⁶

The broken promises of water privatisation include:

- Poor performance of private companies (e.g. Dar es Salaam, Accra, Maputo).
- Under-investment (e.g. Berlin, Buenos Aires).
- Disputes over operational costs and price increases (e.g. Almaty, Maputo, Indianapolis).
- Soaring water bills (e.g. Berlin, Kuala Lumpur).
- Difficulties in monitoring private operators (e.g. Atlanta).
- Lack of financial transparency (e.g. Grenoble, Paris, Berlin).
- Workforce cuts and poor service quality (e.g. Atlanta, Indianapolis).¹⁷

Due to the failed promises of the private sector, an increasing number of cities have decided to take water services back into public hands, including cities that were previously hailed as flagships of water privatisation, including PPPs.¹⁸ This suggests that PPPs and other forms of water privatisation are not sustainable, and that it is better not to privatise in the first place so that you do not have to eventually remunicipalise.

Case 2: Paris, France

The case of water remunicipalisation (or de-privatisation of water operations) in Paris is symbolically powerful as Paris hosts the headquarters of the two major water multinationals, Veolia and Suez. In Paris, remunicipalisation took place in 2010 after the expiry of two private contracts each covering one half of the city, respectively held by Suez and Veolia.¹⁹ The private contracts were not renewed in consideration of the lack of financial transparency and accountability which had been criticised by the public audit body.²⁰ In the first year of operations, the new municipal operator Eau de Paris realised efficiency savings of €35 million, which allowed for an 8 percent reduction in tariffs.²¹ It has also increased its financial contribution to poor households to almost €3 million per year,²² launched a successful water-saving campaign, and refrained from cutting off water supply in squats.²³ Eau de Paris also ensures public participation in decision-making by including in its board of directors 10 city councillors and representatives; two workers' representatives; and five outsiders including two experts, one environmental NGO, one consumer organisation, and one member from L'Observatoire Parisien de l'Eau (Paris Water Observatory).²⁴ In this way, transparency and accountability of the board of directors as the highest decision-making body are strengthened. In 2014, the Regional Court of Auditors published reports on an assessment of Paris' water policy and on performance.²⁵ They stressed that the return to public management enabled Paris to lower the price of water while maintaining a high level of investment.²⁶

Global remunicipalisation trend: The data show that the global remunicipalisation trend is strong. Globally, the cases of remunicipalisation have increased from two cases in two countries in 2000, when less than one million people in total were affected by remunicipalisation, to 235 cases in 37 countries by March 2015. By then, the total number of people in cities with remunicipalised water services had grown to exceed 100 million. The list of high-profile cases is impressive and includes: Accra (Ghana); Almaty (Kazakhstan); Antalya (Turkey); Bamako (Mali); Bogotá (Colombia); Budapest (Hungary); Buenos Aires (Argentina); Conakry (Guinea); Dar es Salaam (Tanzania); Johannesburg (South Africa); Kampala (Uganda); Kuala Lumpur (Malaysia); La Paz (Bolivia); Maputo (Mozambique); and Rabat (Morocco).²⁷

3. Using public finance is preferable.

Ideally, governments support the development and upkeep of water infrastructure with tax revenues. Where financing is necessary, however, the public sector has better access to loans and other forms of infrastructure finance as it pays lower rates of interest than the private sector. Public financing is the main source of financing for water and sewage infrastructure in the world, currently and historically.

The development of water and sanitation services in the U.S., the U.K., and South Korea was massively supported by public finance. By 2010, South Korea had achieved 100% access to improved sanitation and 98% access to improved water (versus 17% in 1961).²⁸

Financing water infrastructure is less expensive than one might think. Research by the PSIRU showed that countries with the highest level of need for drinking water and sewage connections could meet U.N. development goals over a 10-year period by spending between 0.64% and 6.29% of GDP per year. The estimated annual cost for Nigeria as a whole to meet these development goals is 1.48% of GDP annually.²⁹

As explained in *Public financing: Ensuring just and sustainable water infrastructure*, “Ideally the state would finance construction directly from tax revenues. However, if it chooses to borrow, it can do so more cheaply than the private sector. The public sector generally pays lower rates of interest on loans than the private sector due to the superior security of tax revenue. From the perspective of banks, private sector lending is actually riskier since the private sector may not be able to secure long-term returns on sunk investments. That is why, without exception, the large expenses associated with building new infrastructure, not just operation and maintenance of existing infrastructure, require financial support from government.”³⁰

The U.N. DESA report released in February 2016 concludes that the evidence suggests public-private partnerships (PPPs) are more expensive than public sector alternatives from a financial and social perspective. The authors argue that PPPs “have failed to yield ‘value for money’ in its broadest sense, taking into account not just the financial costs and efficiency gains deriving from a project but also its longer-term fiscal implications (including the risks of any contingency liabilities) as well as the broader welfare benefits for society such as the impact on poverty and sustainable development.”³¹

Louis Kasekende, Chief Economist of the African Development Bank Group, made a presentation of the issues at a conference in August 2009, saying

“...In order to overcome the continent's structural constraints and reduce its external dependence, it is necessary to reconsider the role of the state. The market only works through incremental changes and small steps. However, developing countries need to stimulate investments by socializing risk, in order to achieve long-term structural transformation... Macroeconomic policies across the developing world during the last several decades have been strongly influenced by the recommendations of the international finance institutions and bilateral aid donors who, in turn, were heavily influenced by the neoclassical school...[T]he reforms based on this approach have largely failed to develop the private sector as the driving force for development. I thus want to table for your consideration the need for a marked change in the approach to macroeconomic policies across the developing world and for one that recognizes that government has a vital role to play in restructuring the economy and in creating the conditions for a 'take-off' into sustained growth.”³²



Public financing tools

There are a number of tools for public finance available to all levels of government.

Grants and concessionary loans

Grants are public funds that do not have to be repaid by the beneficiary public utility.³³

Concessionary loans are loans disbursed by public agencies and banks that the recipient public utilities have to repay at favourable terms and conditions, normally at lower interest rates and for longer periods than commercial loans.³⁴

These two forms of public finance have played an important role in the development of water systems in the Global North; for example, in the Netherlands and the USA.

- ***Water bank (NWB Bank) in the Netherlands***

The NWB Bank is owned by Dutch public sector entities and provides short- and long-term financing to Dutch public sector organizations, such as “water boards and municipal and provincial authorities, as well as government-backed institutions.” The bank raises funds on the international markets and puts them to work for public utilities in the Netherlands, providing public financing at the lowest possible cost to finance the public sector and promote the common good. In 2015, more than a quarter of the NWB Bank's €7.4 billion in loans went to water authorities.³⁵

- ***US Grants and Revolving Funds***

Federal grants were essential to ensuring clean water in the United States by funding wastewater infrastructure in the 1970s and 1980s.³⁶

Today, most federal funding for wastewater and water systems in the U.S. goes to the State Revolving Funds, a federal-state partnership for the public finance of water and wastewater system infrastructure and safety needs. The Drinking Water State Revolving Fund (DWSRF) begins with federal grants to states based on their infrastructure needs, with states matching 20% of the federal money. States may use a third (31%) of that money outright, and the rest is placed into a revolving fund administered at the state level that provides low- or no-interest financing to eligible local systems. Financing may include loans, refinancing, debt guarantees, and other instruments. Repayments and interest flow back into the fund, and become available for new loans. Between 1996 and 2014, the DWSRFs provided almost US\$30 billion to water systems for infrastructure needs.³⁷ 21st century, state and local governments in the U.S. are investing in water systems at an all-time high.³⁸

Municipal and sovereign bonds

Historically, government bonds have been an important vehicle for public funding and contributed to the development of water systems in the Global North: “During the 19th century, water utilities were created or taken over by municipalities in nearly all European countries...

This was linked to the growth of municipal socialism (or 'gas and water socialism'), which drove the development of local public services in Europe....The municipalities developed financial mechanisms superior to the private sector, including borrowing long-term money from local savers, at low interest rates because of the security of their flow of income from taxes.” This process also took place in the United States, where democratically elected city councils borrowed money to develop local water systems.³⁹

In recent years, African governments have financed their deficits by borrowing, including issuing bonds. In 2014, Kenya raised US\$2 billion from international investors through the issuance of sovereign bonds, setting a new record for the continent.⁴⁰ In 2011, Chad raised US\$232 million for debt management and infrastructure financing through bonds attractive to Central African investors.⁴¹

Public finance compared to Build-Operate-Transfer (BOT) schemes

The above shows that public finance is a sustainable way of financing water service development, historically and today. The sustainability of public finance becomes even more apparent when considering the problems associated with PPPs including “build-operate-transfer” (BOT) schemes, which are increasingly used to finance water infrastructure through private capital. A PSIRU review of the international experience with water BOTs shows that the problems are similar to those that plague many private concessions including misrepresentation and financial manipulation, overestimated costs, and termination of unsatisfactory private contracts.⁴² In Colombia, Suez Degremont's Salitre wastewater BOT “was terminated after the city council calculated that the project was charging ten times too much, and that it was worth paying US\$80 million to buy out the contract.”⁴³

One difference between BOTs and ordinary concessions is that BOTs create strong pressures on public finances. Examination of actual cases of BOTs in developing countries suggests that these contracts may actually create extra demands on the finances of a water distribution authority, and so reduce the money available to the distribution authorities for other purposes.⁴⁴ BOTs, like other PPPs, are therefore the unsustainable face of private finance, unsustainable for citizens, taxpayers, and public authorities alike.

Tariffs and pricing

Water tariff and pricing policies are socially and culturally sensitive aspects of water governance. User fees are an important resource to cover operation and maintenance costs in water utilities worldwide, but water must remain accessible and affordable for all domestic users

The idea that 100% of the cost of providing water should be covered by tariffs, known as "full cost recovery", should not take precedence over the human right to water. Best practices exist to defend poor families from disconnection of services due to inability to pay, while simultaneously generating a healthy income to a water utility to allow it to sustain services. Affordability of water services for all domestic users should be maintained, as required to fulfil the human right to water (see below).

A rising block tariff system (those who consume less pay a lower tariff rate, while heavy users pay a relatively high rate) allows for beneficial policies like cross-subsidization between urban and rural services, and can help encourage conservation. State water company OSE in Uruguay uses a tariff system which distinguishes between 26 categories of users. Commercial and industrial consumers are charged more than domestic customers. Households living in extreme poverty are protected by the national public subsidy and they pay only a symbolic fee (US\$2-3 per month), regardless of their consumption.⁴⁵

Arenys de Munt, a small town in Catalonia, has promoted social policies to guarantee the right to water for all its citizens since 2012, after the town successfully remunicipalised its water services. First, newly established municipal company Aigües de Arenys/GUSAM reformed the tariff structure: It now takes into account the number of people per household and gives a discount on the first 100 litres per person per day. Furthermore, the most vulnerable families that earn less than one minimum wage are guaranteed access.⁴⁶ Similarly, Medina-Sidonia, another Spanish city with remunicipalised water services, has developed an innovative approach to ensure the provision of a minimum amount of water (3 cubic meters/person/month) to residents encountering financial difficulties. After remunicipalisation, the city council has formally declared water to be a human right and is implementing a policy to make it a reality.⁴⁷ These Spanish towns as well as the eThekweni Municipality (South Africa) have developed tariff systems based on the principle that all people have a right to water.

4. The human right to water must be protected and fulfilled.

In 2010, the United Nations General Assembly recognised the human right to safe drinking water and sanitation⁴⁸ and the Human Rights Council reaffirmed this recognition.⁴⁹ The human right to water and sanitation is the foundation and starting point for robust public water to serve public interests such as public health and environmental sustainability.

It has been established that to fulfil the human right to water, governments must ensure that water is available, physically accessible, affordable, safe, and acceptable in colour, odour, and other qualities.⁵⁰

Facilities provided for the access and use of water must be acceptable for usage, meeting standards of privacy and dignity.

Furthermore, water policy must:

- Not discriminate between users.
- Work toward eliminating existing inequalities.
- Ensure transparent public access to information.
- Ensure active, free, and meaningful public participation.
- Hold utilities and the government accountable to users.
- Be sustainable.



By virtue of this resolution, governments are obligated to ensure the progressive fulfilment of the human right to water. Publicly owned and run water utilities with transparent governance and citizen involvement are best positioned to carry out this task because they can place the needs of residents first.

The former Special Rapporteur on the human right to safe drinking water and sanitation, Catarina de Albuquerque, and her team developed the handbook “Realizing the human rights to water and sanitation”⁵¹ to provide comprehensive guidance and clarity for states, policymakers, water professionals, and citizens to develop policies, which is highly recommendable to examine.

Case 3: eThekweni Municipality (Durban), South Africa

The eThekweni Municipality is the administrative name for Durban, a city facing great water and sanitation challenges.⁵² South Africa's 1996 constitution enshrines the right to access to sufficient water, and eThekweni Municipality Water and Sanitation (eTMWS) is at the front line to make the right to water a reality.

Established in 1992, eTMWS provides free basic water of 9000 litres per household per month.⁵³ Commitment and leadership to social justice and equity is the backbone of the utility's significant achievement: By 2014, 1.3 million additional people had been connected to services, bringing the total served to 3.5 million.⁵⁴

Providing water and sanitation services in informal settlements could be one of the most challenging issues in many cities in the world, and is thus often neglected. Durban city leadership is committed to providing fresh water and clean toilets to informal settlements,⁵⁵ where one-third of the city population lives. eTMWS installed 2500 public washrooms, or “community ablution blocks,” in nearly 500 informal settlements. This has been done using a community engagement strategy in which city leaders work with ward leaders to recruit citizen support, and the locations of ablution blocks are decided by leadership groups within settlements.⁵⁶ eTMWS' social achievement required constant efforts of innovating, testing, and implementing technical solutions.

Recently, eThekweni Municipality Water and Sanitation entered into two international Water Operator Partnership (WOP) projects to support the municipal utilities of Lilongwe, Malawi⁵⁷ and Bulawayo, Zimbabwe as well.⁵⁸ WOPs are a form of public-public partnership that aim to increase one partner's capacity to provide better services via peer-to-peer trainings and knowledge transfer.⁵⁹

5. Public collaboration delivers the needed capacity; competition does not.

Public-public partnerships (PUPs) are collaborations between two or more public authorities or organisations, based on solidarity, to improve the capacity and effectiveness of one partner in providing public water supply and/or sanitation services. PUPs are peer relationships forged around common values, interests, and objectives, which exclude profit-seeking. The absence of commercial considerations allows public partners to reinvest all available resources into the development of local capacity, to build a mutual trust which translates into long-term capacity gains, and to incur low transaction costs. The comparative advantage of PUPs over PPPs extends to more ample opportunities for replication and scaling up. PUPs also induce less social resistance than PPPs. In addition, public operators that have benefitted from PUPs tend to support other public utilities in need of capacity development, thus producing a multiplier effect.⁶⁰

The developmental potential of PUPs and other not-for-profit partnerships for capacity development was recognised by the former United Nations Secretary-General Kofi Annan, who in 2006 mandated UN-Habitat to create the Global Water Operator Partnership Alliance (GWOPA).⁶¹ Also, in 2010 the European Commission earmarked €40 million to support PUPs and other not-for-profit partnership projects in African, Caribbean, and Pacific (ACP) countries, aiming to develop operational capacity and enhance governance and sustainability in the ACP water and sanitation sector. GWOPA's online database lists hundreds of PUPs, including those supported by these two international initiatives. A growing interest in PUPs worldwide is demonstrated by the hundreds of applications for funding submitted by public utilities to international funders and by ministerial declarations supporting PUPs.⁶²

Case 4: Lilongwe, Malawi

Funded by the World Bank in the 1980s, a PUP to improve the water and sanitation services of Lilongwe, Malawi “expanded the distribution system and strengthened the capacity of the water board. Access to water improved significantly; the PUP helped develop an effective management support and training programme; the efficiency of operations increased considerably; the level of unaccounted-for water fell to 16 percent; labour costs were reduced; response time to new service applications and [user] complaints improved.”⁶³

Global Water Operator Partnership Alliance (GWOPA)

The United Nations Secretary General's Advisory Board on Water and Sanitation's (UNSGAB) “Hashimoto Action Plan,” launched in March 2006, called for the establishment of an international mechanism to promote water operators' partnerships (WOPs). It also builds on the fact that about 90% of all utilities are publicly managed, and that even modest improvements in these utilities will go a long way in contributing to meeting the internationally agreed upon development goals and targets for water and sanitation. Similar to PUPs, WOPs are peer support relationships between two or more water or sanitation operators, carried out on a not-for-profit basis in the objective of capacity development.⁶⁴ Hosted by UN-Habitat, GWOPA has an international platform to develop and foster WOPs and facilitate regional WOPs platforms. GWOPA welcomes water and sanitation utilities as well as citizen and labour organizations which agree to the GWOPA charter⁶⁵ to engage in partnership projects. GWOPA is a unique international avenue for public water operators who seek partners forged around common public objectives.

PUPs have made tangible contributions to sustainable water development in both the Global North and South. Other examples include Riga, Latvia, where an international PUP transformed the municipal water and sanitation operator into an autonomous, self-financing enterprise capable of attracting international finance without sovereign guarantees.⁶⁶ Domestic PUPs also enabled Costa Rica to achieve water supply coverage of more than 75% in rural areas as early as 2000.⁶⁷

6. Commit to serve public interests, instead of giving up responsibility to privateers.

Commitment to public water is essential to ensuring water systems are managed in people's interests, a responsibility of government which cannot be delegated to the private sector. The international experience shows that public control is preferable due to the managerial flexibility of the public sector, contrary to the profit-maximising fixation of the private sector. Mobilising the public sector's flexibility requires political, including enlightened political leadership and strong democratic governance. Some examples are provided in the following sections.

Case 5: The state water company in Uruguay

The publically owned and operated Obras Sanitarias del Estado (Sanitation Works of the State, OSE) provides high-quality, affordable, and nearly universal services to the population of Uruguay. The country's commitment to public health led to a high level of public investment for six decades, resulting in among the highest coverage rates for water and sanitation in the region. Although OSE had a strong reputation as a model public company internationally, in the 1990s the World Bank pushed to introduce competition to ‘modernise’ the sector, and in turn, two concession contracts were granted to private operators.⁶⁸

Citizen organisations and the OSE workers' union organised nationwide mobilisations to defend public water. As a result, a national referendum was held, and in 2004 Uruguay became the first country in the world to enshrine the right to water in its constitution. Consequently, the two private contracts were cancelled.⁶⁹

OSE's trade union FFOSE played a significant role in the movement to oppose privatisation, achieve recognition of the human right to water, and return water to public control. Organised workers are at the front line to strengthen and reinvent the public ethos in OSE. With renewed public commitment to realise the human right to water, OSE started an in-house reform process, which involved fifty internal investigations of corruption, resulting in weeding out corrupt workers and fourteen prosecutions of former directors. A new accounting system was introduced to increase accountability.⁷⁰

Although OSE was in bad financial shape (US\$3-4 million deficit per year) in 2004, it is running an operation surplus of US\$24 million today. A World Bank study has compared water services in Uruguay under privatisation in the 1990s, followed by nationalisation in the 2000s. Nationalisation led to a 15 percent increase in access to sanitation networks, mainly benefitting the poorest, whereas privatisation had no impact.⁷¹

7. Reinventing public water is good for democratic governance.

Public operators are able to strengthen transparency and accountability through the adoption of advanced forms of democratisation and public participation. This level of accountability to civil society is not found in private sector operations, because private companies exert absolute managerial control over operations in order to maximise profits and shareholder remuneration.⁷²

Water utility workers should be central to democratic and participatory decision-making. Workers' knowledge and experience are critical and can contribute to a reform process if they are meaningfully involved by decision-makers. Internationally recognised tools such as labour-management cooperation and social dialogue create strong dynamics between management, workers, and government, essential in the rebuilding of a strong public utility. Labour management cooperation is a process in which employees participate in decision-making. Activities may include setting goals, identifying and solving problems, and developing long-term plans. Similarly, social dialogue can mean mutual information-sharing, open discussion, consultation (on-going tripartite dialogue) and negotiation (agreements /common opinions). The goal is to improve the quality of services, job satisfaction, and the skills and abilities of workers. The European Commission recognises the benefits of social dialogue, which it promotes as an instrument for better governance and promotion of social and economic reforms.⁷³

When it comes to participatory decision-making and democratic governance, the best practices are found in the public sector.

Case 6: Porto Alegre, Brazil

Water supply and sanitation are provided by the municipally owned operator DMAE, which expanded service coverage despite a rapid increase in population. Access to water supply increased from 95% in 1990 to 99.5% in 2001, and access to sewerage increased from 70% in 1990 to 84% in 2001. Civil society representation within DMAE's Deliberative Council (board of directors) is accompanied with participatory budgeting, an exercise in which citizens vote on how to allocate the municipal budget to fund expenditure in different services including water supply and sanitation.⁷⁴

Case 7: Alagoinhas, Brazil

Alagoinhas (population 138,336), in northeast Brazil, has halved the infant mortality rate between 1999 and 2003. During the same period, the city utility Autonomous Water and Sewage Service of Alagoinhas (SAAE) increased its annual investments with its own income from R\$154,000 to R\$783,000, which enabled it to extend the sanitary sewage system. A key element in making this improvement possible was a comprehensive participatory process to develop and approve a new environmental sanitation policy aimed at improving drinking water supply, wastewater collection, and treatment and sanitation systems for liquid, solid, and gaseous residues. Seventeen regional and four thematic pre-conferences were organised with public participation throughout 2001 and adopted by the city council in December 2001. Law 1460 was the first law completely developed through social participation in Brazil. In December 2001, the city council adopted a municipal policy on environmental sanitation based on Law 1460), and the municipal City Hall of Alagoinhas, SAAE and the Federal University of Bahia (UFBA) produced a draft environmental sanitation plan over the course of a year. Every month, the population and institutions were invited to critically review the draft plan and to provide feedback. The environmental sanitation plan was developed by this participatory process and later the municipal council of environmental sanitation, a deliberative body, was established. It is composed of 15 representatives from civil society (75%) and five from the municipal public authority.⁷⁵ The municipal council of environmental sanitation guaranteed genuine democratic control in implementing plans.

8. How Lagos public water can become world class.

The Lagos State Water Corporation (LSWC) should be reformed radically while retaining full public ownership and management to avoid the problems of water privatisation and PPPs. While Lagos citizens are not satisfied with the current situation, and understandably so, a reformed public LSWC could become world class by adopting the best practices from successful public water utilities in the global North and South, strengthening its management and operations through PUPs and international solidarity, and strengthening decision-making through democratic governance.

THE WAY FORWARD IN LAGOS

After consultations with communities across Lagos as well as study of the international models and lessons described in the previous chapter, we offer to the Executive of Lagos State Governor Akinwunmi Ambode and the Lagos State House of Assembly a set of policy guidelines that will offer the way forward, out of the water crisis.

The areas of action described here can be moved forward beginning immediately, and are well within reach considering Lagos' economic, political, and human resources. If followed, this course of action will ensure that the Lagos water system is transformed from a source of disease, conflict, and suffering into a model for all the world to emulate.



1. Protect and fulfil the human right to water as an obligation of the government, representing the people.

The Lagos State Government can affirm its commitment to the right to water through a strong resolution by the State House of Assembly and by ensuring adequate public funding and democratic oversight to meet the water needs of all Lagosians.

2. Reject all forms of water privatisation, PPPs, and commodification of water, revising laws accordingly.

Lagos State officials have repeatedly endorsed PPPs even as they assure Lagosians they are against the privatisation of water. Officials and the leadership of the LSWC must acknowledge that PPPs are a form of privatisation and promise to reject all forms of privatisation, including public-private partnerships.

Officials must review and revise all pro-privatisation policies and laws for the water sector that currently promote PPPs or outright privatisation of water.

Such laws and policies include:

- Lagos Water Sector Law 2004, which promotes privatisation including PPPs by:
 - Making seeking private contracts a central function of the LSWC.¹
 - Including among the primary duties of the LSWC the duty to ensure the profitability of water system operations.²
- ? Lagos Water Supply Master Plan
 - Lays out an ambitious plan to make LSWC a world-class utility but assumes PPPs will fund that work, which history has shown is not true.
- ? The 2013 Lagos State Development Plan
 - Prioritises financing through the adoption of PPPs, stating the government will “need to implement significant public-private partnerships (PPPs) in the Water Sector to ensure sufficient private spending for water supply. The State will need to access funding through concessions and BOOT PPP contract arrangement across service areas.”³

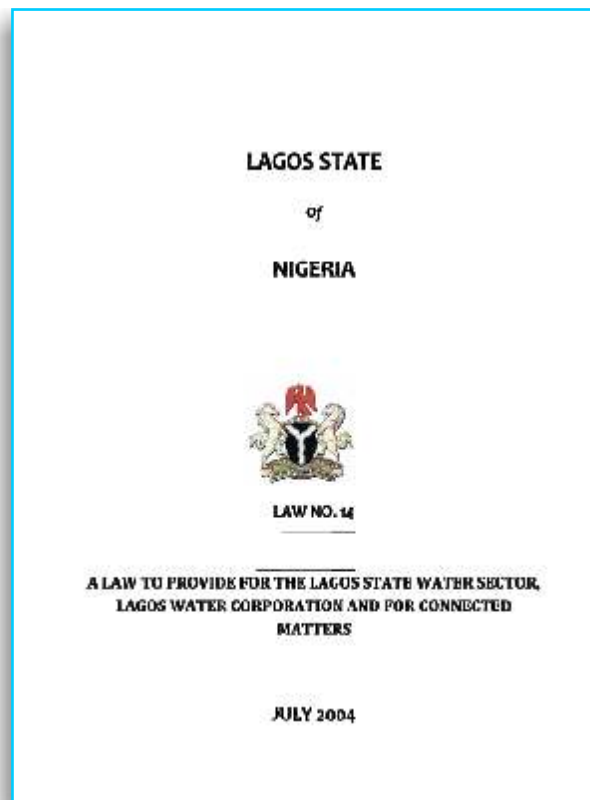
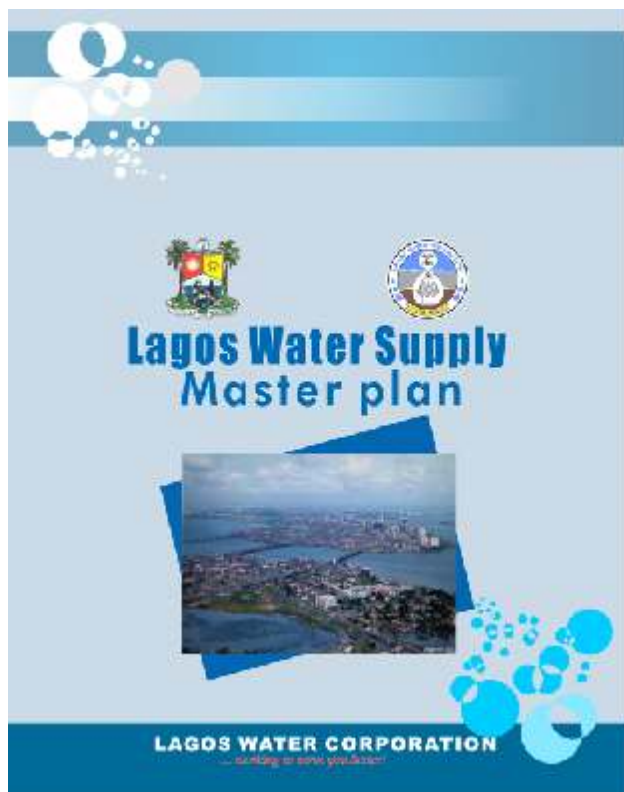


Photo Credit: LASG

The laws should be reviewed and revised, in a transparent manner and on an expedited timeline, with free and meaningful citizen participation, to guarantee Lagos does not enter into harmful PPP arrangements or traditional privatisation schemes like concessions. Instead, plans and legislation should include strategies for public funding and financing, as well as effective democratic governance, as laid out in this document.

3. Increase budgetary allocation to the water sector.

The argument against water privatisation does not overlook the importance of funding to build and maintain water infrastructure. A consistent and adequate budgetary allocation to the water sector will allow the attainment of universal access that Lagos residents deserve. With the huge shortage of water supply in the state and its impact on public health, the Lagos State Government must declare emergency in the sector and make every effort to appropriate sufficient funds for water infrastructure development.

The budgetary allocations to the water sector in Lagos in the last decade and, especially, the period between 2013 and 2016 need critical public review to provide an explanation of the fluctuating appropriations for water.

Lagos State officials have maintained that guaranteeing peoples' access to water is constrained by limited funds, increasing population, institutional weakness, and poor management, among other factors. While some of these are correct and should be addressed according to the recommendations here, there are a number of options for guaranteeing steady funding for the water sector without disenfranchising the poor.

An adequate budget for LSWC could be achieved with a mix of resources and approaches:

Equitable and innovative taxation.

Lagos needs an effective, transparent and equitable tax system that especially ensures that the richest and the corporations pay their fair share. One of the key recommendations for guaranteeing steady funding for the water sector without disenfranchising the poor is the introduction of innovative taxation on big corporations that use large amounts of water in their operations.

Our recommendation therefore is that the host of breweries, bottling corporations, manufacturing industries, and other high-volume water businesses operating in Lagos be primed to substantially increase taxes and levies to fund the water sector.

Innovative tariff.

Our view correlates with the U.N. view that while the human rights to water and sanitation do not call for services to be free of charge, services must be affordable for all, which includes the need to develop tariff systems and subsidies, or in some cases free services, to ensure that services are accessible and affordable for all. The current tariff regime needs urgent review to ensure the poor have affordable rates while businesses pay economically and socially accountable rates.

The current tariff structure is inherently faulty as its main objective is to commodify water and make profit from the poor and vulnerable, not ensure access for all. Currently, the Lagos State Water Corporation charges 5 kobo/litre for all metered customers, placing a heavier burden on the poor than on the rich.

The tariff is suspiciously silent on heavy industrial water users strewn all over the state. It is a regime that provides cheaper water to businesses while the poor pay high rates.

The state needs to restructure its tariff to ensure that the poor pay less or even access specified volume of water for domestic use for free while the wealthy pay more. A graduated tariff scheme based on volume consumed is recommended.

Appropriate bond funds.

Recently, the State House of Assembly approved a N500 billion bond issue, with proceeds to be appropriated over the next five to ten years. Governor Ambode has already stated that funds will be used for infrastructure development; however, he has not emphasized water infrastructure investment of these funds.⁴ Water infrastructure development should be prioritised as a spur to economic activity as well as a human right.

Proven public financing programs.

The Lagos government should develop or promote public financing programs along lines proven successful in other nations.

- Lagos government should institute a Water Fund which can be fashioned after the Nederlandse Waterschapsbank N.V (NWB Bank). (See Chapter 4, International Lessons)
- Lagos officials should develop a public financing program modeled on the U.S. Drinking Water State Revolving Funds (DWSRF)⁵ (See Chapter 4, International Lessons). In the case of Lagos, the state can provide the 80 percent grant while local governments or communities provide matching grants.

4. Integrate broad public participation in developing plans to achieve universal access to clean water.

The experience of rebuilding public water provision in Paris and successful in-house restructuring in Porto Alegre show that the following factors are important in terms of participatory and democratic water governance: a) political commitment to transparency, accountability, and participation; and b) capacity to translate this political commitment into progressive policies. Importantly, capacity is not only the ability of individuals and organisations to perform tasks and provide services, but also the ability of citizens and their elected representatives to collectively make difficult decisions and solve complex problems.⁶

Citizens' participation in resolving the Lagos water crisis is lacking. Important decisions regarding water infrastructure in the state have been shrouded in secrecy. There should be a fundamental shift in the manner and process of citizens' engagement to ensure public access to information and incorporate active participation of citizens. Citizens' buy-in regarding government initiatives is crucial, so also are their inputs to plans and action. Community ownership and community management of water are cultural practices that could be leveraged for positive impacts in the quest for accessible and affordable water. Citizens should have full knowledge of contracts, memorandums of understanding (MOUs), and other decisions relating to the water sector. Lagos officials should ensure a formal channel for citizen input and oversight. We recommend the formation of a deliberative body modelled on Alagoinhas, Brazil's municipal council of environmental sanitation. The deliberative body should have elected members with proportional representation from each local government area to ensure all Lagosians have a say in water policy.

5. Ensure a focus on public funding and democratic governance of water is reflected in any projects funded by international financial institutions or international development funds.

While assistance from international financial institutions (IFIs) such as the World Bank or national development funds such as Agence Française de Développement can be essential to national development programs, we should not let the priorities of these institutions dictate national policy. Lagos officials should ensure that projects funded by or carried out with international funders:

- Are driven by the priorities of local people.
- Are committed to democratic water governance.
- Ensure public control of water by avoiding the promotion or funding of PPPs, concessions, or other forms of privatisation.
- Do not contain hidden conditionalities that promote private sector participation in the water sector.

6. Improve labour relations in LSWC.

Proactive steps should be taken by the Lagos State Government to improve labour relations at the LSWC, to ensure that LSWC workers have effective formal channels to raise workplace issues with management. Labour-management cooperation should allow workers to participate in decision-making in order to improve operations and planning. Workers have in-depth knowledge of system operations, at a level that is often lacking in senior and middle management. Worker experience and expertise can and must be systematically applied to decisions for extending and improving system operations.

Workers need to be able to address grievances without fear of retribution. There are constant concerns by workers about safety practices in LSWC facilities. There should be immediate resolution of issues around staff welfare, pensions, and training, among others. A robust mechanism of engagement should be created to facilitate the seamless exchange of ideas between the workforce and management.

Hiring systems, for both front-line workers and for management, need to be transparent and based on merit and competence and not nepotism and patronage.

Workers and management should use the tools of social dialogue to build deeper cooperation with management. Such mechanisms can help strengthen human resources management functions, for example by improving occupational health and safety processes, instituting life-long learning, and career planning. Overall they can improve planning, operations, and maintenance in ways that respect labour rights and improve services to the community.

7. Pursue public-public partnerships (PUPs).

With the failure of for-profit financing and management of water, many governments are moving toward public-public partnerships to promote knowledge-sharing and strengthen community management of water resources. PUP models include agreements between communities, agreements between a public utility and a community, agreements between two public entities, agreements between public and civil society, and agreements between a community and civil society in the management of water. These partnerships can involve local or international communities or public institutions.

LSWC should actively seek a partner public utility willing to provide peer-to-peer assistance in the reform process forged around the objectives of nurturing LSWC's capacity and maintaining full public control over Lagos' water systems.

8. Promote good governance and eliminate corruption.

The Lagos State Government should promote good governance at the LSWC. There should be accountability for all public funds invested in that agency, including assurance that procurement rules, labour contracts, and fund disbursements are carried out fully in accordance with the law and with full and complete transparency.

It is disturbing that the Lagos State Government is yet to institute an inquiry into allegations of widespread corruption, ineptitude, and bad management that prevailed in the agency during the period of the recently sacked management. The state government must probe the allegations, recover looted public funds, and bring the culprits to justice.

REFERENCES

HEALTH AND ECONOMIC TOLL OF LAGOS WATER CRISIS

1. Elisabeth Rosenthal, "Nigeria Tested by Rapid Rise in Population," *The New York Times*, April 14, 2012, <http://www.nytimes.com/2012/04/15/world/africa/in-nigeria-a-preview-of-an-overcrowded-planet.html>; Ola Oresanya, "Challenges of Population, Development and Waste Management in a Contemporary Lagos" (Sub-Regional Sector Roundtable on Population and Development, Lagos, April 2, 2015), 6, <http://www.lawma.gov.ng/md%20presentation/2015/Challenges%20of%20Population,%20Development%20and%20Waste%20Management.pdf>; Department of Economic and Social Affairs, Population Division, "World Urbanization Prospects: The 2014 Revision, Highlights" (United Nations Secretariat, 2014), <https://esa.un.org/unpd/wup/Publications/Files/WUP2014-Highlights.pdf> (accessed September 27, 2016).
2. Dr. Ijeoma Nwagwu and Tamilore Oni, "Lagos and Its Potentials for Economic Growth," *Heinrich Böll Stiftung Nigeria*, July 2, 2015, <https://hg.boell.org/2015/07/02/lagos-and-its-potentials-economic-growth> (accessed September 27, 2016).
3. Ibid.
4. "Lagos Water Supply Master Plan" (Lagos, Nigeria: Lagos Water Corporation), 16, <http://lagoswater.org/wp-content/uploads/2016/04/Lagos-Water-Master-Plan.pdf> (accessed September 19, 2016).
5. "Facilities," *Lagos Water Corporation*, http://lagoswater.org/lwcweb-lauch.php?page_id=493 accessed September 19, 2016).
6. "Lagos Water Supply Master Plan," 17.
7. Mohammed Shosanya et al., "Epidemic Looms as Water Scarcity Hits Lagos," *Daily Trust*, April 20, 2016, <http://www.dailytrust.com.ng/news/eko-trust/epidemic-looms-as-water-scarcity-hits-lagos/143275.html>; Nahimah Ajikanle Nurudeen, "Nigeria: Uncovering the Root of Lagos' Measles Outbreak," *All Africa*, February 27, 2016, <http://allafrica.com/stories/201602291232.html> (accessed September 27, 2016).
8. Ehi-Eromosele C. O and Okiei W. O, "Heavy Metal Assessment of Ground, Surface and Tap Water Samples in Lagos Metropolis Using Anodic Stripping Voltammetry," *Resources and Environment* 2, no. 3 (May 9, 2012): 82-86, doi:10.5923/j.re.20120203.01.
9. "Unending Pain...as Taps Dry up Petrol," *Daily Nigeria News*, April 13, 2016, <http://www.dailynigerianews.com/2016/04/13/unending-pain-as-taps-dry-up-petrol/> (accessed September 27, 2016).
10. Charles Robertson, Nothando Ndebele, and Yvonne Mhango, "A Survey of the Nigerian Middle Class" (Renaissance Capital, September 26, 2011), 3, http://www.fastestbillion.com/res/Research/Survey_Nigerian_middle_class-260911.pdf (accessed September 27, 2016).

ROOTS OF THE CRISIS

1. "Welcome Cont. | Lagos Water Corporation," accessed September 30, 2016, http://lagoswater.org/lwcweb-lauch.php?page_id=1047; "Facilities | Lagos Water Corporation," accessed September 19, 2016, http://lagoswater.org/lwcweb-lauch.php?page_id=493.
2. "Facilities," *Lagos Water Corporation*, http://lagoswater.org/lwcweb-lauch.php?page_id=493 (accessed September 19, 2016).
3. Peter Jones Ailuorio, "Nigeria: Oando's IPP to Power Lagos Water Facility," *All Africa*, February 10, 2010, <http://allafrica.com/stories/201002110420.html> (accessed September 27, 2016).
4. "On Clean Drinking Water in Lagos: Many Options, Few Solutions," *African Urbanism*, August 7, 2012, <http://africanurbanism.net/on-clean-drinking-water-in-lagos-many-options-few-solutions/>; Judith Afooma Jideonwo, "Ensuring Sustainable Water Supply in Lagos, Nigeria," Master of Environmental Studies Capstone Projects (University of Pennsylvania, May 8, 2014), 40, http://repository.upenn.edu/cgi/viewcontent.cgi?article=1056&context=mes_capstones (accessed September 27, 2016).
5. "Lagos Water Supply Master Plan" (Lagos, Nigeria: Lagos Water Corporation), 3, <http://lagoswater.org/wp-content/uploads/2016/04/Lagos-Water-Master-Plan.pdf> (accessed September 19, 2016).
6. Judith Afooma Jideonwo, "Ensuring Sustainable Water Supply in Lagos, Nigeria," 78; "About Us," *Lagos Water Corporation*, http://lagoswater.org/lwcweb-lauch.php?page_id=232 (accessed September 19, 2016).
7. Judith Afooma Jideonwo, "Ensuring Sustainable Water Supply in Lagos, Nigeria," 41.
8. Ibid., 9-10.
9. Ibid., 27, 40.
10. "Water and Sewerage Sector Snapshots - Private Participation in Infrastructure (PPI)," *World Bank*, accessed September 27, 2016, <http://ppi.worldbank.org/snapshots/sector/water-and-sewerage>.
11. Mary Gooderham, "Help for the New Nigeria," *IFC Impact* 3, no. 4 (Fall 1999): 31, http://www-wds.worldbank.org/external/default/WDSContentServer/WDS/IB/2002/02/02/000094946_02011804101624/Rendered/PDF/multi0page.pdf; Uzochukwu Amakom, "Development Financing, Utility Privatization and Poverty Reduction in Africa: An Insight on Water Privatization in Nigeria," SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, September 1, 2007), <http://papers.ssrn.com/abstract=1601975>; Babatope Babalobi, "Water Is Life" (Lagos, Nigeria, March 22, 2005), <https://www.citizen.org/documents/nigeriaccoal.pdf>.
12. Independent Evaluation Group, "ICR Review" (The World Bank, June 26, 2015), 1-2, <http://documents.worldbank.org/curated/en/73619146799>

- 8242643/pdf/ICRR14660-P071075-Box393183B-PUBLIC.pdf; David Hall, "Water and Electricity in Nigeria" (Public Service International Research Unit, 2006).
13. David Hall, "Water and Electricity in Nigeria" (Public Service International Research Unit, 2006), 8.
14. "Project Information Document (PID): Appraisal Stage, Second National Urban Water Sector Reform Project" (The World Bank, March 23, 2005), 4, <http://documents.worldbank.org/curated/en/599051468763459567/pdf/31851.pdf> (accessed September 27, 2016).
15. "Second National Urban Water Sector Reform Project (P071391): Implementation Status & Results Report" (The World Bank, December 30, 2015), 2, <http://documents.worldbank.org/curated/en/395431468298475509/pdf/ISR-Disclosable-P071391-12-30-2015-1451526421338.pdf> (accessed September 27, 2016).
16. "PPIAF Annual Report 2000" (Washington, DC: Public-Private Infrastructure Advisory Facility), 29, <http://documents.worldbank.org/curated/en/249411468160526786/pdf/354950arppiaf2000.pdf> (accessed September 27, 2016).
17. "NIGERIA: Regulatory Framework for Introducing Private Participation in the Lagos State Water Utilities," *Public-Private Infrastructure Advisory Facility*, <https://web.archive.org/web/20150101202801/http://www.ppiaf.org/node/3667> (accessed November 6, 2015).
18. "Projects & Operations - Projects," *The World Bank*, <http://www.worldbank.org/projects/search?lang=en&searchTerm=nigeria%20water> (accessed September 19, 2016).
19. "Implementation Status & Results Report: Second National Urban Water Sector Reform Project (P071391)" (Washington, DC: The World Bank, June 30, 2016), 1-2, <http://documents.worldbank.org/curated/en/184621467313195307/pdf/ISR-Disclosable-P071391-06-30-2016-1467313179837.pdf> (accessed September 27, 2016).
20. Thematic and Global Evaluation Division, Independent Evaluation Group (IEG) of the World Bank, "Project Performance Assessment Report: Nigeria" (The World Bank, June 13, 2006), http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2006/07/19/000112742_20060719121550/Rendered/PDF/36443010UNI.pdf (accessed September 27, 2016).
21. David Hall and Emanuele Lobina, "Financing Water and Sanitation: Public Realities" (Public Services International Research Unit, 2012), 7.
22. Marin, Philippe, "Public-Private Partnerships for Urban Water Utilities: A Review of Experiences in Developing Countries" (Washington, DC: The World Bank; Public-Private Infrastructure Advisory Facility, 2009), 8, <https://www.ppiaf.org/sites/ppiaf.org/files/FINAL-PPPsforUrbanWaterUtilities-PhMarin.pdf>.
23. "Shutting the Spigot on Private Water: The Case for the World Bank to Divest" (Boston: Corporate Accountability International, April 2012), 27, allenges of <http://www.stopcorporateabuse.org/resource/shutting-spigot-private-water-case-world-bank-divest>; Leonar Shang-Quartey, "Post Privatisation Challenges of Public Water in Ghana," *Transnational Institute*, June 23, 2014, <https://www.tni.org/en/article/post-privatisation-challenges-public-water-ghana> (accessed September 27, 2016).
24. Vincent Yamboo, "Resolution No. 13-009-CA: Rate Rebasing Determination for Manila Water Company, Inc. for Charging Years 2013-2017" (Metropolitan Waterworks and Sewerage System Regulatory Office), 6, accessed September 21, 2016, <https://www.scribd.com/doc/168493622/MWSS-RO-Resolution-No-13-009-CA-Manila-Water>.
25. Luke Dale-Harris, "French Water Executive Charged in Romania Corruption Probe," *POLITICO*, October 9, 2015, <http://www.politico.eu/article/france-water-executive-charged-romania-corruption-probe/>; Luke Dale-Harris, "Watchdog Unearths Dubious Dealings behind Romania's Economic Boom," *DW*, December 10, 2015, <http://www.dw.com/en/watchdog-unearts-dubious-dealings-behind-romania-economic-boom/a-18776986> (accessed September 27, 2016).
26. Anjaya Anparthi, "Water Meant for East & North Nagpur given to Central," *The Times of India*, accessed September 21, 2016, <http://timesofindia.indiatimes.com/city/nagpur/Water-meant-for-East-North-Nagpur-given-to-Central/articleshow/19905598.cms>; Ashish Roy, "No Amount of 24X7 Water Can Wash NMC Officials Clean," *The Times of India*, accessed September 21, 2016, <http://timesofindia.indiatimes.com/city/nagpur/No-amount-of-24X7-water-can-wash-NMC-officials-clean/articleshow/10037360.cms>; TNN, "Orange City Water Pvt Ltd Meter Reader in Scam to Face Action - Times of India," *The Times of India*, accessed September 21, 2016, <http://timesofindia.indiatimes.com/city/nagpur/Orange-City-Water-Pvt-Ltd-meter-reader-in-scam-to-face-action/articleshow/40444400.cms>; "Water Scam: Tankers Operate in Networked Areas, NMC Pays Undue Amount to OCW," *Nagpur Today*, accessed September 21, 2016, <http://www.nagpurtoday.in/water-scamtankers-operate-in-networked-areas-nmc-pays-undue-amount-to-ocw>; Anjaya Anparthi, "Hastak's Veolia-Sponsored France Tour Raises Eyebrows," *The Times of India*, accessed September 21, 2016, <http://timesofindia.indiatimes.com/city/nagpur/Hastaks-Veolia-sponsored-France-tour-raises-eyebrows/articleshow/16415231.cms>.
27. Katharina Gassner, Alexander Popov, Nataliya Pushak, "Does Private Sector Participation Improve Performance in Electricity and Water Distribution?" (The World Bank; Public-Private Infrastructure Advisory Facility, 2009), 42,

- <https://openknowledge.worldbank.org/bitstream/handle/10986/6605/461320PUB0Box3101OFFICIAL0USE0ONLY1.pdf?seq> (accessed September 27, 2016).
28. Steven Verburg, "Water Privatization Bill Probably Can't Be Revived, GOP Leader Says," *Wisconsin State Journal*, February 18, 2016, http://host.madison.com/wsj/news/local/environment/water-privatization-bill-probably-can-t-be-revived-gop-leader/article_192a683c-a7e8-5ea5-b15d-983a7072065b.html; James F. Kelly, "Chris Christie Is Turning Tap Water Into a Private Commodity," *The Nation*, July 16, 2015, <http://www.thenation.com/article/chris-christie-is-turning-tap-water-into-a-private-commodity/> (accessed September 27, 2016).
 29. "Argentina Government to Appeal World Bank Court Ruling," *teleSUR*, April 11, 2015, <http://www.telesurtv.net/english/news/Argentina-Government-to-Appeal-World-Bank-Court-Ruling--20150411-0008.html> (accessed September 27, 2016).
 30. Javier Márquez Valderrama, Lina Mondragón Pérez, and Bibiana Salazar Restrepo, "Public- Community Partnerships in Latin America: An Alternative Vision for Improving the Water Sector" (Public Water for All), accessed September 21, 2016, <http://www.blueplanetproject.net/wordpress/wp-content/uploads/PublicWaterForAll-Mar14-PuP.pdf>.
 31. Rosa Pavanelli, General Secretary, "Letter to Governor Ambode: Call on Lagos State Government to Halt the Proposed Privatization of Water in Lagos" (Public Services International, January 18, 2016).
 32. *A Law to Provide for the Lagos State Water Sector, Lagos Water Corporation and for Connected Matters*, 2004, 4, 24, <http://lagoswastewater.org/wp-content/uploads/Water-Sector-Law-2004.pdf> (accessed September 27, 2016).
 33. Babatope Babalobi, "Water Is Life," 2.
 34. "Lagos Water Supply Master Plan," 14.
 35. *Ibid.*, 32.
 36. *Ibid.*, 4.
 37. Olutoyin Ayinda, "Implementation of Water and Sanitation Policies and Practices within the Spatial Plans of Lagos, Nigeria" (2013 World Water Week, Stockholm, September 4, 2013), 9, http://programme.worldwaterweek.org/sites/default/files/ayinde-presentation_lagos_government_-_draft2.pdf (accessed September 28, 2016).
 38. "Lagos State Development Plan: 2012-2025" (Ministry of Economic Planning and Budget, September 2013), 79, <https://www.scribd.com/document/271150413/LAGOS-STATE-DEVELOPMENT-PLAN-2012-2025>.
 39. Olutoyin Ayinda, "Implementation of Water and Sanitation Policies and Practices within the Spatial Plans of Lagos, Nigeria," 15.
 40. Chimamanda Ngozi Adichie, "Lights Out in Nigeria - The New York Times,"
 - out-in-nigeria.html?_r=0 (accessed August 23, 2016).
 41. "Lagos Water Supply Master Plan," 32.
 42. "Lagos State Ministry of Economic Planning and Budget, accessed September 30, 2016, lagosbudget.org/approved-budget.
 43. "LAGOS ASSEMBLY DECRIES SHORTAGE OF WATER SUPPLY IN THE STATE Lagos State Government," *Lagos State Government*, accessed September 21, 2016, <http://www.lagosstate.gov.ng/2016/06/01/lagos-assembly-decries-shortage-of-water-supply-in-the-state/>.
 44. Akinwunmi Ambode, "Address by His Excellency, the Governor of Lagos State, Mr. Akinwunmi Ambode on the Occasion of Signing of the Year 2016 Appropriation Law on Monday 4th January, 2016 Lagos State Government" January 4, 2016, <http://www.lagosstate.gov.ng/2016/01/04/address-by-his-excellency-the-governor-of-lagos-state-mr-akinwunmi-ambode-on-the-occasion-of-signing-of-the-year-2016-appropriation-law-on-monday-4th-january-2016/>.
 45. Yomi Kazeem, "Lagos Is Africa's 7th Largest Economy and Is about to Get Bigger with Its First Oil Finds," *Quartz*, accessed September 21, 2016, <http://qz.com/676819/lagos-is-africas-7th-largest-economy-and-is-about-to-get-bigger-with-its-first-oil-finds/>.
 46. *Ibid.*
 47. *A Law to Provide for the Lagos State Water Sector, Lagos Water Corporation and for Connected Matters*.
 48. Babatope Babalobi, "Water Is Life"; David Hall, "Water and Electricity in Nigeria" (Public Service International Research Unit, 2006).
 49. "Stakeholder/CSO Interaction Policy with LSWC" (Lagos Water Corporation, 2012), https://www.stopcorporateabuse.org/sites/default/files/lswc_policy_cso_interaction_final_2012.pdf (accessed September 28, 2016).
 50. *Ibid.*
 51. *Ibid.*
 52. *Resolution Adopted by the General Assembly on 28 July 2010: 64/292. The Human Right to Water and Sanitation, 64/292, 2010*, http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/64/292 (accessed September 28, 2016).
 53. Com. 'Biodun Bakare (JP), State Secretary, Amalgamated Union of Public Corporations, Civil Service Technical and Recreational Services Employees (Lagos State Council), "Letter from Com. 'Biodun Bakare to Executive Governor of Lagos State: Appeal for Bailout of Lagos Water Corporation from Total Collapse," August 3, 2015, 3.
 54. Com. 'Biodun Bakare (JP), State Secretary, Amalgamated Union of Public Corporations, Civil Service Technical and Recreational Services Employees (Lagos State Council), "Letter from Com. 'Biodun Bakare to Executive Governor of Lagos State: Appeal for Bailout of Lagos Water Corporation from Total Collapse," August 3,

2015, Annexure II.

55. *Ibid.*, 2.

56. Com. 'Biodun Bakare (JP), State Secretary, Amalgamated Union of Public Corporations, Civil Service Technical and Recreational Services Employees (Lagos State Council), "Letter from Com. 'Biodun Bakare to Executive Governor of Lagos State: Appeal for Bailout of Lagos Water Corporation from Total Collapse."

57. *Ibid.*, Annexure VI.

58. Monsuru Olowoapejo, "How Lagos Water Corporation Short-Changes Its Workers," *Vanguard News*, July 22, 2014, <http://www.vanguardngr.com/2014/07/lagos-water-corporation-short-changes-workers/> (accessed September 28, 2016).

59. "National Policy on Public Private Partnerships And Its Supplementary Notes" (The Federal Government of Nigeria), 6, accessed September 21, 2016, <https://www.scribd.com/document/93324903/National-PPP-Policy>; "About PPA," *Lagos State Public Procurement Agency*, accessed September 21, 2016, <http://www.lagosppa.gov.ng/about-ppa> (accessed September 28, 2016).

60. "LWC Restores Water Supply, Urges Residents to Be Patient," *Lagos Water Corporation*, June 10, 2016, <http://lagoswater.org/lwcweb-lauch.php?p=1061> (accessed September 28, 2016).

61. "PPP Manual for Lagos State" (Office of Public-Private Partnership, December 1, 2012), 18-20, <http://akindelano.com/wp-content/uploads/2015/02/LagosStatePPPMannualFinal.pdf>

INTERNATIONAL LESSONS FOR BUILDING ROBUST PUBLIC WATER SYSTEMS

1. Brid Bennan et al., *Reclaiming Public Water: Achievements, Struggles and Visions from Around the World*, Second Edition (Transnational Institute, 2007), <https://www.tni.org/en/tnibook/reclaiming-public-water-book> (accessed September 28, 2016).

2. "Dutch Water Sector," *Vewin*, <http://www.vewin.nl/english/dutch-water-sector/> (accessed September 28, 2016).

3. R.C. Marques, S.V. Berg, and S. Yane, "Performance Benchmarking Analysis of Japanese Water Utilities," *Proceedings, Pi2011 Conference*, 2011, 8, http://warrington.ufl.edu/centers/purc/purcdocs/papers/1107_Marques_Performance_Benchmarking_Analysis.pdf (accessed September 28, 2016).

4. "Delving into Water: Performance of the Water Companies in England and Wales, 2010-11 to 2013-14," Company Performance Report (Consumer Council for Water, 2015), 23, <http://www.ccwater.org.uk/wp-content/uploads/2015/01/Company-performance-report.pdf> (accessed September 28, 2016).

5. Emanuele Lobina and David Hall, "The Comparative Advantage of the Public Sector in the Development of Urban Water Supply," *Progress in Development Studies* 8, no. 1 (January 1, 2008): 85-101, Doi:10.1177/146499340700800108; Kheang Un, "State, Society and Democratic Consolidation: The Case of Cambodia," *Pacific Affairs* 79, no. 2 (2006): 225-45.

6. "Ek Sonn Chan," *Global Water Summit 2016*, <http://www.watermeetsmoney.com/speaker/ek-sonn-chan/> (accessed September 22, 2016).

7. David Hall et al., "Public-Public Partnerships (PUPs) in Water" (Public Service International Research Unit & Transnational Institute, March 2009), 8, <http://www.waterjustice.org/uploads/attachments/WWF5-PUPs-%20FINAL-for%20web-Zlatan.pdf> (accessed September 28, 2016).

8. Judy Bryant, "Thirst for Change," *ADB Review* 36, no. 3 (June 2004), <https://www.scribd.com/document/127123276/Water-Article-Thirst-for-Change>; Ek Sonn Chan, Michael Vermersch, and Patrick Vaughan, "Water Supply in Phnom Penh: From Devastation to Sector Leadership" (Water Utility Management International, September 2012), <http://www.leakssuite.com/wp-content/uploads/2015/06/2012-Phnom-Penh-Water-Supply-From-Devastation-to-Leadership-Ek-Sonnchan-Vermersch-M-Vaughan-P-WUMI-Sept-2012.pdf> (accessed September 28, 2016).

9. Visoth Chea, "Going Public: Southern Solutions to the Global Water Crisis" (London: World Development Movement, March 2007), 62, <https://www.yumpu.com/en/document/view/11836628/going-public-webindd-world-development-movement/4> (accessed September 28, 2016).

10. Emanuele Lobina, "Remediable Institutional Alignment and Water Service Reform: Beyond Rational Choice," *International Journal of Water Governance* 1 (February 2013): 109-32.

11. Emanuele Lobina, "Troubled Waters: Misleading Industry PR and the Case for Public Water" (Boston: Corporate

- Accountability International, 2014), <https://www.stopcorporateabuse.org/TroubledWatersReport> (accessed September 28, 2016).
12. *Public-Private Partnerships: In Pursuit of Risk Sharing and Value for Money* (Paris: Organisation for Economic Co-operation and Development, 2008), 77, <http://www.oecd.org/gov/budgeting/public-privatepartnershipsinpursuitofrisksharingandvalueformoney.htm>; Judith Afooma Jideonwo, "Ensuring Sustainable Water Supply in Lagos, Nigeria," Master of Environmental Studies Capstone Projects (University of Pennsylvania, May 8, 2014), <http://repository.upenn.edu/cgi/viewcontent.cgi?article=1056&context=mecapstones> (accessed September 28, 2016).
 13. David Hall, "Public and Private Sector Efficiency" (European Federation of Public Service Unions, September 2014), 19, <http://www.epsu.org/sites/default/files/article/files/efficiency.pdf> (accessed September 28, 2016).
 14. Holloway, Shayo, "Rejoinder: Still on Water Challenge in Lagos (2)," *The Guardian Nigeria*, July 31, 2015, <http://www.nguardiannews.com/2015/07/rejoinder-still-on-water-challenge-in-lagos-2/> (accessed September 28, 2016).
 15. Fiscal Affairs Department, "Public-Private Partnerships" (International Monetary Fund, March 12, 2004), 12, <http://www.imf.org/external/np/fad/2004/pifp/eng/031204.pdf> (accessed September 28, 2016).
 16. "Exposing the Myths around Public-Private Partnerships: A PSIRU Briefing for EPSU" (Public Services International Research Unit, December 2014), 7-8, http://www.epsu.org/sites/default/files/article/files/PSIRU_PPP_briefing_final_.pdf (accessed September 28, 2016).
 17. Emanuele Lobina, Satoko Kishimoto, and Olivier Petitjean, "Here to Stay: Water Remunicipalisation as a Global Trend" (Public Services International Research Unit, Transnational Institute, and Multinational Observatory, November 2014), <https://www.tni.org/files/download/heretostay-en.pdf> (accessed September 28, 2016).
 18. *Ibid.*, 4.
 19. Martin Pigeon, "Une Eau Publique Pour Paris: Symbolism and Success in the Heartland of Private Water," in *Remunicipalisation: Putting Water Back into Public Hands* (Amsterdam: Transnational Institute, 2012), https://www.tni.org/files/download/remunicipalisation_book_final_for_web_0.pdf (accessed September 28, 2016).
 20. *Ibid.*, 27.
 21. *Ibid.*, 34.
 22. Anne Le Strat, "The Remunicipalisation of Paris' Water Supply Service" (Paris), 28, <https://research.ncl.ac.uk/media/sites/researchwebsites/gobacit/Anne%20Le%20Strat.pdf> (accessed August 24, 2016).
 23. Martin Pigeon, "Une Eau Publique Pour Paris: Symbolism and Success in the Heartland of Private Water," 36.
 24. "Governance," *Eau de Paris*, http://www.eaudeparis.fr/lentreprisepublique/gouvernance/#conseil_admin (accessed August 24, 2016).
 25. "Rapport D'observations Définitives et Sa Réponse: Politique de L'eau Ville de Paris" (Paris: Chambre régionale des comptes, July 3, 2014), <https://www.ccomptes.fr/Publications/Publications/Politique-de-l-Eau-Ville-de-Paris-75>; "Rapport D'observations Définitives et Sa Réponse: Régie Eau de Paris" (Paris: Chambre régionale des comptes, June 27, 2014), <https://www.ccomptes.fr/Publications/Publications/Regie-Eau-de-Paris-75> (accessed September 29, 2016).
 26. Olivier Petitjean, "Taking Stock of Remunicipalisation in Paris: A Conversation with Anne Le Strat," in *Our Public Water Future: The Global Experience with Remunicipalisation* (Amsterdam, London, Paris, Cape Town and Brussels: Transnational Institute, 2015), 66, <http://www.municipalservicesproject.org/publication/our-public-water-future-global-experience-remunicipalisation>; "Rapport D'observations Définitives et Sa Réponse: Politique de L'eau Ville de Paris," 4.
 27. Emanuele Lobina, Satoko Kishimoto, and Olivier Petitjean, eds., *Our Public Water Future: The Global Experience with Remunicipalisation* (Amsterdam, London, Paris, Cape Town and Brussels: Transnational Institute, Public Services International Research Unit, Multinationals Observatory, Municipal Services Project, European Federation of Public Service Unions, 2015), <https://www.tni.org/en/publication/our-public-water-future> (accessed September 28, 2016).
 28. "Progress on Drinking Water and Sanitation, 2012 Update" (United States: UNICEF and World Health Organization, 2012), 50, <http://www.unicef.org/media/files/JMPreport2012.pdf>; Yu-Seop Shim, Seong-Hwan An, and Jong-Ho Ahn, "Republic of Korea: Transformation of the Water Sector (1960-2012)" (Korea Water and Wastewater Works Association, May 2016), iii, https://www.ib-net.org/docs/KWWA_Booklet_Web_Final.pdf (accessed September 28, 2016).
 29. David Hall and Emanuele Lobina, "Financing Water and Sanitation: Public Realities" (Public Services International Research Unit, March 2012), 13, [http://www.gwp.org/Global/ToolBox/References/Financing%20water%20and%20sanitation-public%20realities%20\(PSIRU,%202012\).pdf](http://www.gwp.org/Global/ToolBox/References/Financing%20water%20and%20sanitation-public%20realities%20(PSIRU,%202012).pdf) (accessed September 28, 2016).
 30. Meera Karunanathan and Susan Spronk, "Public Financing: Ensuring Just and Sustainable Water Infrastructure" (Public Water for All), 3, <http://www.blueplanetproject.net/wordpress/wp-content/uploads/PublicWaterForAll-May31-Finance.pdf> (accessed September 26, 2016).
 31. Jomo KS et al., "Public-Private Partnership and 2030 Agenda for Sustainable Development: Fit for Purpose" (United Nations Department of Economic and Social Affairs, February 2016), 22, <https://sustainabledevelopment.un.org/content/documents/2288desaworkingpaper148.pdf> (accessed September 29, 2016).
 32. Louis Kasekende, "Public Policy and Economic Development in Africa" (Speech, Cape Town, August 13, 2009), 12-13, http://www.iipf.net/speeches/Kasekende_2009.pdf (accessed September 29, 2016).
 33. "Government Grants," *Entrepreneur*, <https://www.entrepreneur.com/encyclopedia/government-grants> (accessed September 26, 2016).
 34. "Soft Loan," *Investopedia*, November 26, 2003, <http://www.investopedia.com/terms/s/softloan.asp> (accessed September 29, 2016).
 35. "About NWB Bank," *NWB Bank*, <https://www.nwbbank.com/about-nwb-bank.html>; "NWB Bank

- Annual Report 2015" (NWB Bank, n.d.), 27-28, <https://www.nwbbank.com/annual-reports.html> (accessed September 26, 2016).
36. Claudia Copeland and Mary Tiemann, "Water Infrastructure Needs and Investment: Review and Analysis of Key Issues" (Congressional Research Service, December 21, 2010), 3-5, <https://www.fas.org/sgp/crs/homesecc/RL31116.pdf> (accessed September 29, 2016).
37. "How the Drinking Water State Revolving Fund Works," US Environmental Protection Agency, <https://www.epa.gov/drinkingwatersrf/how-drinking-water-state-revolving-fund-works#tab-3> (accessed September 26, 2016).
38. "Public Spending on Transportation and Water Infrastructure, 1956 to 2014," *Congressional Budget Office*, March 2, 2015, 29, <https://www.cbo.gov/publication/49910> (accessed September 26, 2016).
39. David Hall and Emanuele Lobina, "The Past, Present and Future of Finance for Investment in Water Systems" (London: Public Service International Research Unit, November 2010), 2, <http://www.right2water.eu/sites/water/files/2010-11-W-finance.pdf> (accessed September 29, 2016).
40. Katrina Manson and Javier Blas, "Kenya's Debut \$2bn Bond Breaks Africa Record," *Financial Times*, June 16, 2014, <https://www.ft.com/content/4397a32a-f572-11e3-be21-00144feabdc0> (accessed September 28, 2016).
41. "Chad Raises \$232 Million in Bond Issue: Bank," *Reuters Africa*, July 21, 2011, <http://af.reuters.com/article/investingNews/idAFJOE76K01P2010721> (accessed September 29, 2016).
42. David Hall and Emanuele Lobina, "Pipe Dreams: The Failure of the Private Sector to Invest in Water Services in Developing Countries" (Public Services International Research Unit and World Development Movement, March 2006), <http://www.psirru.org/sites/default/files/2006-03-W-investment.pdf> (accessed September 28, 2016).
43. Emanuele Lobina and David Hall, "Water Privatisation and Restructuring in Latin America, 2007" (London: Public Service International Research Unit, September 2007), 40, <http://www.psirru.org/sites/default/files/2007-09-W-Latam.doc> (accessed September 28, 2016).
44. David Hall and Emanuele Lobina, "Pipe Dreams: The Failure of the Private Sector to Invest in Water Services in Developing Countries," 43, <http://www.psirru.org/sites/default/files/2006-03-W-investment.pdf> (accessed September 28, 2016).
45. Susan Spronk, Carlos Crespo, and Marcela Olivera, "Modernization and the Boundaries of Public Water in Uruguay," in *Rethinking Corporatization and Public Services in the Global South*, ed. David McDonald (New York: Zed Books Ltd, 2014), 115-17.
46. "Arenys de Munt," *Water Remunicipalisation Tracker*, November 2014, [http://remunicipalisation.org/#case_Arenys de Munt](http://remunicipalisation.org/#case_Arenys%20de%20Munt) (accessed September 29, 2016).
47. "Medina Sidonia," *Water Remunicipalisation Tracker*, April 2015, [http://remunicipalisation.org/#case_Medina Sidonia](http://remunicipalisation.org/#case_Medina%20Sidonia) (accessed September 29, 2016).
48. *Resolution Adopted by the General Assembly on 28 July 2010: 64/292. The Human Right to Water and Sanitation*, 64/292, 2010, http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/64/292 (accessed September 29, 2016).
49. "Resolution Adopted by the Human Rights Council: 15/9, Human Rights and Access to Safe Drinking Water and Sanitation" (United Nations General Assembly, October 6, 2010), <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G10/166/33/PDF/G1016633.pdf> (accessed September 29, 2016).
50. "The Right to Water: Fact Sheet No. 35" (United Nations, August 2010), 7-11, <http://www.ohchr.org/Documents/Publications/FactSheet35en.pdf> (accessed September 29, 2016).
51. Catarina de Albuquerque, "Realizing the Human Rights to Water and Sanitation: A Handbook," *United Nations Human Rights: Office of the High Commissioner*, 2014, <http://www.ohchr.org/EN/Issues/WaterAndSanitation/SRWater/Pages/Handbook.aspx> (accessed September 29, 2016).
52. Catherine Sutherland and Bonang Lewis, "Water and Sanitation Service Delivery in eThekweni: A Spatially Differentiated Model" (Chance2Sustain, November 2012), 2, http://www.chance2sustain.eu/fileadmin/Website/Dokumente/Dokumente/Publications/Pub_Dec_2012/C2S_OP_No6_WP4_Water_and_Sanitation_Service_Delivery_in_eThekwini.pdf (accessed September 29, 2016).
53. "Constitution of the Republic of South Africa, 1996 - Chapter 2: Bill of Rights," *South African Government*, December 4, 1996, <http://www.gov.za/documents/constitution/chapter-2-bill-rights#27> (accessed September 28, 2016).
54. "Water Tariffs English," *eThekwini Municipality*, July 1, 2016, http://www.durban.gov.za/City_Services/water_sanitation/Bylaws_Tariffs/Tariffs/Pages/Water_Tariffs_English.aspx (accessed September 26, 2016).
55. "Most Progressive Water Utility in Africa' wins 2014 Stockholm Industry Water Award," *Stockholm International Water Institute*, 2014, <http://www.siw.org/prizes/industry-award/2014-2/> (accessed September 28, 2016).
56. "Water And Sanitation Project Commences In eThekweni," http://www.durban.gov.za/City_Services/water_sanitation/Services/Provision_Sanitation_Informal_Settlements/Pages/Water_Sanitation_project_commences_eThekwini.aspx (accessed September 21, 2016).
57. Keith Schneider, "How Durban Set the Global Standard for Providing Water and Sanitation for the Poor," *Citiscopes*, February 12, 2016, <http://citiscopes.org/story/2016/how-durban-set-global-standard-providing-water-and-sanitation-poor> (accessed September 28, 2016).
58. Verson Kafodya, "WOP: eThekweni and Lilongwe Water Board," *Global Water Operators' Partnerships Alliance*, April 14, 2014, <http://gwopa.org/en/wop-profiles/e-thekwini-durban-south-africa-with-lilongwe-water-board-malawi-on-pip-development> (accessed September 29, 2016).
59. "WOP: eThekweni and Bulawayo City Council," *Global Water Operators' Partnerships Alliance*, June 18, 2014, <http://gwopa.org/en/wop-profiles/wop-between-ethikwini-water-and-sanitation-and-bulawayo-city-council> (accessed September 28, 2016).
60. "How WOPs Work," *Global Water Operators' Partnerships Alliance*, <http://gwopa.org/en/why-wops-work> (accessed September 21, 2016).
61. David Hall et al., "Public-Public Partnerships (PUPs) in Water" (Public Service International Research Unit &

Transnational Institute, March 2009), <http://www.waterjustice.org/uploads/attachments/WWF5-PUPs-%20FINAL-for%20web-Zlatan.pdf>; Emanuele Lobina and David Hall, "Public-Public Partnerships as a Catalyst for Capacity Building and Institutional Development: Lessons from Stockholm Vatten's Experience in the Baltic Region" (London: Public Service International Research Unit, August 15, 2006).

62. "The Origin of GWOPA," *Global Water Operators' Partnerships Alliance*, <http://gwopa.org/en/structure> (accessed September 21, 2016).

63. David Hall and Emanuele Lobina, "ACP-EU Water Facility Partnerships Initiative" (London: Public Services International Research Unit, August 3, 2012), 10, <http://www.psiru.org/sites/default/files/2012-08-W-ACPEUPUPs.docx> (accessed September 29, 2016).

64. David Hall et al., "Public-Public Partnerships (PUPs) in Water," 10.

65. "Hashimoto Action Plan" (United Nations Secretary-General's Advisory Board on Water and Sanitation, March 2006), <http://gwopa.org/en/resources-library/hap> (accessed September 28, 2016).

66. GWOPA Secretariat, "Global Water Operators' Partnerships Alliance Charter," *Global Water Operators' Partnerships Alliance*, August 21, 2012, <http://gwopa.org/en/water-operators-partnerships/1825> (accessed September 29, 2016).

67. Emanuele Lobina and David Hall, "Public-Public Partnerships as a Catalyst for Capacity Building and Institutional Development: Lessons from Stockholm Vatten's Experience in the Baltic Region," 11-13.

68. David Hall et al., "Public-Public Partnerships (PUPs) in Water," 7.

69. Spronk, Crespo, and Olivera, "Modernization and the Boundaries of Public Water in Uruguay," 113.

70. *Ibid.*, 106, 113-14.

71. *Ibid.*, 114-15.

72. Fernando Borraz, Nicolás González Pampillón, and Marcelo Olarreaga, "Water Nationalization and Service Quality" (The World Bank, January 2013), 16, <https://openknowledge.worldbank.org/bitstream/handle/10986/12180/wps6318.pdf?sequence=1&isAllowed=y> (accessed September 29, 2016).

73. Emanuele Lobina, "Remediable Institutional Alignment and Water Service Reform: Beyond Rational Choice."

74. "Social Dialogue - Employment, Social Affairs & Inclusion," *European Commission*, <http://ec.europa.eu/social/main.jsp?catId=329&langId=en> (accessed September 22, 2016).

75. Emanuele Lobina and David Hall, "The Comparative Advantage of the Public Sector in the Development of Urban Water Supply"; David Hall et al., "Water in Porto Alegre, Brazil- Accountable, Effective, Sustainable and Democratic" (Public Services International Research Unit and Municipal Department of Water and Sanitary Sewage (DMAE), August 2002), <http://www.psiru.org/reports/water-porto-alegre-brazil-accountable-effective-sustainable-and-democratic.html> (accessed September 29, 2016).

76. "Participation and Social Control" (Transnational Institute, November 14, 2006), 2, https://www.tni.org/files/download/01_Alagoinhas_14nov06.pdf (accessed September 29, 2016).

THE WAY FORWARD IN LAGOS

1. *A Law to Provide for the Lagos State Water Sector, Lagos Water Corporation and for Connected Matters*, 2004, 4, <http://lagoswastewater.org/wp-content/uploads/Water-Sector-Law-2004.pdf> (accessed September 28, 2016).
2. *Ibid.*, 24.
3. "Lagos State Development Plan: 2012-2025" (Ministry of Economic Planning and Budget, September 2013), 79, <https://www.scribd.com/document/271150413/LAGOS-STATE-DEVELOPMENT-PLAN-2012-2025> (accessed September 28, 2016).
4. "Ambode Clarifies N500bn Bond Approved by State Assembly," *Lagos State Government*, September 7, 2016, <http://www.lagosstate.gov.ng/2016/09/08/ambode-clarifies-n500bn-bond-approved-by-state-assembly/> (accessed September 28, 2016).
5. "How the Drinking Water State Revolving Fund Works," *US Environmental Protection Agency*, n.d., <https://www.epa.gov/drinkingwatersrf/how-drinking-water-state-revolving-fund-works#tab-1> (accessed September 28, 2016).
6. David Hall and Emanuele Lobina, "ACP-EU Water Facility Partnerships Initiative" (London: Public Services International Research Unit, August 3, 2012), 7, <http://www.psiru.org/sites/default/files/2012-08-W-ACPEUPUPs.docx> (accessed September 28, 2016).



“ Clean water, the essence of life and a birthright for everyone, must become available to all people now. ”

- Jean-Michel Cousteau

