



DELIVERY CASE STUDY



Arne Hoel/The World Bank

AGAINST THE CURRENT: HOW TO SHAPE AN ENABLING ENVIRONMENT FOR SUSTAINABLE WATER SERVICE DELIVERY IN NIGERIA

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Against The Current: How to Shape an Enabling Environment for Sustainable Water Service Delivery in Nigeria

Cover: Ismail Abdulhi is a pastoralist in Ta Kuti village (Niger State) and beneficiary of Nigeria's Fadama II project.

This case study was written by Halimatou Hima and Claudio Santibanez as part of the Delivery Case Studies series produced by the World Bank's Nigeria Country Team under the management of Hassan Madu Kida (GWADR) and Katherine Bain (GGODR). The Delivery Case Studies series—part of the Doing Development Differently initiative—aims to generate knowledge on what works in Nigeria and why. These cases are one of a number of instruments being piloted to help the World Bank continually improve its effectiveness as a partner to Nigeria. The Doing Development Differently pilot is task managed by Katherine Bain in the Global Governance Practice. The authors are grateful to Sabrina Roshan, Roland Lomme, Jens Kromann Kristensen, Marie Françoise Marie-Nelly, Maria Gonzalez, Michel Duret and Pier Montavani for comments and support on earlier drafts. They also acknowledge the invaluable feedback provided by national stakeholders, including managers of state water utilities, Commissioners of Water and Eng. Ajisegiri Benson from the Federal Ministry of Water Resources. The paper does not represent the views of the World Bank's Board of Directors, and any errors are those of the authors alone.

Abbreviations and Acronyms

AMCOW	African Ministers' Council on Water
Eurodad	European Network on Debt and Development
FMoF	Federal Ministry of Finance
FMWR	Federal Ministry of Water Resources
FPIU	Federal Project Implementation Unit
IBNET	International Benchmarking Network for Water and Sanitation Utilities
ICR	Implementation Completion and Results Report
NEWSAN	National Civil Society Network on Water and Sanitation
NUWSRP1	National Urban Water Sector Reform Project
NWRP	National Water Rehabilitation Fund Project
NWSSP	National Water Supply and Sanitation Policy
PPP	Public-Private Partnership
SWA	State Water Agency
TTL	Task Team Leader
UN	United Nations
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WSP	Water and Sanitation Program

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Executive Summary

Nigeria has enough surface and ground water to meet domestic demand, but as of 2004 half of its urban population did not have access to piped water. And for those who did have access, water taps flowed only a few hours a day. Rapid urban population growth of 5.7 percent per year heightened the difficulties faced by State Water Agencies (SWAs) in meeting the need for piped water and expanding production capacity. Poorly maintained and aging pipes were subject to frequent leakages, and some newly built pipes carried no water owing to intermittent power supply. Nigeria's water sector performance contrasts with that of smaller countries in West Africa, such as Niger and Burkina Faso, which, with fewer resources, have undergone major institutional reforms and made significant progress in the urban water sector.

Poor maintenance of water and wastewater networks, limited institutional capacity, and weak financial performance of water supply and sanitation utilities, together with power supply interruptions, shaped a challenging backdrop for reforms in Nigeria's urban water sector. Subject to political interference, SWAs struggled to recover operating costs and relied heavily on state governments to finance gaps. Finally, insufficient coordination between federal and state actors led to a general absence of accountability. The result was a complex system with, at times, competing incentives and interests and rigid institutional structures.

In 2004, following six major national-level water projects, the Federal Government of Nigeria joined with the World Bank to address the institutional weaknesses of urban water utilities under the National Urban Water Sector Reform Project (NUWSRPI). The NUWSRPI aimed to increase access to piped water supply in selected urban areas by improving the reliability and financial viability of selected urban water utilities in the states of Enugu, Kaduna, and Ogun. The project represented a shift from past interventions, which focused mainly on infrastructure rehabilitation. A prolonged preparation process allowed for extensive stakeholder consultations on the proposed model and resulted in a more balanced approach between public and private actors.

While the NUWSRPI, in its nine years of implementation, achieved (and even surpassed) targets for investment in rehabilitation and expansion and was rated “moderately satisfactory” in the World Bank's internal monitoring system, it did not perform as strongly on the institutional reforms needed to ensure sustainability. This raised the

fundamental question that this case study addresses: Why did the NUWSRPI not fully meet its essential objective of achieving a sustainable water delivery service?

Using qualitative research methods—including a review of relevant project documentation, a literature review on water reform and governance issues in Nigeria, and process-tracing (collecting primary qualitative data through semi-structured interviews)—this analysis examines the *why* and *how* of delivery. It highlights the most *salient bottlenecks* that prevented initial plans from unfolding, the *adaptation techniques* that changed implementation in response to signals and changing environments, and the *inflection points* in implementation that provided conditions for a transformational change. Insights from the implementation process bring forward key lessons and recommendations and identify new questions and avenues for future inquiry to better understand how to address the key delivery challenge (and, with it, generate insights applicable to the emerging science of delivery).

At the state level, where implementation occurs, the absence of a culture of staff performance combined with high turnover in management to undermine momentum on institutional reforms and the ability of SWAs to achieve financial sustainability. Citizens' trust in state services was weakened by supply problems, billing inconsistencies, and delays in obtaining metering equipment.

At the federal level, inadequate communication among the World Bank, SWAs, and federal officials affected coordination and caused delays in processes that, at times, challenged accountability for more effective delivery of results. The need for better coordination among development agencies, and better-aligned reform agendas, grows as more partners invest in the water sector and move to support emerging reforms.

At the World Bank level, internal disbursement incentives worked against efforts to set up a system based on results. Pressure to disburse funds quickly led to the release of funds regardless of progress toward targets, and may have influenced the project's relative success in achieving targets for infrastructure investments, which required large sums for works, as compared to “softer”—but still critical—institutional investments.

At the citizen or user level, although a real willingness to pay for reliable water services exists, the perception that water provided by the government should be free weakened the culture of payment that SWAs

were trying to promote and challenged SWAs' efforts to commercialize, or even break even. In the absence of reliable piped water services, Nigerians are already paying substantial amounts through informal channels and private vendors.

Together, these stakeholder positions highlight the barriers to implementing a strategy that features timely investments in infrastructure, together with institutional reforms to secure sustainable outcomes.

This case inquiry highlights valuable lessons on how to shape an enabling environment for sustainable water service delivery in the water sector, given the existence of longstanding informal and formal institutions:

- *Going from staying to doing: reform signaling versus reform implementation.* Political incentives, together with the need to achieve near-term results quickly, may undermine a long-term commitment to change, overvaluing short-run returns and inducing a low-level equilibrium trap that holds back the achievement of sustainable outcomes. Institutional changes are more likely when they are aligned with the political incentives of key actors and addressed within a favorable time frame. Changes do not occur simply because they point to better solutions. Dysfunctional systems may prevail due to vested interests that want to keep ineffective projects running for as long as possible in order to continue benefiting from the inefficiencies.
- *Balancing the “hardware” and “software” of reform.* Carrying out institutional reforms in a well-established system is, by definition, disruptive, since it challenges set patterns. Under the NUWSRPI, incentives were skewed toward moving hardware investments. But when institutional reforms do not accompany “hardware” reforms, the sustainability of outcomes can be compromised. The “software” component should invest in technical capacity through training programs that are closely monitored to produce improved capacity or motivation to deliver.
- *Avoiding the illusion of reform.* Efforts to address SWAs' institutional capacity emphasized mainly formal governance frameworks such as drafting a national strategy and water policy and establishing regulatory agencies. Yet an emphasis on formal governance frameworks can risk creating the illusion of institutional change, where improvements in formal rules are not accompanied by tangible results. Lewis and Watts (2015) argue that, while Nigeria is a country of diverse capacities with a number of pockets of effectiveness, taking a “best practices” or good governance approach to reform has rarely proved effective. There is a growing body of literature on institutional reform that now recognizes that a *de jure* approach to reform can lead to short-term signaling, low ownership of reform implementation, and little difference on the ground (Pritchett et al. 2010; Andrews 2013).
- *Changing mindsets for sustained institutional reform.* Investing in capacity building without changing the mindsets of agents to value long-term outcomes may jeopardize the attainment of institutional reform. Utilities, in addition to providing leadership in the reform process, can instill a culture of water service payment and install a credible system of rewards and sanctions that strengthens accountability and promotes the view that building staff capacity is an investment.
- *Using data to enable change and build credibility.* Open and honest, evidence-based discussions with the highest political leadership at the state level can spur more productive discussions on sustainability and enhance the credibility of state managers. SWA managers committed to politically difficult reform proposals used hard data to inform policy makers and their own internal staff, and to convince them to support institutional change. Strong, passionate leadership among individual heads of SWAs and commissioners has opened the door to reform in some states. Access to data forges transparency and trust, and with it a culture of accountability.
- *Tailoring reform to each state's context.* The states' different capacities and experiences speak to the need for realistic reform plans, a variety of delivery models, and a stronger role for federal counterparts in ensuring diverse delivery around common results. In each of the states, however, the need to move from reform signaling to reform implementation and to invest in changing behaviors, including within the civil service and utilities themselves, appeared as a common theme. The reform process should acknowledge and work with the diversity of approaches available for tailoring responses to the vision, capacity, and goals of each state.
- *Disbursing on results.* Results-based disbursement schemes generate incentives for the implementing agents to improve how the project is executed. Stakeholders at the federal level pointed out that the World Bank allocated funds without regard for results, which undermined the system of rewards and sanctions needed for projects to deliver on expected outcomes. This sent signals that undermined local ownership and contradicted the goal of achieving sustained change.
- *Doing development differently within the World Bank.* The case study elicited several lessons for the Bank's implementation of projects in Nigeria, including the need to: (i) see real reform traction before committing too many new investments; (ii) support teams with a range of skills and instruments; (iii) prioritize the development of an in-depth understanding of the local context and the

political incentives of stakeholders as a means to build a coalition of support; (iv) protect reform teams from internal disbursement pressures, since reforms are rarely linear or fast; (v) provide adaptable and flexible support when reform momentum takes off in some states, with clear exit strategies when it dwindles; (vi) recognize and reward tangible results, rather than inputs; (vii) support competition and evidence-based decision making through the continual generation of better sector performance data; and (viii) review project implementation arrangements to ensure that a wide enough range of actors are involved and that the division of roles and responsibilities among federal and state actors plays to their comparative advantage.

The case study is part of a series on Doing Development Differently in Nigeria. This series seeks to support the World Bank's Nigeria country team in strengthening its effectiveness by tailoring interventions to the local context using World Bank support to leverage systemwide change and systematically learn by doing. This case study is also part of the Science of Delivery case study program that is contributing to the Global Delivery Initiative's Library of Delivery Case Studies. The Global Delivery Initiative is a collaboration across the international development community to forge a new frontier in development efforts worldwide.

The Development Challenge: The Urgent Need for Reliable Water Supply

Like many Nigerians, Alex, a resident of Abuja and a member of a nonprofit organization, does not understand why there is once again no water in his tap. “We Nigerians are tired of hustling for water, digging our own boreholes, and buying from street vendors.” Alex says the government has left many of his fellow citizens without access to potable water, particularly those who live at the periphery of Abuja and other major cities. “For years, we hear of millions put in [state water] boards, but where is the water? It is like putting money in a broken jar.”¹

NIGERIA'S WATER SECTOR

Despite the Nigerian federal government's annual cash injection of US\$ 550 million in the water sector, reliable access to water of acceptable quality remains scarce in Nigeria.² In 2004, half of Nigerians living in urban areas lacked piped water access, and for those who had it, water taps flowed only a few hours a day. Only 20 percent of the semi-urban population had piped water access, placing a heavy burden on women, in particular, to collect water. In a country with enough surface and ground water to meet actual demand (World Bank 2014), Nigerians have had to resort to alternative sources of water for domestic use, including private boreholes and wells sourcing groundwater aquifers, private water vendors, and rivers in some areas. Poor access to potable water has had severe consequences for the population's health outcomes and livelihoods, with children hurt the most; more than 97,000 Nigerian children die every year from diarrhea caused by unsafe water and poor sanitation (WHO/UNICEF 2014).

Rapid annual urban population growth of 5.7 percent has made it more difficult for Nigeria's State Water Agencies (SWAs)—frontline service providers in the

water sector—to meet the existing need for piped water and expand production capacity. Between 2004 and 2013, Nigeria's urban population grew from 38 percent of the total population to 46 percent, while urban access to improved water sources stagnated at 79 percent. As a result, growing numbers of Nigerians living in urban areas faced water scarcity (WHO/UNICEF 2014). Aging and poorly maintained pipes were subject to frequent leakages, and newly built pipes often had no water in them due to intermittent power supply (World Bank 2004, 1–18). The abandonment of service delivery principles during Nigeria's military dictatorship, which ended in 1999, further contributed to the decay of the water sector.

Nigeria's water sector has underperformed compared to smaller countries in West Africa. Niger and Burkina Faso, for example, have with fewer resources undergone major institutional reforms and made significant progress in the urban water sector (WSP 2011a,b). In both Niger and Burkina Faso, overall water coverage stands at 72 percent. Utilities are able to cover operating costs at a ratio of 1.22 in Niger and 2.07 in Burkina Faso, surpassing the ratio of 0.80 for Nigeria (Figures 1–4).

A key development challenge facing Nigeria is to provide its population with reliable, potable, and affordable water today and in the future. To achieve this goal, the country will need to set up viable and accountable water utilities that deliver piped water efficiently and sustainably.

THE NATIONAL URBAN WATER SECTOR REFORM PROJECT: A CHANGE IN SECTOR REFORM EFFORTS

After six major—and largely unsuccessful—national projects in the water sector in Nigeria, it became

1. Authors' interview with civil society organizations, Nigeria, September 2014.

2. Note that the amount of US\$ 550 million is well below the estimated US\$ 2.5 billion required to meet the country's Millennium Development Goals on water supply and sanitation, according to Federal Government of Nigeria 2012.

FIGURE 1: Water Coverage, %

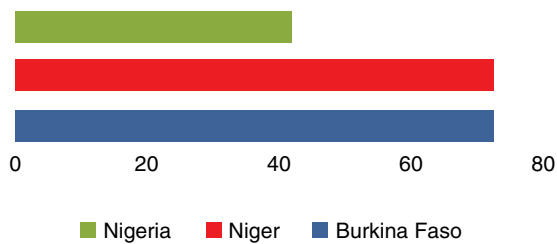


FIGURE 3: Nonrevenue Water, %

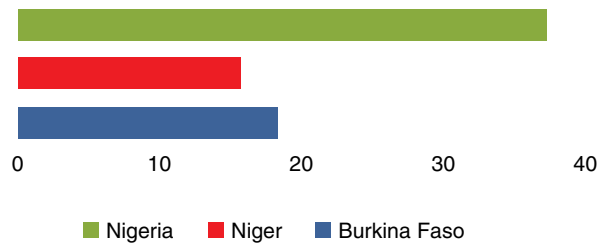


FIGURE 2: Operating Cost Coverage, Ratio

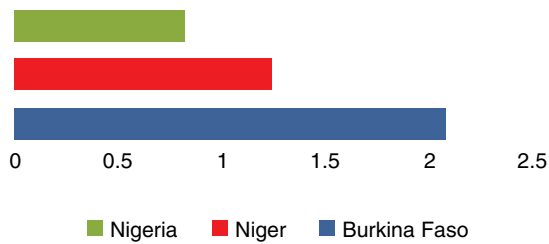
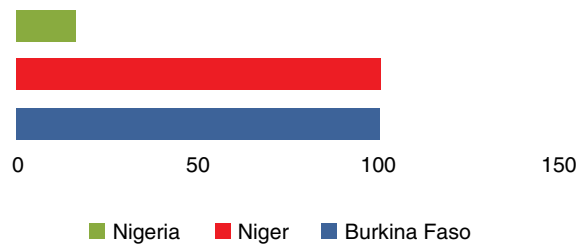


FIGURE 4: Water Sold That Is Metered, %



Source: IBNET 2015. Based on the latest data available for The Office National de l'Eau et de l'Assainissement for Burkina Faso, La Société de Patrimoine des Eaux du Niger for Niger, and for Nigeria, an aggregate of the 36 state water utilities.

clear to stakeholders that past interventions were not well designed, implemented, or followed up on, resulting in large gaps between intended outcomes and actual results. “By 2001, we realized that the major flaw with past projects was not including [institutional] reforms in the agenda. . . . Most of the problems are human problems, and human problems are not easily solved except through a carrot-and-stick approach.”³

In 2004, the Federal Government of Nigeria joined with the World Bank to address the institutional weaknesses of urban water utilities under the National Urban Water Sector Reform Project (NUWSRP1). The NUWSRP1 represented a shift from past interventions, which had focused mainly on infrastructure rehabilitation. The project’s objective was to increase access to piped water supply in selected urban areas by improving the reliability and financial viability of selected urban water utilities in the states of Enugu, Kaduna, and Ogun. Yet while the NUWSRP1, in its nine years of implementation, achieved (and even surpassed) targets for investment in rehabilitation and expansion, it did not perform as strongly on the institutional reforms needed to ensure sustainability.

CASE STUDY RESEARCH FRAMEWORK

This case study seeks to understand why, despite a purposeful focus on institutional reform, the NUWSRP1 did not fully meet its objective of achieving a sustainable water delivery service. Research methods focus on the Science of Delivery case study guidelines, drawing on semi-structured interviews with key stakeholders to better understand the implementation process and analyze the causal mechanisms behind the results achieved—or not achieved (Box 1). First, the case study reviews the project’s implementation to explore *how* the final results came about. Next, the case study describes the challenges faced by project implementers in delivering water services and maps stakeholders’ incentives as a means to better understand *why* challenges to the SWAs’ financial sustainability were not successfully addressed from the perspective of key stakeholders. It then analyzes how the project helped change the political incentives of relevant central and local government officials, political leaders, bureaucrats, citizens, private sector representatives, and other relevant stakeholders. Understanding how this project engaged with institutional reforms should help guide other national-level projects that seek to reform longstanding informal and formal institutions.

3. Authors’ interview with Federal Project Implementation Unit (FPIU), Nigeria, September 2014.

BOX 1: Case Study Research Methods

A Science of Delivery case study is based on primary data collection, including semi-structured interviews, direct observation, and focus groups, supplemented by secondary sources and desk review of project documents, monitoring and evaluation reports, and existing knowledge on the delivery challenge(s) in question. Interviews are guided by a protocol tailored to tease out decision-making processes at critical junctures of implementation. Various other data analysis techniques and tools may be relevant in identifying the causal factors of results and chronology of the intervention, such as analyses of root cause, systems, social networks, and stakeholder and political economy, among others.

This case uses the process-tracing method. Interviews are guided by a protocol tailored to identify decision-making processes at critical points in the implementation process. The case study complements existing World Bank processes and project review documents, and is not intended to dispute the information and assessment provided in such documents.

Key research questions include:

- How can implementers jointly ensure timely investments in “hardware” (infrastructure) and “software” (institutional) reforms to secure sustainable outcomes in the water sector, aligning short-term political incentives to deliver tangible results with the long-term goal of ensuring that outcomes are sustainable?
- How did individual and/or collective leadership improve financial viability and help overcome institutional deadlocks and delays?
- What mechanisms were used (in the project’s problem definition, design, and implementation) to reinforce accountability in the relationships along the delivery chain (beneficiaries, policy makers, and providers)?
- How did incentives shape performance? Did they guide implementers toward or away from improved and sustainable results, and how?

The Delivery Challenge: Creating an Enabling Environment for Reform

PROGRAM DESIGN: AN ATTEMPT TO REDRESS PAST FAILURES AND RESPOND TO EVOLVING CONDITIONS

The NUWSRPI emerged in light of the recognition that a more systematic approach was needed to address challenges in sustainable service delivery. The aim was to incorporate into the project design (what were then considered) best practices in reform. The NUWSRPI hoped to break with past performance and achieve rapid results, building on the momentum of a new government.

Sense of Urgency in the Water Sector

In 2003, the new administration promised a strong focus on corruption and fiscal discipline. That same year, the Federal Ministry of Water Resources (FMWR) wrote up the National Water Resources Management Policy to complement the National Water Supply and Sanitation Policy (NWSSP) developed in 2000. At the same time, the executive launched the Presidential Water Initiative, which aimed to increase access to water and sanitation services nationwide in the wake of the African Ministers' Council on Water (AMCOW) meeting held in Abuja the year before. The general momentum in the water sector was enhanced when Nigerian civil society organizations organized themselves under one umbrella—the National Civil Society Network on Water and Sanitation (NEWSAN)—to exercise greater influence in the policy debate. These events helped facilitate a national discourse around the emerging NUWSRPI, shaping an approach that focused on investment in institutional reforms alongside rehabilitation works.

Strong Legal Framework, Weak Implementation

The existence of numerous policies governing Nigeria's water sector did not necessarily offer sufficient guidance

in implementation. As described by a 2011 World Bank review of urban water service delivery in the country, “the urban water sector's political and policy framework is quite well-developed in principle, but in comparison to international benchmarks, its implementation and compliance tends to be weak” (World Bank 2011). The report noted that commitment to implementation and compliance varied across states. While some states lacked water policy frameworks, others had overarching legal and expenditure frameworks and were willing to create new normative spaces that might allow the development of commercialization strategies for water utilities and promote an enabling environment for private sector participation. At the state level, however, the sector lacked an independent regulatory agency able to review and determine tariffs (World Bank 2011). Attracting private investment in the sector was made difficult by the absence of a tariff strategy, the pricing of water delivery below the cost of supplying it, and the belief among some customers that water supply, if provided by the government, was a social good and a right and should thus be free of charge.

A Shift from Past Interventions

The FMWR completed the National Water Rehabilitation Fund Project (NWRP)⁴ in June 2001—at a cost of US\$ 306.7 million—with financial support from the World Bank. The performance ratings spoke for themselves: outcomes were rated unsatisfactory, sustainability was considered unlikely, and institutional development impact was deemed modest (World Bank 2001). Addressing challenges in the urban water sector demanded a shift from past interventions that had focused mostly on rehabilitation works. The new approach emphasized states' willingness to undertake institutional reforms and provide supporting data to track progress (or lack thereof). Design of the NUWSRPI focused on three SWAs (down from 22 under the NWRP), in order to focus on

4. The NWRP set the foundation for putting institutional strengthening and reform at the heart of subsequent urban water projects, including the NUWSRPI.

BOX 2: Incorporating and Adapting a Controversial PPP Component

With international standards favoring public-private partnerships as the panacea for public service ineffectiveness, the World Bank supported the NUWSRP1 in the hopes that it could draw in the private sector to revamp water supply in Nigeria. The PPP component was controversial, especially in light of the baggage that privatization had left behind in the region in the late 1990s. As one high-level officer inside the FMWR stated, “some of the states are not readily willing to have private partners come into their operations; they fear that they may lose their jobs or may not be able to control the situation—that certain benefits that they are enjoying will no longer be there.” The PPP issue was made even more challenging by lukewarm interest from local private investors, who saw Nigeria’s water sector as too risky an investment.

The PPP component in the NUWSRP1 was a weak link that affected stakeholder commitment. One of the World Bank Project Task Team Leaders (TTL) saw inadequate stakeholder buy-in as a major deficiency of the project design: “[W]e knew we were dealing with a heterogeneous local context. Nigeria is diverse and large, but our relations were with *one* actor in a ministry. Ownership was at the central level” (authors’ interview, July 2014). In dealing with the heterogeneous contexts faced by different states, the ability to build consensus, particularly around controversial components, creates the space for setting appropriate and relevant targets backed up by accountability measures.

Kaduna SWA adopted an internally delegated management contract to substitute for full private sector involvement. While this approach did not bring about the efficiency gains expected from a full PPP, it did support changes in management structures by reinforcing a performance-driven assessment of staff. “[T]his system is a tool that can motivate staff to perform better; it places a number of responsibility[ies] on you, directly.” As staff capacity increased, SWA management granted greater operational, managerial, and financial autonomy at the district level instead of concentrating all decision making at the state level. “[B]efore every kobo, I had to sign. Now I only see the paper” (authors’ interview with a Kaduna SWA officer, September 2014).

a few states that were already undertaking institutional reforms.⁵ The narrower focus helped avoid the small-scale contracts associated with many subcontracts under the NWRP, so as to attract international contractors favoring larger projects (World Bank 2001). Design of the NUWSRP1 also took on board the lesson that rehabilitation of facilities alone would not suffice to increase sustainable water availability to end users; the NWRP had made clear that the constraints caused by aged and inadequate distribution networks also needed to be overcome.

Enhancing the Focus on Institutional Reforms

Stakeholders from the Federal Ministry of Finance (FMoF), FMWR, SWAs, and World Bank identified four main components as critical to unlocking the full potential of SWAs: rehabilitation and network expansion, development of a public-private partnership (PPP) for water service delivery, capacity building and project management, and policy reforms and institutional development. The PPP component raised significant questions and garnered limited stakeholder buy-in (Box 2). In considering how best to mount institutional reforms

across three diverse states with different capabilities and resources, the Federal Project Implementation Unit (FPIU) determined that a “one size fits all” approach might not deliver the intended results. “Nigeria is like a large country with 36 other countries together, each with its peculiarities that affect how institutions function.”⁶

Dealing Effectively with SWAs’ Different Capacities

The three participating states possessed varying levels of institutional capacity to deal with new contractual arrangements for water utilities, as well as differing degrees of prior experience with water reform projects, generally and with the World Bank in particular. To account for these variations, the NUWSRP1 set different targets for participating SWAs, while expecting each SWA to fully cover its operations and management costs and achieve the same level of collection efficiency. Capitalizing on lessons learned under the NWRP, the FMWR and the World Bank required that each state have an independent board of directors to which SWAs would report directly (rather than to the governor’s office). The aim was to give SWA managers greater autonomy for

5. SWAs in Enugu, Kaduna, and Ogun states were selected for the project, in part as a result of national geopolitical considerations. Kano state was initially part of the project but was later replaced.
6. Authors’ interview with the Federal Project Implementation Unit at the FMWR, Nigeria, September 2014.

strategic, financial, and operational decisions and—as noted by a number of stakeholders—“to take the politics out of the water sector.”

PROJECT IMPLEMENTATION: PUTTING NEW DESIGN PRINCIPLES INTO PRACTICE WITH MIXED RESULTS

Identifying Challenges to Achieve Targets

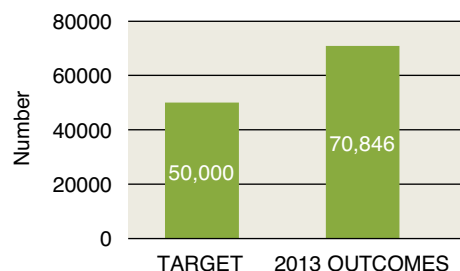
The NUWSRP1 came to fruition after a prolonged preparation process aimed at designing a new approach to urban water sector improvements in Nigeria. After three and a half years of extensive consultations with counterparts in the federal government and other stakeholders, the project developed a flexible and adaptable approach that incorporated both public and private sector roles. The project was funded with a World Bank credit of US\$ 120 million in 2004, with additional financing of US\$ 80 million approved in 2010. The NUWSRP1 aimed to increase access to piped water supply in selected urban areas by improving the reliability and financial viability of selected urban water utilities in the states of Enugu, Kaduna, and Ogun (World Bank 2004). The project focused principally on the SWAs, which are officially responsible for providing water service delivery in all urban areas—defined in 2000 as areas with a population in excess of 20,000—and in some semi-urban areas (World Bank 2014).

To succeed, the project would have to solve the interlinked challenges of creating an enabling environment for institutional reform and improving the financial and operational autonomy of SWAs. Rehabilitation of existing and extended network pipes would improve water access for populations in the short term, while institutional reforms would ensure the sustainability of these efforts and strengthen the ability of SWAs to deliver consistently over the long term. The prolonged preparation process, which prioritized consultation and an appropriate balance in private and public sector roles, was a signal that the project would need to support an ongoing consensus-building process throughout its implementation.

By the time the project closed in 2013, the NUWSRP1 had exceeded its target for new household water connections by 42 percent (Figure 5). The project had brought water to 70,846 new households in Enugu, Kaduna, and Ogun, well above the initial target of 50,000. Over the life of the project, 5,377,449 more urban dwellers in the three states gained access to improved water sources, exceeding the project’s target of 5,000,000 by 8 percent (Figure 6).

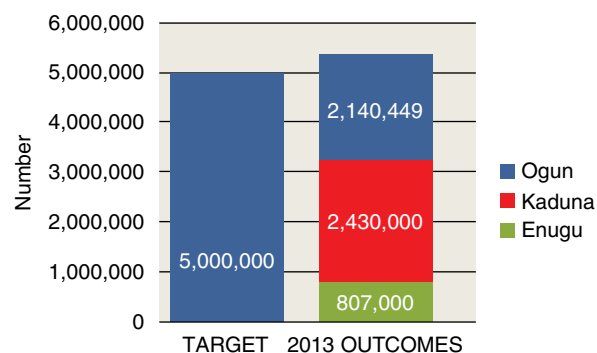
While the NUWSRP1 surpassed its targets for service expansion, the maintenance of existing household connections fell short of expectations. Of the 250,000

FIGURE 5: New Piped Water Connections Resulting from Project Interventions



Source: World Bank 2014.

FIGURE 6: Number of People Provided with Access to Improved Water Source as a Result of Project Interventions

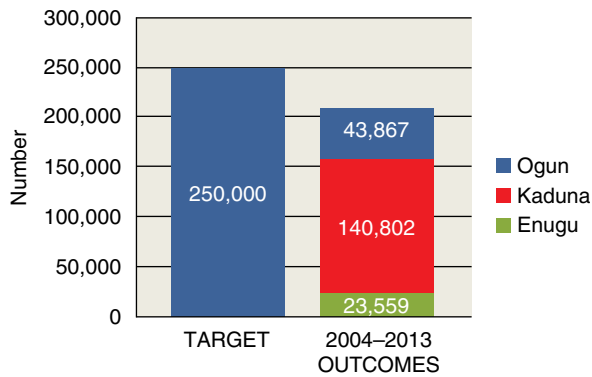


Source: World Bank 2014.

household connections that were to be rehabilitated under the project, only 208,228 connections benefited from this work—17 percent below target (Figure 7). Although water availability increased, it was limited by intermittent water supply. Water delivered through existing and extended networks grew by 865 million liters a day, exceeding the project’s target of 760 million by 14 percent (Figure 8). Overall, water delivered has increased by 220 million liters per day in Enugu, 420 million liters per day in Kaduna, and 225 million liters per day in Ogun (World Bank 2014).

The NUWSRP1 closed technical leaks and met relative successes in an extremely difficult context and was evaluated as “moderately satisfactory” by the World Bank’s Implementation Completion and Results Report (ICR). The project brought water to many, yet it did not

FIGURE 7: Piped Household Water Connections That Benefited from Rehabilitation under the Project



Source: World Bank 2014.

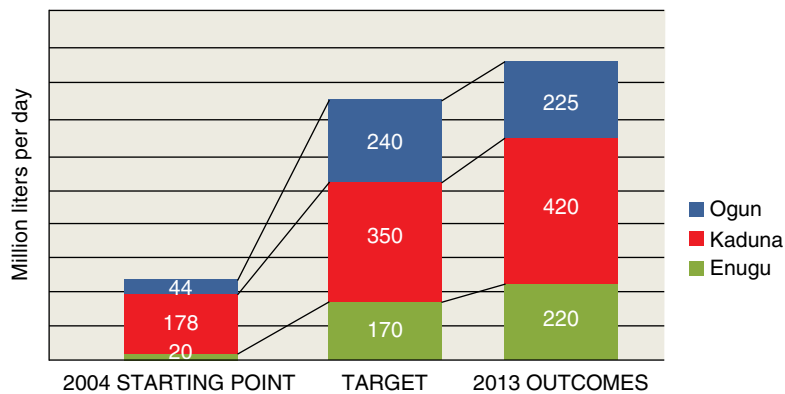
fully achieve its financial sustainability target for SWAs. The combination of poor maintenance of water and wastewater networks, limited institutional capacity, and weak financial performance of water supply and sanitation utilities, along with intermittent power supply, posed serious challenges for Nigeria’s urban water sector (World Bank 2010). In addition, SWAs could not fully recover operating costs and relied heavily on state governments to finance gaps. Average

cost recovery was just 40 percent, and functional capacity utilization operated at less than 30 percent (World Bank 2014). Price escalations and budget overruns in some states, as referenced in the ICR, pointed to administrative and contract management issues, but may also suggest broader underlying governance problems. Finally, insufficient coordination between the federal and state levels of government contributed to the overall absence of accountability for results. The result was a complex system with, at times, competing incentives and interests and rigid institutional structures.

Focusing on the Delivery Challenge

At project closing, all three participating states had only partially achieved, at 58 percent, the average revised target for improving cost recovery (Figure 9). At the same time, the project substantially achieved, at 98 percent, the average revised target of an 80 percent increase in billing and collection efficiency (Figure 10).⁷ Improvement in collection efficiency “represent[s] positive progress towards financial viability” (World Bank 2014). Cost recovery had not kept pace as expected, however, pulling against the objective of financial sustainability. Under the scenario of an increase in the customer base due to improved SWA performance, cost recovery challenges may well not fully reflect a lack of willingness to pay for water, but rather a supply-side problem in billing new customers (as seen in Figure 10, SWAs have been

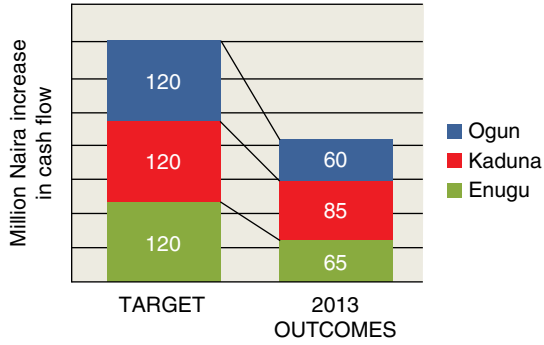
FIGURE 8: Increase in Water Delivered through Existing and Extended Networks



Source: Final Status Report for Enugu, Kaduna and Ogun States (2ml Consulting 2013a, b, c); World Bank 2014.

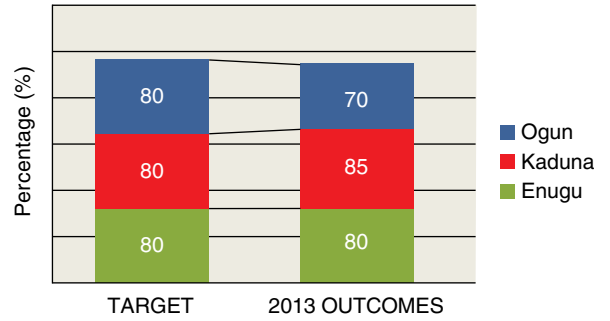
7. Targets were revised as part of the project’s restructuring in 2010. In the case of the cost recovery target, there was no formal baseline in the original Project Appraisal Document.

FIGURE 9: Improvement in Cost Recovery



Note: Improvement in cost recovery captures the increased annual cash flow in each state (in Naira). Target was set in 2010 at an average of 120 for all 3 states.
Source: World Bank 2014.

FIGURE 10: Increase in Collection Efficiency

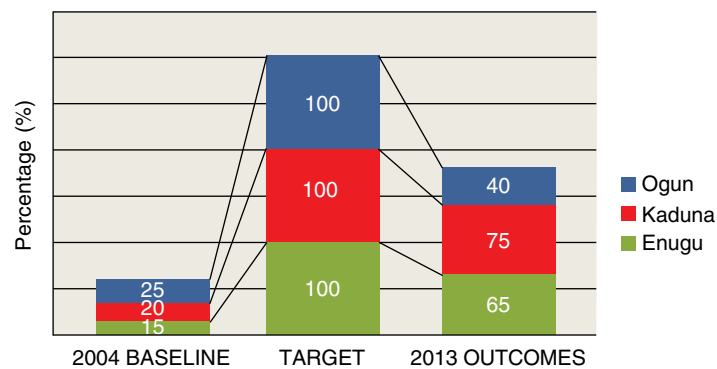


Note: Collection efficiency (%) is defined as the ratio of revenue collected compared to amount billed.
Source: World Bank 2014.

successful in collecting from billed customers). Despite their higher annual revenues, SWAs did not cover their operating and management costs. Cost recovery difficulties resulted in part from higher operating costs, which increased in response to higher electricity costs, minimum wage requirements (in some states), and higher prices for chemicals and fuel (2ml Consulting 2013a,b,c). Operating cost recovery from revenues had risen from 15 percent to 65 percent in Enugu's SWA, from 20 percent to 75 percent in Kaduna's SWA, and from 25 percent to 40 percent in Ogun's SWA—but still fell far short of the 100 percent target set in the NUWSRPI (Figure 11). State

governments covered gaps in operating and management costs, and when states' budgets came under pressure, so did SWA staff. Though gross water production and the number of connections increased, the targeted institutional changes in SWAs were not fully met. This result highlights the difficulties in initiating, implementing, and sustaining institutional reforms in the water sector and provides the context for identifying the specific delivery challenge explored in this case study: how to shape an enabling environment to achieve sustained reform for sustainable water service delivery.

FIGURE 11: Operations and Management Coverage from Revenue



Source: World Bank 2014.

Focusing on the Implementation Process: How Stakeholders Engaged with the Delivery Challenge

An in-depth analysis of stakeholders' responses to delivery challenges at key stages of the project's life provides an investigative tool for looking at small and big actions (or inactions), decisions, interests, positions, and capacities. Together, these factors can help understand:

- how and why actors engaged with the delivery challenges in the way they did;
- how they acted on constructive signals and pressures; and
- how the nature of their participation can help explain the project's outcomes.

This analysis is organized by the level at which stakeholders interact. The discussion begins with the SWAs at the state level, then moves to the federal level, to the World Bank, and finally to the end user. It highlights the most *salient bottlenecks* that prevented initial plans from unfolding, the *adaptation techniques* that changed implementation in response to signals and changing environments, and the *inflection points* in implementation that provided conditions for transformational change.

AT THE STATE LEVEL

Building Trust by Overcoming the Delivery Deficit

Despite the relatively high price charged by informal service providers, myriad supply-side problems continue to make piped water access unattractive, and trust between citizens and SWAs is fragmented. For instance,

the prevailing flat-rate billing system is viewed as unfair, as it favors nonhousehold consumers. In states that use some type of metering system, the long process for obtaining a meter, together with the perception that the bill often overestimates actual consumption, further undermines trust in the system.⁸ To attain financial sustainability, SWAs need to capture a larger share of the market by addressing supply-side problems and changing mindsets, and by more effectively measuring how much is produced, consumed, and lost through leakage (Federal Republic of Nigeria 2000). The experience of Ogun's SWA shows that, even with a strong communication strategy (Box 3), customers' willingness to pay for (public) water services will remain weak until essential supply-side challenges are addressed. During the implementation of NUWSRPI, the number of new connections in Ogun State increased by 16 percent (rising by 5,410 connections from 33,939 in 2004 to 39,349 in 2013—well below the project's target of 23,760 new connections). No improvement in revenue collection was registered (2ml Consulting 2013c).

Understanding Willingness to Pay

As mentioned above, the relationship between citizens and SWAs is sometimes governed by the belief that potable water, if provided by government, should be free. This does not necessarily reflect a lack of willingness to pay for reliable services. In fact, in the absence of reliable piped water services, Nigerians pay substantial amounts through informal channels and private vendors (Whittington et al. 1989; World Bank, forthcoming). While these informal providers charge higher prices than formal piped water services, they provide the relative

8. This quote captures citizens' frustration with the system: "I managed to get a meter. One month they brought a bill that made me laugh because it was ridiculous [...] and because their services are on and off, I paid the bills and for water from the vendors when taps went dry. Everything is being done by estimate."

BOX 3: Billboard in Abeokuta, Ogun State



A billboard shows how state government is trying to change mindsets about payment for water services in Ogun State. The billboard advocates paying for water by raising awareness of its relatively low price (5 drums of water for just ₦100, or US\$ 0.60) and the need to pay to receive a product that is safe, available, and affordable.

Photographed in Abeokuta, Ogun State, September 2014.

“convenience” of timely access to water—unlike piped water access, which may be interrupted without notice. In some states, private vendors serve up to 30 percent of the urban population, charging prices almost twice the operational and maintenance costs of public potable water. The resulting expenditure is estimated at 20 percent of household income, significantly higher than the official tariffs (Olajuyigbe and Fasakin 2010). A recent study found that informal service providers charge tariffs that are 10 to 100 times higher than provision through the state—around ₦500–1000/m³ (US\$ 3–6/m³) (World Bank, forthcoming). Considering that these informal water providers pay around ₦25–50 (US\$ 0.15–0.25) for a 20-liter jerry can of water, annual consumption of 10 liters per capita per day would bring the coping cost of this water to at least US\$ 700 million per year (World Bank, forthcoming).

What these findings show is that poor households pay more for water than higher-income households, which may have access to private boreholes or be closer to a water source. Informal service providers and private tankers that operate in more acutely underserved urban areas represent a network of profitable businesses and thus need to be seen as important stakeholders in the water sector reform agenda. Furthermore, SWAs' ability to build trust—by providing reliable and affordable services, easy access to fair metering, and reliable billing—is likely to improve customers' willingness to pay for services received. Finally, it is worth noting that SWAs must also deal with willingness to pay for water services among large public consumers such as schools, hospitals, and

other state agencies. Educating them on the importance of paying their bills provides a key opportunity for cost recovery and positive signaling for other consumers.

Creating Autonomy from Political Interference in SWAs

During the NUWSRPI's nine-year implementation period, Ogun's SWA saw a succession of five general managers; in addition, only one member of the implementation unit was present from the project's start to its completion. This high turnover seriously undermined the reform agenda by depriving SWAs of the opportunity to foster and sustain the new internal practices needed to achieve the institutional reforms that this project aimed to put in place. Some managers attributed their inability to carry out a sustained reform strategy in part to the high turnover in management and the resulting loss of momentum and institutional memory. In addition, most SWAs had limited margin to fire and hire based on performance (see next section). That utilities relied heavily on state governments to close financing gaps made them even more vulnerable to political interference. Reform in the Kaduna SWA is illustrative. Although there was some turnover in management and staff, Kaduna's experience shows that: (i) the state's political leadership had been convinced of the need for greater autonomy; (ii) a politically savvy management team used data to obtain political support and keep staff focused on implementing a vision; and (iii) given the improvements perceived by users, there was pressure to leave the performing team in place (Box 4).

BOX 4: Convincing Political Leaders to Grant SWAs Greater Autonomy

Kaduna's SWA built stronger resilience to adverse political interference than the other two participating SWAs. First, delivering improved services over the years increased the Kaduna SWA's management legitimacy. One governor appointed a general manager to lead the SWA who delivered suboptimal results, without any signs of improvement. Pressured by the state's residents, who had already tasted the benefits of better water services, the governor had no choice but to remove that general manager if he wished to survive politically. When political leaders feel threatened by weak service delivery, their response is to restore what continues to ensure popular support. The prior presence of good management, even if fleeting, had created space for citizens to demand, if not further improved services, then at least the maintenance of previous improvements.

Subsequently, the management of Kaduna's SWA used its increased negotiating power and legitimacy to establish sustained, strategic, and data-driven communication with the political leadership. Understanding the intrinsic political incentives was a turning point for the SWA management: "I approached my Honorable Commissioner and the Governor with a clear choice: we can continue to make 150,000 people happy or attempt to make 3 million happy by delivering better services [...] to do this, these 150,000 utility staff will have to go out and collect revenues." This was the first step the government took in supporting change, granting the SWA greater autonomy to engage the reform process and supporting revenue collection.

Cultivating a Culture of Staff Performance and Delivery

All SWAs involved in the NUWSRPI recognized that, even with greater autonomy, attempts at reform would stall without a staff that was motivated to perform. The SWA civil service structure, however, encouraged neither performance nor accountability. Staff received pay whether they delivered or not, with no added rewards for those who outperformed expectations or sanctions for those who lagged behind. A high-level officer at the FMoF, who was a central figure in setting up procedures with such external partners as the World Bank, saw the lack of rewards and sanctions as a major challenge in achieving institutional change: "[O]ur system is what it is, and unless people know that there are repercussions and sanctions, then things will continue to be as they are."⁹ The SWAs in both Ogun and Kaduna attempted to institute performance-driven management by rewarding high-performing staff, sometimes with opportunities to attend conferences or workshops.

The management of Kaduna's SWA also used training and peer learning to motivate a change in behavior. The motivating theory was that if the SWA's connections doubled during the project and customer payments increased, this was due in part to improved staff productivity, resulting from the performance-based system and aided by the stronger feedback loop between customers and the SWA created through an active online platform and customer care centers (2ml

Consulting 2013b). Hands-on engagement, with attention to a process within the civil service, is particularly important when implementing changes in business as usual. An example is the move toward a greater private sector role, which is likely to create uncertainty and fear, favoring the status quo. For the SWA management to constructively engage with staff was even more critical because of the uncertainty that reform, including the potential involvement of the private sector, stirred.

AT THE FEDERAL LEVEL

Clarity in Roles and Communication

Although in the NUWSRPI Project Appraisal Document, the FMoF was expected to facilitate all communication between federal and state-level counterparts and external partners, in practice implementation arrangements were much more fluid. While this fluidity has evolved to improve delivery, it has also weakened the roles of some federal actors. Officers from the FPIU at the FMWR worked closely with the World Bank TTL for the NUWSRPI and with water specialists, while FMoF representatives remained at the periphery unless urgent financial matters emerged. An FMoF officer recognized the virtues of this system in making processes faster, but also acknowledged its potential pitfalls:

"People bypass us, and that is the problem. We should be able to work better. We should be able to coordinate better [...] The Bank was dealing directly

9. Authors' interview with FMoF official, September 2014.

with the states, and only when the problem was ripe did they come to us [...] we do not want to slow down process; that's why we close our eyes on certain issues. Nothing delays here (they know us) unless we fundamentally disagree [...] you break procedures and small things balloon into something bigger. Communication and coordination is key. We are not trying to stop you from doing anything provided it is what we have signed for. The Bank should work directly with us without bypassing states.”¹⁰

When managed effectively, communication appears to have minimized delays in some processes and, more notably, instilled a climate of trust, accountability, and ownership—particularly on the side of counterparts at the federal level. Moreover, clear and uninterrupted communication lines between state governments, federal officials, and Bank staff could help involved stakeholders set realistic expectations for projects.

One role that federal-level actors could play more forcibly is that of coordinating development partners. This is important if development agencies are to provide unified support to reforms without contradictory incentives. A more coordinated approach would improve the potential for attracting necessary political support at the state level. Furthermore, lack of coordination risks overstressing counterparts' implementation units, which are dealing with potentially diverging agendas that may undermine deep-rooted institutional reforms. Given the existence of incentives that may not necessarily support reforms, projects may face isomorphic mimicry (Box 5), whereby agencies adopt institutional behaviors that may

mimic institutional change but without addressing the institutional change needed for reform.

It appears from these factors that greater coordination could tap into the convening power of many to ensure the incorporation of more comprehensive, sustained, and long-term institutional reforms at the utilities' level. Policy makers, though conscious of the need to deliver quickly, also speak of the need to reflect more pragmatically and adapt before launching additional projects.

“Whenever we want to move away to a new system, we do not look at the reasons why the earlier system did not work [...] we seem to be too much in a hurry. We are doing ad hoc things; we don't look at what to do differently [...] the same pitfalls come over and over again [...] even before we knew what worked, we are already embarking on another. There should be a pilot. There should be space. These projects are just springing up [...] those pitfalls should never be transferred to new projects.”¹¹

The FPIU's leading officer and his team viewed the inclusion of institutional factors as a clear indication that implementers had adapted.

The Inertia of Misaligned Incentives

Execution of the NUWSRP1 accumulated significant delays, owing in part to procurement bottlenecks, delays in financial audits and approvals, limited accountability, and inadequate performance incentives. The need to

BOX 5: The Risk of Isomorphic Mimicry—Promoting Institutional Changes and Reforms That Do Not Last

It is risky to induce changes from the outside if forces from the local environment are pushing in the opposite direction. One such problem has to do with institutional behavior that may mimic an institutional change or adaptation, as required by some development processes, but without addressing the institutional change needed for such reforms. Weak organizational capability for policy implementation can explain why countries and sectors are making no, or extremely slow, progress on key development indicators.

Pritchett et al. (2010) identifies a risk in which systems “can create incentives for organizations and agents (leaders and front-line workers) to engage in ‘isomorphic mimicry’ (DiMaggio and Powell 1983), adopting the camouflage of *organizational* forms that are successful elsewhere to hide their actual dysfunction. When isomorphic mimicry is a sustainable, if not optimal, organizational strategy, this can result in [negative development outcomes] in which the appearance of development activity masks the lack of development activity.” Following such an approach may allow organizations and their counterparts in the state to gain legitimacy by adopting the forms or “façade” of what are seen as successful institutions, without performing the necessary functions or having the capacity to deal with internal and external factors and accomplish the expected outcomes.

10. Authors' interview with FMOF official, September 2014.

11. From authors' interview notes with FPIU officer, September 2014.

move forward with the project met with the inertia of the status quo, through which planning—mainly at the central level—did not adequately account for political incentives along the delivery chain at the state level. A World Bank project TTL points out how misaligned incentives at times distorted the project's ability to deliver: "Government accountability is very weak. There is no way to measure accountability except through elections, and elections are not about delivery but are about money [...] accountability is too dangerous, and people think it is a waste of time; they would spend their time and still not get service delivered."¹² Project implementers that care about delivering results may be trapped in a system that favors continuity over change.

AT THE WORLD BANK LEVEL

Turnover in Project Leadership

In discussing his experience working with the World Bank, a senior FMOF official observed that projects are set up in a way that allows for frequent changes in TTLs throughout the implementation process. This turnover rate may delay project execution and inhibit planning for sustainability, as each TTL tends to make changes reflecting his or her individual approach to the subject matter: "I have yet to see a new TTL who did not want to modify the project in some form."¹³ This, added to a supervision model and budget system that rest on regular onsite missions, may undermine momentum, institutional memory, and trust building with state actors over a sustained period of time. A major turning point for the NUWSRPI was the appointment of a permanent, locally based TTL whose regular interaction with project staff and counterparts helped improve coordination and provide more effective and agile responses to disbursement and implementation issues that arose during implementation.

Adapting Context-Relevant Procurement Processes

In Nigeria, project procurement processes typically use *lotting*—the packaging of various contracts for goods and services within a single procurement contract and tendering these as "lots." This approach can improve efficiency, take advantage of economies of scale, and enhance compliance, particularly in areas with highly dispersed investments. As one procurement officer

put it: "[I]magine having twenty different contractors all around a city like Lagos [...] Our ability to monitor the work would be highly diminished."¹⁴

The size of the lot is critical, however. Smaller lots can increase competition, encourage small and medium-sized companies to compete, and diversify implementation risks—but they make fiduciary supervision time consuming. Larger lots, on the other hand, can help minimize fiduciary risk, but if the contractor does not perform, it can delay implementation across a significant portion of project activities.

A recent European Network on Debt and Development (Eurodad) publication confirmed that, because of the World Bank's keen interest in ensuring compliance, lots tended to be large, with more restrictive eligibility criteria, making it hard for small and medium-sized firms to compete (Ellmers 2011). In the NUWSRPI, some stakeholders in SWAs attributed delays in execution partly to the fact that private firms, which had won large lots, had limited financial or operational capabilities on the ground and struggled to deliver on major project components. Those interviewed seemed to agree that the size of lots had to balance delivery potential with fiduciary concerns, and that what works for major cities in large Nigerian states may not necessarily deliver in smaller or more rural areas.

Assessing Internal Disbursement Incentives

National-level implementers and World Bank TTLs cited challenges posed by disbursement incentives internal to the Bank, which impeded attempts to set up a results-based system. SWAs received their disbursements regardless of results achieved or progress made toward set targets. One TTL stated that: "[O]ur way to show donors that we are getting things done is to spend the money. Use more, spend more [...] It is our own institutional incentives messing up."¹⁵ A federal officer from the FPIU echoed this concern, indicating that the need to disburse large amounts of funding quickly was at times inconsistent with national actors' level of readiness on certain components: "[T]he Bank was eager to see money go out in full scale when the capacity to maintain was sometimes not yet there."¹⁶ Establishing a solid accountability system proved difficult, therefore: "The way we did this project was that whether you delivered or not, you received your money."¹⁷ The need to disburse may have had an effect on the project's relative success

12. Authors' interview with project TTL, July 2014.

13. Authors' interview with FMOF official, September 2014.

14. Authors' interview with WB procurement officer, September 2014.

15. Authors' interview with Bank TTL, July 2014.

16. Authors' interview with FPIU official, September 2014.

17. Authors' interview with FPIU official, September 2014.

in achieving targets for infrastructure investments, which required large sums for works, as compared to “softer” institutional investments.

The process for obtaining procurement clearance during NUWSRP1 implementation added to these challenges. The states contacted the World Bank directly, bypassing involvement from the FPIU: “The states had direct access to the Bank for their procurement clearance and disbursement without necessarily going to the federal one. A lot of things happened where the federal [was] put on the side [...] since the federal borrowed from the Bank, the federal should have been their first point of contact.”¹⁸ While SWAs viewed direct communication with the Bank as a means to minimize potential administrative delays, the FPIU perceived this as circumventing the arrangement negotiated in the terms of agreement. At times, this left issues pending at the federal level to be dealt with after the project closed officially. It is likely that this type of tension over correct procedures would become even more apparent as the FPIU took on the administrative burden of a larger project covering more states.

Harnessing a Coalition of Stakeholders

During the design phase of the NUWSRP1, the FPIU and the TTL saw space for a more strategic engagement with a broader set of stakeholders, ranging from those who would be affected directly by changes made through the project, to those with enough political clout to make a difference in the reform process, to those who stood to lose certain privileges as a result of envisioned reforms. Civil society organizations took part in the initial stakeholder summit held as a prelude to this project, but they did not remain engaged at the federal level. Some SWAs organically developed ways of keeping the public informed of their major initiatives—by setting up consumer hotlines and online groups to provide a constant feedback loop on service quality and maintenance needs. There is little evidence, however, that this happened during implementation.

At the closing of the NUWSRP1, a stakeholder discussion confirmed the need to take a more inclusive approach going forward, explicitly including all those who have a stake in the sector. Including the “right” stakeholders in project implementation and supervision could help to provide a broader array of information as well as support from different corners, improving the likelihood of reform. Evidence on demand-side support to reforms in Nigeria shows that citizen pressure is unlikely to result in reform

initiation but can be critical for reform consolidation and institutionalization (Lewis and Watts 2015).

AT THE CITIZEN LEVEL

‘Free Water’ as a Campaign Card

A fundamental challenge in reforming Nigeria’s water sector is to break with the perception that access to potable water is a social good that the government should provide free of charge. “If the government cannot give you common water, then what is the government there for?” questioned a civil society organization representative. Politicians from all sides have created this perception by using water to their political benefit, promising free water in exchange for votes. This has made water tariffs a difficult issue to raise, particularly as elections approach, and has thus undermined the SWAs’ efforts to achieve financial sustainability. A World Bank TTL observed that managers faced great difficulty in running SWAs as normal services utilities because people were used to receiving water for free from the states—even though the average urban household spent between 4 and 18 percent of its total income on water supplied by private wells, boreholes, and street vendors.¹⁹

Data as an Advocacy Tool

The incentives faced by short-termist politicians need careful consideration. “[P]oliticians who push for getting those reforms in place [...] often say that it becomes difficult to implement when people fought for them and voted then in.”²⁰ One SWA manager, however, cited the experience of producing uninterrupted, data-driven discourse as an advocacy tool to persuade political leaders and decision makers of the need for and potential benefits of reforms in the sector; when government officials were better informed, and especially if they were responsive to data-based advocacy, they were less likely to use water as a campaign tool. As an SWA officer stated when referring to the SWAs’ role in educating politicians: “[E]lected people may or may not be technocrats; [however] in our case, because of our dialogue with [them], they cannot go claim free water.”²¹ In some states, civil society organizations have been used to generate data, using qualitative work to gauge perceptions about tariffs, better understand nonpayment, and even communicate with citizens and educate them about the costs of delivery.

18. Authors’ interview with FPIU official, September 2014.

19. Federal Government of Nigeria, National Bureau of Statistics, 2012.

20. Authors’ interview with SWA manager, September 2014.

21. Authors’ interview with SWA manager, September 2014.

Technical Fixes Can Be Ineffective without Factoring in the Context

SWAs looked to metering water consumption as a way of replacing the flat-rate system prevailing in most states. However, many of those interviewed, including senior civil servants, noted that the potential for bureaucratic entanglements and the threat to existing interests in the sector were not sufficiently taken into account at the outset. Few interviewed were clear on how many days, how much money, or how many signatures were required to have a meter installed in one's household. One well-connected senior civil servant complained about the difficulty of getting a meter installed and functional,

noting that the task would probably have been much harder for the average citizen. A World Bank officer agreed that many well-intentioned solutions to improving water access had become exclusive and ineffective because of bureaucracy.²² The distribution of meters can threaten vested interests and allow for new rents to be made in designing a "quick fix" to a prolonged negotiating process. Hence, a seemingly easy-to-solve technical problem may become bogged down by a tangle of interests favoring the current service delivery model, which is dominated by informal service providers and private vendors that often fail to meet the water quality safeguards required of a well-run utility (UN Habitat 2006, 148).

22. Authors' interview with World Bank staff, September 2014.

Lessons Learned

Tracing the project implementation process helps to identify the main factors behind the NUWSRPI's delivery results, which in turn helps to elicit valuable lessons from implementation experience and related recommendations on how to shape an enabling environment for sustainable water service delivery. This work also offers more general insights into the emerging science of delivery (Annex 1).

GOING FROM SAYING TO DOING: REFORM SIGNALING VERSUS REFORM IMPLEMENTATION

Political incentives, together with the need for rapid short-term results, may undermine a long-term commitment to change, overvaluing short-term returns and inducing a low-level equilibrium trap that holds back the achievement of sustainable outcomes. Reform projects face the illusion risk of thinking that long-term solutions can be achieved “one short term at a time.”²³

Although this approach still resonates with some stakeholders, the history of water reform projects in Nigeria has for the most part not delivered sustained change. The NUWSRPI further underlined the need to align (short-term) political incentives with (long-term) sustainability objectives to facilitate internal institutional reform mechanisms. Institutional changes are more likely when they are aligned with the political incentives of key actors and addressed within a favorable time frame. Changes do not occur simply because they point to better solutions. Dysfunctional systems may prevail if vested interests benefit from the inefficiencies emanating from ineffective projects. To secure long-term sustainable outcomes and reduce delivery gaps in Nigeria's urban water reform process, therefore, it will be critical to devise a strategy that jointly addresses infrastructure investments and reforms (Figure 12). Subsequent efforts in the sector will need to find ways to better sequence infrastructure delivery with reform in the sector and its utilities.

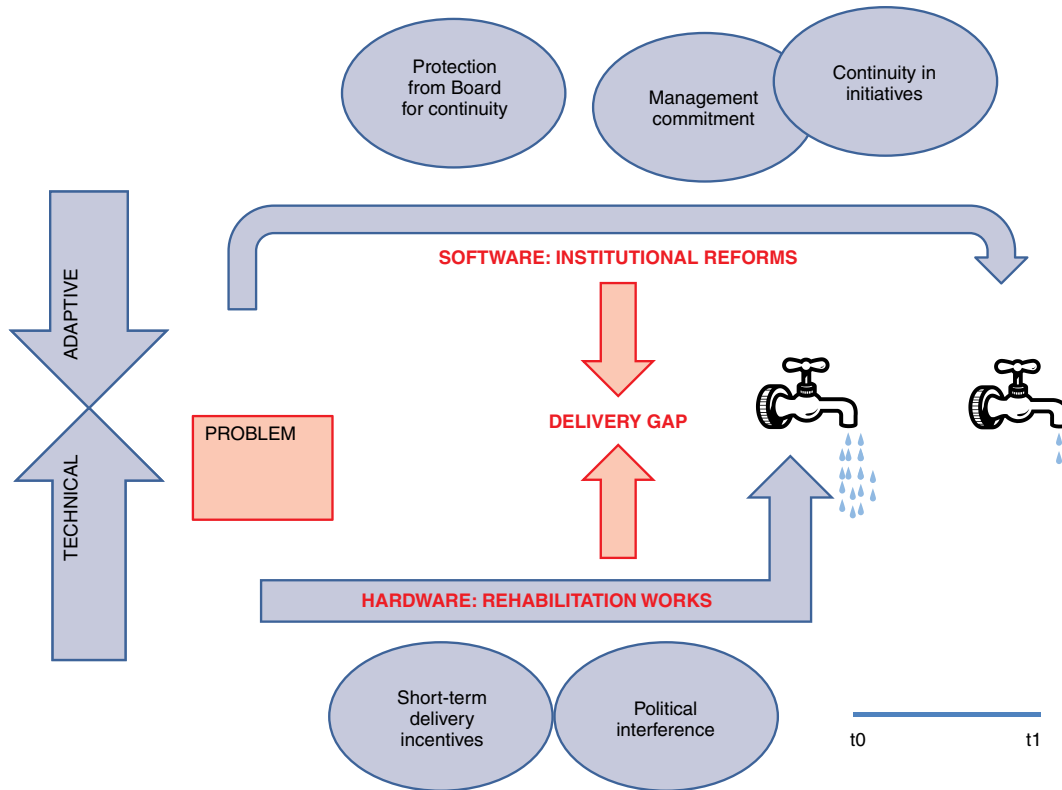
BALANCING THE “HARDWARE” AND “SOFTWARE” OF REFORM

During NUWSRPI implementation, it proved difficult to determine how the project would effectively balance the “hardware,” or investments in infrastructure, with the “software,” or institutional reform activities. Although the “software” component was included in the project's design, the NUWSRPI was an investment operation and was staffed—on both the government and World Bank sides—by a skill mix geared more toward “hardware” investments. Moreover, short-term incentives on both sides were aligned toward moving “hardware” investments; the World Bank can disburse large sums for infrastructure, the government can show visible results to the population, and SWAs can deliver more water without tackling the deeper challenges of institutional change.

As one officer from the FPIU commented when asked how the NUWSRPI was able to solve the development challenge, “the infrastructure component worked well, but the human one not. There was no motivation from government to strengthen institutions.” He cited the strategy for deployment of “hardware” and “software” reforms as an important reason for the challenges in committing to sustainable outcomes: “We lost it there,” he stated, referring to how the strategy of first investing in infrastructure and then dealing with institutional reforms ultimately undermined the sustainability of project outcomes. A somewhat different emphasis came from the FMOF, where a high-level officer considered that triggering sustainable water reform in the sector should begin by investing in the “hardware” conditions for sustainable service delivery (such as the repair and maintenance of waterworks, including the extension of the pipeline network and installation of a metering system for end users). When asked at what stage a commercialization and financial strategy for sustainable SWAs entered into the equation, the same high-level officer said, “If you give them [consumers] water, they will pay.” These positions do not necessarily contradict each other, but they do point to the difficulties in balancing

23. As in a mirage that occurs in hot weather, which creates the illusion of a watery surface at the horizon that is never reached, project implementation can repeat short-term strategies in hopes of obtaining long-term sustainable solutions that are never achieved.

FIGURE 12: The Delivery Gap between Institutional Reforms and Rehabilitation Works



Note: When “software” (institutional) reforms are not accompanied by “hardware” (infrastructure) reforms, a delivery gap arises that can compromise the sustainability of outcomes. To fill the delivery gap, “software” reforms—aided by continuity in initiatives, commitment of SWA management, and a Board that effectively oversees the organization’s activities and results—must accompany “hardware” rehabilitation. To secure optimal results over the long term ($t1$) and reduce the delivery gap, “software” institutional reforms, which require greater investments in SWAs’ adaptive capabilities, must be sustained ($t0$ to $t1$), as “hardware” investment alone cannot guarantee service delivery over the long term ($t1$).

and sequencing a strategy to jointly address timely “hardware” and “software” reforms in order to secure sustainable outcomes.

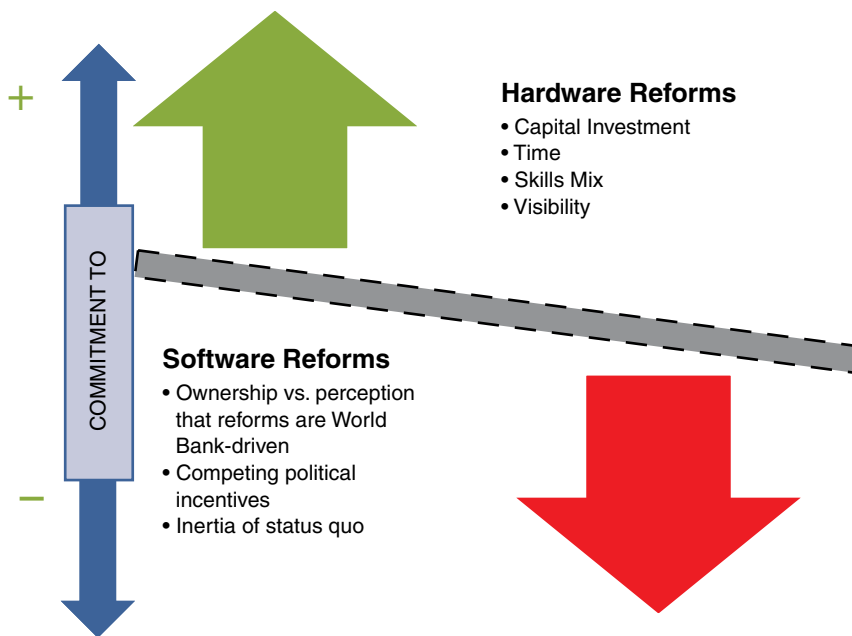
An inadequate mix of both can lead to failure. This mix includes not only the relative focus on each variable, but also the timing of their implementation. For instance, earlier water sector interventions in Nigeria demonstrated that it is not effective to invest only in infrastructure, without strengthening the institutional mechanisms needed to secure the maintenance and operation of the investment. Similarly, as some stakeholders argue for the NUWSRPI, focusing first on institutional reforms as preconditions to increasing water supply may not create

adequate incentives for sustainable service delivery (Figure 12).

“Software” components should invest in technical capacity through training that is monitored closely to ensure that it produces improved capacity or motivation to deliver. It is important to select training participants carefully, based on objective skills gap analysis, and to ensure that trainees are held accountable for using new skills in their day-to-day activities. Stakeholder feedback on the NUWSRPI indicated the need for a more strategic approach to capacity building to ensure value for money, with training viewed as a reward and an investment rather than as an entitlement.²⁴

24. Authors’ notes from local stakeholders’ feedback workshop, Abuja, January 2015.

FIGURE 13: Commitment to Delivery



This balance captures the various elements that push implementers and stakeholders to favor “hardware” reforms over institutional change. Commitment to delivery ($C2D$) is a function of capital investment (K), time (T), human capital (H): $C2D = f(K, T, H)$.

It is recommended that project staffing ensure the presence of multi-skilled implementation teams, including both engineers (“hardware”) and social/political scientists (“software”), so that all components of the agenda receive needed attention during implementation (Figure 13). This process should account for variations in states’ ability to set clear targets for all components, tailoring interventions to each state’s context (see below).

AVOIDING THE ILLUSION OF REFORM

The component of the NUWSRPI that addressed SWAs’ institutional capacity to deliver services emphasized mainly formal governance frameworks—that is, drafting a national strategy and water policy along with establishing regulatory agencies. However, the emphasis on formal governance frameworks can risk creating the illusion of institutional change, where improvements in formal rules are not accompanied by tangible results—promoting conditions that incentivize institutional mimicry instead of building capacity for long-term institutional reforms.

Several studies have tried to explain the paradox posed by Nigeria’s robust economic growth and the prevalence of widespread poverty and poor public services by pointing to a profound crisis of governance.

Lewis and Watts (2015) propose that Nigeria is in fact a country of diverse capacities and that there are a number of examples of pockets of effectiveness. They argue, however, that taking a “best practices” or good governance approach to reform, in a setting like Nigeria, has rarely proved effective and does in fact result in an illusion of institutional change. Isomorphic mimicry occurs when “countries improve their formal rules but do not see tangible substantive results; though initiatives have varied impact in complex institutional settings, reforms often stall, are shallow, and provide ineffective solutions to local problems” (Lewis and Watts 2015, 11). There is a growing body of literature on institutional reform that now recognizes that a *de jure* approach to reform can lead to short-term signaling, low ownership for reform implementation, and little difference on the ground (Pritchett et al. 2010; Andrews 2013).

CHANGING MINDSETS FOR SUSTAINED INSTITUTIONAL REFORM

Changing mindsets so that stakeholders begin to value long-term outcomes is critical to sustaining institutional reforms. The belief among many Nigerians that government-provided water should be free jeopardizes utilities’ efforts to build a strong customer base and

remain financially sustainable. Politicians can play a stronger role by promoting an environment of trust that legitimizes the change process and encourages a fair tariff system. Utilities, in addition to providing leadership in the process, can install a credible system of rewards and sanctions to strengthen accountability and promote the view that building staff capacity is an investment in the future. The sustainability of internal initiatives within the utilities depends on managers' ability to engage the entire staff in the process.

It is also important to instill a culture of payment for water services. Utilities can take the lead in educating stakeholders about the costs of service delivery, using data-driven campaigns to link sector performance with cost recovery, and about the benefits of having access to safe, reliable water resources. To facilitate this cultural shift, the World Bank should monitor and reward its own performance by linking project performance with utility cost recovery results. Finally, end consumers could help provide a greater impetus for reform. Traditionally, they have not played a strong role in demanding change in the sector, but in some states—with knowledge assistance from development partners—they have begun to take positive steps toward building an effective coalition for reform.

USING DATA TO ENABLE CHANGE AND BUILD CREDIBILITY

Open and honest, evidence-based discussions with political representatives at the state level can spur more productive discussions on sustainability. Utility managers who sustained engagement with politically difficult reform proposals used data to change the minds of policy makers and of their own internal staff. Data were used to inform, to convince, and to plan. Data and information proved critical in formulating a clearer picture of performance and in planning for sustainability. While there were limits to the extent to which data drove performance and shifted the debate on the water issue, it was undeniable that better information played a role. The manager of Kaduna's SWA, for example, indicated that using good data proved essential in his effort to craft a clearer vision for his agency, to attain greater autonomy, and to gauge his staff's performance against contextual realities.

Managing data has helped "make the case" to leaders. Understanding the incentives of politicians and using data to support them and win them over, as in Kaduna, is critical. Strong, passionate leadership among individual

heads of SWAs and commissioners has opened the door to the development of a reform agenda in some states. Access to data forges transparency and trust, and with it a culture of accountability. Nongovernmental organizations and other civil society actors should have access to relevant data so that they can support reform efforts and serve as an external source of feedback on progress.

The FMWR and FMOF can play a reinforcing role using new data on urban water issues, as well as international commitments and national strategies, to make the topic increasingly imperative to the political elite. The change in administration during 2015 provides an opportunity to engage early on with the new political leadership to understand their priorities and set the tone for how reforms in the water sector could improve public service delivery.

TAILORING REFORM GOALS TO EACH STATE'S CONTEXT

The reform process should acknowledge and work with the diversity of approaches available for tailoring responses to the vision, capacity, and goals of each state. The varying capacities and experiences of the states speak to the need for a range of delivery models and a stronger role for federal counterparts in ensuring diverse delivery targets around common results.

Realistic reform plans are also critical. Under the NUWSRPI, faced with an unclear reform direction and a poorly spelled-out theory of change (made worse by insufficient baseline data), SWAs aimed to cover at least 90 percent of their operating and management costs with their own revenues, to increase their collection efficiency by 20 to 80 percent in Enugu, 85 percent in Kaduna, and 69 percent in Ogun; and to boost capacity utilization while expanding water access and increasing water production.²⁵ Even for a country with great human capital, these were ambitious goals that some believe set up the SWAs to fail: "[I]t was as if we designed the project with another context in mind."²⁶

DISBURSING ON RESULTS

Results-based disbursement schemes generate incentives for implementing agents to improve how the project is executed. Regarding implementation of the NUWSRPI, stakeholders noted that the World Bank's allocation of funds regardless of results contributed to undermining the system of rewards and sanctions required for projects

25. Ogun state did not have baseline data for collection efficiency.

26. Interview notes with officers at the FMOF, interview by authors, Nigeria, September 2014.

to deliver on expected outcomes. Disbursing in this way sends signals to stakeholders that may contradict the desire to sustain changes after the project's completion.

Disbursement-related incentives also seem to affect the level of buy-in from local counterparts when limited time is allocated to building consensus among stakeholders and accounting for local specificities. In the NUWSRP1, the sense of urgency in getting the project off the ground made it difficult to fully engage certain parties between the concept and design stages and project effectiveness. When a project's sustainability depends on stakeholders' ability to set up mechanisms that support change, World Bank disbursement incentives may negatively affect local ownership and reduce the probability of sustainable outcomes.

DOING DEVELOPMENT DIFFERENTLY WITHIN THE WORLD BANK

It is clear from this case study that the World Bank has struggled to align its own processes and incentives to support long-term reforms in the sector.

Implementation of the NUWSRP1 ultimately favored infrastructure investment over sustainable change, in part as a result of the Bank's own internal limitations. How the Bank exercises its supportive role during project implementation has been shown to influence the project's impact. Lessons for the Bank include the need to: (i) see real reform traction before committing too many new investments to the sector; (ii) support teams with a range of skills and instruments; (iii) prioritize the development of an in-depth understanding of the local context and the political incentives of stakeholders as a means to build a coalition of support; (iv) protect reform teams from internal disbursement pressures, since reforms are rarely linear or fast; (v) provide adaptable and flexible support when reform momentum takes off in some states, with clear exit strategies when it dwindles; (vi) recognize and reward tangible results, rather than inputs; (vii) support competition and evidence-based decision making through the continual generation of better sector performance data; and (viii) review project implementation arrangements to ensure that a wide enough range of actors are involved and that the division of roles and responsibilities among federal and state actors plays to their comparative advantage.

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Annex 1: How This Case Study Informs the Science of Delivery

During the fall of 2013, the Bank (in collaboration with academics) analyzed case study work on the science of delivery. The emerging framework identifies five elements seen as important for enabling science-of-delivery approaches. The current case study underscores these five elements.

1. Relentless focus on citizen outcomes

This project demonstrates the importance of selecting indicators of success that wholly reflect the project's contribution to the development outcome of improving citizens' access to sustainable and affordable clean water. The client's Implementation Completion and Results Report (ICR) rates the project's outcome "satisfactory," while the World Bank's ICR rates it "moderately satisfactory." Some key stakeholders interviewed for this case study reported seeing the potential for the project to have gone farther in advancing its development goal.

The project achieved two key outcome indicators: (i) increase in water delivered through existing and extended networks; and (ii) increase in the number of household connections. But on the third key outcome indicator, improvement in cost recovery, the project underachieved. It can be argued that without improved cost recovery, achieving improved access to reliable and affordable sources of clean water will be extremely difficult. This rationale supports the assertion that more could have been done to achieve the project's development outcome. It is thus important to achieve alignment within and between project development outcomes and indicators, and between intermediate results and indicators.

2. Multidimensional response

This NUWSRPI brought together many actors from design to implementation and follow-up, partly because this project followed other water sector interventions. The dynamics that emerged during project design and at closing were particularly telling—namely that countries may struggle to garner needed financial investments in the sector, even if they are crucial to human development, because they may be perceived as too risky. This makes the incremental success of any initiative in the sector even more important for further partnerships.

When the NUWSRPI was launched, the World Bank was the only international agency that had invested significantly in Nigeria's water sector, with several other international partners coming on board in other states after the NUWSRPI ended. Though this approach provided opportunities for all stakeholders to capitalize on lessons from this project, it highlights the difficulties that large countries face with inadequate financial resources in serving their citizens across several localities.

3. Evidence to achieve results

By design, the NUWSRPI differed fundamentally from past interventions in the water sector. Implementers recognized the need to incorporate institutional reforms. This recognition emerged as a result of learning and adapting, by understanding what had not worked and trying to make amends. Furthermore, states involved in the project looked to other countries to understand how they operated their water utilities and sought to apply some of those lessons. This was the case with the Kaduna SWA, which developed a management program that revamped its institutional structures and increased staff's ability to deliver.

4. Leadership for change

An important turning point in the project's implementation was the appointment of a core TTL based on site: "[S]omeone who can go talk to the governor without being seen as an outsider; someone, well respected, who understands the culture and can be trusted to engage with sensitive issues with tact." It is the symbiosis between global perspectives and local understanding that shapes how a World Bank team takes the best from the world and the country's own experiences to craft projects that deliver—"a global who tells you this worked in Uganda, and a local who tells you, this will not work in Nigeria."

5. Adaptive implementation

From the onset, the project tested stakeholders' flexibility—sitting across the table were people that held different views on the proposed focus on PPPs. The final Project Appraisal Document differed significantly from the initial project concept note in response to signals from government counterparts that supported a more flexible design that did not necessarily put PPPs at the center of the project.

Annex 2: Interviewee List

Date	Name	Position
9-Sep	Indira Konjhodzic	World Bank, Country Program Coordinator
9-Sep	Nthara Khwima	World Bank, Senior Economist
9-Sep	Katherine Bain	World Bank, Senior Governance Specialist TTL
9-Sep	Hassan Madu Kida	World Bank, Lead Water and Sanitation Specialist
10-Sep	Eng. Ajisegiri Benson	Federal Ministry of Water Resources, National Project Coordinator
11-Sep	Eng. Kabiru Ahmed Rufai	State Water Board, Kaduna, General Manager
11-Sep	Eng. Soni Elisha John	State Water Board, Kaduna, Assistant General Manager (commercial)
12-Sep	Aisha Omar	Federal Ministry of Finance, Deputy Director for International Affairs
12-Sep	Abdulfatah Abdulsalam	Federal Ministry of Finance
15-Sep	Eng. O.R. Ipaye	Lagos Water Corporation, Project Coordinator
15-Sep	Eng. Shayo Holloway	Lagos Water Corporation, General Manager
15-Sep	Eng. Deji Johnson	Lagos Water Corporation, Executive Director Production
15-Sep	Bright-Ondami Titilola	Lagos Water Corporation, Project Implementation Unit/NRE
15-Sep	Olatimiji Sahe Ajibade	Lagos Water Corporation, PIU Network Expansion
15-Sep	Eng. M. B. Seriki	Lagos Water Corporation, Procurement
15-Sep	Eng. Lawal M. O.	Lagos Water Corporation, Monitoring and Evaluation
15-Sep	Isola, A. L.	Lagos Water Corporation, Monitoring and Evaluation
15-Sep	Abiola K. Aina	Lagos Water Corporation, Director Sector Reform
15-Sep	Sola Osinibi	Lagos Water Corporation, Consultant
16-Sep	Eng. Maku Oluseye O.	State Water Board, Ogun, Project Coordinator
16-Sep	Eng. Tomi Omafowokam	State Water Board, Ogun, Procurement Officer
16-Sep	Oluwagbenro Oluoji	State Water Board, Ogun, Project Accountant
16-Sep	Ademoye Omobolanle	State Water Board, Ogun, Legal Officer]
16-Sep	Engr (Mrs) Monsurat Oluwatoyin Agboola	State Water Board, Ogun, General Manager
17-Sep	Fashoyi Adewale Olabode	Assistant Director & Project Procurement Officer, Ministry
17-Sep	Obadiah Tohomdet	World Bank, Senior Communication Officer

(continued)

Date	Name	Position
18-Sep	Haruna Mohammed	Director, International Economic Relations (IER), Federal Ministry of Finance
18-Sep	Nature Obrakor	Coordinator, Youth, Water, Sanitation and Hygiene (WASH) initiative Africa
18-Sep	Etta Michael	Environment/Development, Editor with Blueprint Newspaper/ Youth WASH Network Africa
18-Sep	Felicia Ngaji-Usibe	Project Communication Officer, Reform Office, Federal Ministry of Water Resources
18-Sep	Alex Abutu	Editor Water Desk, Daily Trust Newspaper
18-Sep	Eng. Hossana John Dajan	Team Leader, SUWASA, Bauchi, USAID Project
19-Sep	Bayo Awosemusi	World Bank, Lead Procurement Specialist
19-Sep	Roland Romme	World Bank, Senior Governance Specialist
22-Oct	Sanyu Lutalo	World Bank, Senior Water and Sanitation Specialist
28-Oct	Alex McPhail	Lead Water and Sanitation Specialist
10-Nov	Alexander Bakalian	Practice Manager

Annex 3: Nigeria Workshop Participants, Washington, D.C., and Abuja

Nigeria Workshop, Washington D.C., January 2015	
Name	Position
Pier Francesco Montavani	World Bank, GWADR
Katherine Bain	World Bank, GGODR
Hassan Madu Kida	World Bank, GWADR
Indira Konjhodzic	World Bank, Country Program Coordinator, AFCNG
Roland Lomme	World Bank, GGODR
Sabrina Roshan	World Bank, GGODR
Sanyu Lutalo	World Bank, GWADR
Camilo Lombana Cordoba	World Bank, GWADR
Alexander V. Danilenko	World Bank, GWASP
Berta Macheve	World Bank, GWASP
Liang M.D.O. Wang	World Bank, LLI
Sue Harding	World Bank, LLI
Hirut M'cleod	World Bank, LLI
Claudio Santibanez	World Bank, GPSCE
Halimatou Hima	World Bank, GPSCE

Nigeria Workshop, Abuja, January 2015		
Name	Organization	Designation
Tom Robert Mugoya	AFDB	Water & Sanitation Engineer
Bashir I. Goug	AFDB	Consultant, Water
Jeanne Milleliri	AFDB	Project Manager
Engr. Aminu Aliyu Gital	BSWB	GM

(continued)

Nigeria Workshop, Abuja, January 2015		
Name	Organization	Designation
Abubaker A. Fateh	BSWC	M&E
Aminir A. Gotal	BSWC	Project Coordinator
Timothy Ntamu	CRSWBL	Project Engr.
Engr. Timothy Ntamu E.	CRSWBL	Project Engineer
Engr. James E. Ekabua	CRSWBL	Procurement Officer
Eng. Oluwaleye A.	Ekiti State Water	Water & Sanitation
Engr. Adewumi A. Stephen	Ekiti State Water Corp. (PIU)	Assistant Project Coordinator
Aisha Omar	FMF	Deputy Director (IDA)
Olaide Ademola	FMF	Desk Officer
Ohaeri Stephen, E.	FMF	CAO
Engr. Ajisegiri Benson	FMFW	NPC, Head of Water Sector Reform & PPP
Engr. M.K. Nafiu	FMWR	Project Engineer
Umar S. Bashir	FMWR	Project Accountant
Dahiru Abdulkareem	FMWR	Project Engineer
Engr. Kabir Ahmed Rufai	KDSWB	GM
Eutyclus John	KDSWB	M&E
Engr. John Gimba	KDSWB	AGM (Corporate Planning)
Eng. Adamu B. Daudu	KSWB	AGM Corporate Pl.
Eng. Soni Esiha	KSWB	AGMCOM
Dalhatu Zubairu	KSWB	AGM Admin.
Patricia Simon-Hart	MWRRD RVSG	Honorable Commissioner
Monsurat Oluwatoyin Agboola	OGSWC	GM
Salaam Sakirudeen A.	OGSWC	AGM Corporate Plan./M&E
Taiwo S. Kayude	OGSWC	AGM Comm
Agboola M. O. (Mrs)	OGSWC	GM
Maku Oluseye O.	OGSWC	Project Coordinator
Oluwagbenro T.O.	OGSWC	Project Accountant
Kenneth Anga	PHWC	MD
Nene Sobande	USAID	Project Manager WASH
Pier Mantovani	World Bank	Water Global Practice
Marie Françoise Marie-Nelly	World Bank	Nigeria Country Director
Katherine A. Bain	World Bank	Governance Global Practice

Nigeria Workshop, Abuja, January 2015

Name	Organization	Designation
Michel Duret	World Bank	Water Global Practice
Liang Wang	World Bank	Learning, Leadership and Innovation team
Hirof M'cleod	World Bank	Learning, Leadership and Innovation team
Alexander Darilenko	World Bank	Water Global Practice
Halimatou Hima Moussa Dioula	World Bank	Science of Delivery team
Camilo Lombana Cordoba	World Bank	Water Global Practice
Claudio Santibanez	World Bank	Science of Delivery team
Sabrina Roshan	World Bank	Governance Global Practice

Annex 4: Project Timeline

1981–1991	Anambra Water Supply and Sanitation Project	Of the amount of US\$ 67 million implemented in collaboration with the World Bank to improve water supply and sanitation services.
1985–1995	Borno State Water Supply Project	Of the amount of US\$ 72 million implemented in collaboration with the World Bank to expand the water supply service in the Borno State capital, Maiduguri, to include some 74,000 people who are presently not served by BSWB and to meet the demand of the projected population of 543,000 by 1992.
1992–2000	Multi State Water Supply Project	The project includes: 1) physical rehabilitation of the existing systems; 2) selective increase of supply facilities; 3) improved operation and maintenance practices; 4) improved investment planning; 5) setting and achieving realistic financial objectives; and 6) manpower development.
1993	The 1993 Water Resources Decree, Decree no. 101	Designated the FMWR as the responsible authority for the planning, coordination and management of water resources in Nigeria
1995	National Resources Master Plan	
1999	The 1999 Constitution of the Federal Republic of Nigeria	Gave state government the constitutional power to manage water within their jurisdiction with the exception of waters covering more than one state
2000	National Water Supply and Sanitation Policy, FMWR	Defined roles at federal, state and local levels—with federal responsible for “policy formulation, data collection, resources and demand surveys, monitoring, evaluation and the coordination of water supply development and management, research and development, national funding and technical support, and the creation of an enabling environment for meaningful private sector participation among others” and state responsible for “the establishment, operation, quality control and maintenance of urban and semi-urban water supply systems” ^a
2003	The National Water Resources Management Policy, draft 2003	
2003	Presidential Water Initiative (PWI) launched	
2004	National Economic Empowerment and Development Strategy (NEEDS)	
2004	The National Water Policy	Advocated for a demand driven approach and effective management of water resources.

(continued)

2003	National Urban Water Sector Reform Project began	
2005	Debt relief	Boosted resources available for water sector
2007	National Water Resources Act	Aimed to provide equitable, beneficial, efficient and sustainable use and management of surface and groundwater resources.
	Kaduna Water Supply	
2005–2016	Second National Urban Water Sector Reform project	The Second National urban Water Sector Reform Project for Nigeria aims to: (i) improve reliability of water supply produced by the water treatment works in Lagos; (ii) increase access to piped water networks in four cities in Cross River State; and (iii) improve commercial viability of the urban water utilities in Cross River and Lagos States. The Project will be implemented in two states in Nigeria: Lagos and Cross River.
2012–ongoing	Second National Urban Water Sector Reform project (additional financing)	The objectives of the Additional Financing for the Second National Urban Water Sector Reform Project for Nigeria were to: 1) improve reliability of water supply produced by the water treatment works in Lagos state; 2) increase access to piped water networks in four cities in Cross River State; and 3) improve commercial viability of the urban water utilities in participating states.

