Report Number: ICRR0022825

1. Project Data

Project ID	Project Name
P123513	NG-III Nat'l Urban Water Sector Reform
Country	**Practice Area(Lead)**
Nigeria	Water

L/C/TF Number(s)	Closing Date (Original)	Total Project Cost (USD)
IDA-54160	30-Jun-2020	141,644,933.10
Bank Approval Date	**Closing Date (Actual)**	
18-Apr-2014	30-Mar-2021	

	IBRD/IDA (USD)	Grants (USD)
Original Commitment	250,000,000.00	0.00
Revised Commitment	163,830,474.30	0.00
Actual	141,644,933.10	0.00

Prepared by	Reviewed by	ICR Review Coordinator	Group
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2. Project Objectives and Components

a. Objectives

The Project Development Objectives (PDO) are (i) to increase access to improved water supply service in selected States of Nigeria and improve the financial viability of existing water utilities in those States, and (ii) to increase the investment planning capacity of participating States (Schedule 1, page 6 of the Financial Agreement, Negotiated Text Dated March 11, 2014).

For the purposes of this ICR Review, the PDO will be assessed based on three sub-objectives:

1. To increase access to improved water supply service in selected States of Nigeria;
2. To improve the financial viability of existing water utilities in those States; and
3. To increase the investment planning capacity of participating States.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

No

c. Will a split evaluation be undertaken?

Yes

d. Components

The project has three main components:

Component One: Sector Reforms and Water Supply Investments (appraisal estimate, US$215 million; actual, US$121.8 million)**.** This component would finance civil works for large water supply investments, including rehabilitation, upgrading and/or expansion of water intakes and treatment plants; rehabilitation and/or replacement of bulk transmission pipelines; construction of new pipelines; rehabilitation and/or construction of reservoirs, boreholes and well fields; replacement, expansion and/or construction of distribution networks; replacement and installation of water meters; as well as refurbishing of laboratories and construction of new office buildings.

Specific sub-components are as follows:

Subcomponent 1 - Rehabilitation and Expansion of Water Production and Distribution Facilities. This subcomponent would support Rivers, Bauchi and Ekiti States to implement large investments to rehabilitate water production and expand distribution facilities to increase access to water supply services in the states' capital areas and immediate environs; and to implement needed reforms and capacity building to increase service sustainability. The component would also finance activities to improve performance, such as strategic metering, marketing communication programs, review of technical and commercial cadastral information databases, and office facilities and equipment.

Subcomponent 2 - Performance Based Allocation. To promote competition and incentivize performance improvements, this subcomponent would be earmarked as a Performance Grant, to be allocated during the project's Mid-term review (MTR) among the participating states, based on their respective MTR results on the following criteria: (i) implementation progress; (ii) customer enumeration and classification; (iii) completion of tariff studies; and (iv) investment plans and designs to scale up access to water supply. The progress of the states on these criteria were included in the Results Framework and would be monitored throughout implementation. To be eligible, states must achieve a total of 70 points on these criteria, with each qualifying state getting a percentage of the allocation based on relative performance.

Component Two: Water Sector Governance, Institutional Strengthening and Human Capital Development (appraisal estimate, US$23 million; actual, US$30 million)**.** This component would support the design and implementation of reforms in nine Participating states, and minor but urgent water supply investments to quickly improve service provision. States include Kano, Gombe, Benue, Jigawa, Ondo, Abia, Bayelsa, Anambra, and Plateau. These states would be made "finance-ready" for larger investments, by ensuring that their investment plans include adequate technical, environmental and social provision.

Component Three: Sector-wide Improvement and Project Management at the Federal Level (appraisal estimate, US$12 million; actual, US$3.7 million)**.** This component would strengthen the capacity of the Federal Government to identify an appropriate financing model for the sector, and to support and monitor the reform process and utility performance. It will include: (i) a study to identify a suitable sector financing model that is more transparent and efficient in federal-to-state transfer of resources; and (ii) support to the Federal Ministry of Water Resources (FMWR) in maintaining and updating its database on the states' sector performance and the provision of water supply and sanitation (WSS) services nationwide; and (iii) project management to cover fiduciary, safeguards and technical expenditures borne by FMWR to implement the project.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Costs. According to the ICR's Financing Table (page 2), the total project cost at appraisal was estimated at US$273 million. The actual cost at closing was US$155.5 million.

Bank Financing. IDA approved a credit of US$250 million, of which US$141.6 million were disbursed.

Borrower Contribution. The Borrower committed US$23 million at appraisal, of which US$13.8 were disbursed by project closing.

Dates. The project was approved on April 18, 2014 and became effective on February 12, 2015. The mid-term review was held on December 10, 2017. The original closing date of June 30, 2020 was extended by nine months to March 30, 2021, the actual closing date.

The project had five restructurings, as delineated below with the dates and key changes.

First: December 18, 2018.

- Replaced one PDO outcome indicator, O&M cost recovery, with billing efficiency given the difficulties encountered early in the project in meeting O&M targets;
- Added four Participating States: Sokoto, Kebbi, Imo, and Adamawa, under Component 2;
- Removed performance grants allocated to Selected States from Component 1; and
- Reallocated the funds (SDR 12.9 million) from Category 3 (Unallocated) to Category 2 (for Components 2 and 3).

Second: May 6, 2020.

- Canceled (from Component 1) the Rivers State scope of work related to key investments. This cancellation was due to the absence of progress on procurement of the single contract package

(US$61 million) for the key investments, almost to the end of the original project closing date. Funds allocated to Rivers were cancelled, except for supporting the preparation of safeguards documents;
- Canceled SDR 5.0 million from Component 2;
- Reallocated the balance of funds among disbursement categories; and
- Added preparatory activities to prepare a new WSS project (under Component 3).

Third: May 12, 2020.

- Extended credit closing date by six months to allow for completion delayed investments, from June 30, 2020, to Dec. 30, 2020.

Fourth: December 16, 2020.

- Extended credit closing date by three months to complete the final stages of selected activities, from Dec. 30, 2020, to March 30, 2021.

Fifth: Mar. 25, 2021.

- Canceled SDR 29.42 million from the credit
- Reallocated the balance of funds Among disbursement categories

Split Rating. Due to the significant changes in indicators during the first and second restructuring, two split evaluations have been carried out. Since the PDO did not change during those restructurings, and to minimize presentational discontinuity in the assessment of whether the PDOs were achieved or not, the parsing out of each change in outcome indicators corresponding to each restructuring was not presented in the template. The overall outcome would be Moderately Unsatisfactory even if that parsing out in the template were done. This approach enabled a more coherent and integrated evaluation of PDO achievement without losing the information on the ratings at each restructuring.

3. Relevance of Objectives

Rationale

The project's development objectives (PDOs) are appropriately pitched to Nigeria's level of economic development and to the priority needs of the country's water supply and sanitation (WSS) sector. The planned interventions were adequate, and the specific activities related to reforms, institutional development and investments were properly sequenced.

Country and Sector Background. Nigeria—the largest African country in population and economic size—has 36 states, a Federal Capital Territory (FCT) at Abuja, and a population of 176.4 million in 2014, of which 53 percent is rural. Oil and gas dominated the country's economy, accounting for more than 30 percent of GDP in 2014 and about 75 percent of the government revenue. One-third of the population lived below the poverty line in 2012, with the poverty rate as high as 45 percent in rural areas compared to about

13 percent in urban areas in 2014. Nigeria ranks among the lowest globally on many human development indicators. Living standards differ widely between regions, in part due to imbalances in market access and the provision of public services. Nigeria remains challenged by huge development issues, such as the need to diversify away from petroleum, strengthen institutions and governance, improve financial management systems, and address the seriously inadequate infrastructure nationwide

Nigeria has abundant water resources, with withdrawals at only 5.8 percent of freshwater resources in 2014. However, these resources face both natural and human threats such as oil spills, industrial wastes, salinity intrusion, and deficits due to climate change. Nigeria was not on track to achieve the Millennium Development (MDG) goals as of 2015, with about 64 percent of the population having access to adequate water supply and only 28 percent with access to improved sanitation, both heavily biased in serving urban areas.

The Nigerian water and sanitation sector is faced with several institutional, policy and regulatory issues. At the federal level, the mandate for water supply is clear, but the roles for sanitation are fragmented. At the state level, institutional roles and structures differ significantly. Thus, while the Federal Ministry of Water Resources (FMWR) manages water resources and implements the National Water Policy (NWP), some states have ministries dedicated to water supply, which formulate policies and retain both oversight and regulatory roles. States are responsible for service delivery, with a high degree of autonomy. State Water Agencies (SWAs) are fully public-owned, corporate bodies responsible for the establishment, operation, quality control, and maintenance of urban and semi-urban water supplies. The SWAs report to their respective ministries and are heavily dependent on state government subsidies, thus eroding their autonomy (e.g., the state governor decides tariffs, grants levels of autonomy, etc.). Many SWAs have frequent supply interruptions, high levels of nonrevenue water, and poor customer service. At the local government level, responsibilities are even less clear. There are 774 local government authorities (LGAs) responsible for rural WSS services, some of which are served by SWAs.

In 2011, the Government of Nigeria (GoN) prepared the Nigeria Water Sector Roadmap, which sought to optimize the use of water resources by focusing on the development of water quality and sanitation standards, increased access, improved operations and maintenance (O&M), and promotion of public-private partnerships (PPPs). The states responsiveness was uneven, with some states supporting more reforms than others, depending on their respective political economy and their governors' leadership. Monitoring of sector performance was weak or absent. There was no effective regulation of service providers, and where state ministries did exercise some regulation, the tariffs were set with little regard to the cost recovery. Consequently, the investment needs of the WSS sector were not met. This has worsened supply deficits, rehabilitation backlogs, and system unreliability. At the same time, the growth in illegal connections and inadequate cost recovery has resulted in operating losses and greater dependency on state and federal subsidies for O&M.

<u>Relevance to Government Strategies</u>. The project's objectives were closely aligned with Nigeria's national strategies at the time of closing. In particular, the PDO outcomes of access improvement and financial sustainability directly supported the 2018 National Action Plan (NAP) for the Revitalization of Nigeria's water supply, sanitation and hygiene (WASH) sector. The NAP's long-term aim was to meet Sustainable Development Goals (SDGs) for Nigeria's WSS sector. More specifically, the congruence between the PDOs and the NAP is evident from the NAP's principal lines of action, namely: (i) to achieve better governance through policy, legislative, regulatory, and institutional reforms; (ii) to improve the sustainability of WSS services through the efficiency and autonomy of service providers; (iii) to ensure cost-effective sector financing and investments; and (iv) to utilize monitoring and evaluation (M&E) to inform decision-making,

manage performance, and establish accountability. The M&E strengthening and the activities of the national WASH fund are also aligned with the NAP.

Relevance to Bank strategies. The PDOs were fully consistent with the four pillars of the Bank's 2021-2025 Country Partnership Framework (CPF) at project closing. Regarding **Pillar One** "strengthening the foundations of the public sector", the project aimed to lay the foundations for enhancing the performance of the public institutions. The project sought to build institutional capacity by encouraging the states to form regulatory units (Ekiti, Bauchi), transform water boards into corporations (Bauchi), prepare plans for institutional reorganization (Ekiti, Bauchi and the Participating States), prepare a road map for FMWR's national WASH fund, and establish systems at the federal level to collect utility performance data through the International Benchmarking Network for Water and Sanitation Utilities (IBNET). The project's targeted outcome of financial viability is critical to the sustainability of WSS services and was therefore also fully supportive of Pillar One. Regarding **Pillar Two** "investing in human capital", the project's PDOs supported Core Objective 4, which is to "increase access to basic water and sanitation services". Improved access directly translates into investments in human capital by reducing water-related diseases and thus improving health and nutrition outcomes; moreover, improved WASH would reduce health-threatening infections. Regarding **Pillar Three** "promoting jobs and economic transformation", the PDOs, pending more robust data, may be expected to support increases in local employment by decreasing the time spent in water collection, thereby increasing prospects for seeking gainful work elsewhere. Regarding **Pillar Four** "enhancing resilience", the project's dam safety measures may be expected to enhanced the resilience of water resources, as well as resilience to climate-related disaster in turn.

Previous Bank Involvement.

The Bank's support for Nigeria's water sector dates back to the 1970s. The two most recent ones (prior to this one under review) both had Moderately Unsatisfactory outcome ratings. Those are: (i) the National Urban Water Sector Reform Project (2004–13), which sought to expand access and improve the reliability and financial viability of SWAs (MU outcome as rated by IEG's Project Performance Assessment Report); and (ii) the Second National Urban Water Sector Reform Project (2005–16), which sought to improve access as well as the service reliability and commercial viability of water services; however, policy and institutional reforms and private sector involvement were not achieved (MU outcome). This project under review was able to incorporate lessons only from project (i) above and was informed by sector studies and other Bank partnerships.

Overall, the relevance of objectives is substantial given the close alignment of the PDOs with the Government's strategies as well as the coherence and consistency of the PDOs with the key pillars of the Bank's Country Partnership Framework.

Rating

Substantial

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To increase access to improved water supply service in selected States of Nigeria

Rationale

Theory of Change

Since the Project Appraisal Document (PAD) did not include a theory of change (TOC), the ICR prepared one that was implied by the project components and the results framework. The over-arching causal chain is that the introduction and deepening of reforms, and the provision of parallel investments—with the selected activities pitched at levels that are appropriate to the capabilities and readiness of the beneficiary states—would causally lead to improvements in sector performance. The causal links at both the investment and reform levels (discussed below) were valid, adequate and appropriately timed and sequenced.

In terms of the “backbone” investments that were expected to lead to service improvements, most of the project funds (86 percent) was allocated to improving key water supply infrastructure in the Selected States. These investments focused on water source improvements, strengthening bulk infrastructure, and improving the distribution network through rehabilitation and expansion within state capitals. As operational support, SWA capacity building was also included and expected to result in service delivery and O&M improvements at the same time that the investments were materializing.

The causal chain for the reforms can be traced at three levels. At the federal level, the final outcome of achieving improvements in sector financing and monitoring were expected to result from the following input activities intended to help FMWR: (i) the establishment of a pooling mechanism for funds and clear principles for transferring funds to the states; and (ii) the nationwide tracking of reform progress and investment performance. At the level of the Selected States, the granting of operational and financial autonomy was expected to lead to the transformation of SWAs into autonomous and commercially viable utilities. Moreover, structural improvements within SWAs were expected to enhance the accountability of the key sector stakeholders, namely, the state governments, policy makers, service providers and users. These foregoing activities were expected to result in the achievement of utility autonomy, efficiency, improved governance, and empowerment of users as final outcomes. At the level of Participating States, the provision of technical assistance (to enhance their readiness to implement reforms), as well as limited “quick win” investments (to gain community trust in the reform process) were expected to make the states "finance ready”.

The core assumption of the ICR’s TOC is that the risk of not achieving reforms could be mitigated by selecting the states based on their reform readiness, providing them tailored support such as performance grants, and the adequate oversight and support by the federal government.

In light of the close inter-relationships between the PDOs, this theory of change applies to the discussion of PDOs 2 and 3 in the separate sections below.

Outputs

495 km of water pipes rehabilitated and expanded, exceeding the target of 370 km.

Outcomes

There were two major changes in PDO1 outcome indicators: (i) the scope of work of Rivers State was removed under the second restructuring; and (ii) the targets of both Indicators 1 and 2 (under PDO1) were reduced.

PDO indicator 1 "Number of direct project beneficiaries": The rehabilitation and expansion of water systems were expected to generate benefits from improved access to water sources. The original target was 920,000 beneficiaries for the Selected States combined (Bauchi: 420,000; Ekiti: 80,000; Rivers: 420,000). At project closing, and with Rivers having been removed, the completion of the investments in the capital cities of Bauchi and Ekiti resulted in 738,076 total beneficiaries of improved services (Bauchi: 576,972; Ekiti: 161,104), defined as availability of water and hours of supply. This surpassed by 48 percent the revised target of 500,000 (after the target for Rivers was removed) by 48 percent. The result includes both existing and new customers. (Note, however, that according to page 75 of the ICR, none of the utilities in this region supply water 24x7. Taraba, Gombe, and Adamawa SWAs could enhance the supply hours to 12 hours or more per day, while Bauchi could increase from five to eight hours per day. Only Lagos was able to increase the average period of uninterrupted supply to 20 hours a day. The rest of SWAs serve customers fewer than eight hours a day in 2019.)

The ICR explains that based strictly on the Bank's Core Sector Indicator (CSI) definition, which considers only new customers and incremental benefits from the Bank project, the Indicator 1's measurement would result in 274,108 beneficiaries (Bauchi: 201,636 and Ekiti: 72,472), which is 55 percent of the revised 500,000 target for Bauchi and Ekiti combined. The ICR argues, however, without the project, infrastructure was poor, and for six years the SWAs had not provided services to city residents, who had to rely on informal service providers and inferior sources at high costs. Consequently, the ICR's assessment considers improvements to existing customers as a new service that qualifies as "access to improved water sources". The ICR therefore uses the figure of 738,076 as the achievement under Indicator 1 of PDO 1.

There were also outcomes related to improvements in water quality (the ICR also mentions improved level of service in paragraph para 36, but does not provide any evidence), and in the availability of options, including single connection for a household, multiple households on a single connection, and customers served through public standposts. In Bauchi and Ekiti, the water quality laboratory was strengthened and its technical staff were trained, thus resulting in the regular testing of water quality samples and improvements in water quality, for which beneficiaries were willing to pay.

However, there were some significant and continuing shortcomings. As in previous projects, water and power supplies are intermittent and unreliable, even at project closing. Unmetered standposts continue to operate in the service area, as indicated by beneficiaries themselves. The issue of managing these public standposts and improving services to the poor (through pro-poor tariffs, loss reduction, and water supply sharing among households) still remains to be addressed.

PDO indicator 2 on the number of direct project beneficiaries in urban areas was also measured (based on the databases maintained by the Bauchi and Ekiti SWAs) by including both existing and new beneficiaries, hence the ICR's figure of 738,076 was the same as that of PDO indicator 1. However, the SWAs do not maintain a database of men versus women beneficiaries. The ICR mentions that census figures indicate women beneficiaries as making up 50 percent of the total.

Another shortcoming is the lack of clarity in the definition of a related intermediate indicator i.e., piped household connections benefiting from rehabilitation works. As reported, the target of 35,523 (Bauchi: 35,000; Ekiti: 523) was exceeded since the project achieved 42,357 (Bauchi: 31,278; Ekiti: 11,079) connections. The latter number counted only existing customers, whereas the CSI specifies new customers. However, while Bauchi underachieved, the very high numbers of rehabilitated connections at Ekiti (around twenty times the target) resulted from an underestimation of underserved existing customers at project entry, which was not corrected during implementation.

Based on the Bank's CSI definition which prescribes counting new customers, and taking into account the significant shortcomings indicated above, the efficacy rating for PDO 1 before and after restructuring is **modest**.

Rating
Modest

OBJECTIVE 2

Objective
To improve the financial viability of existing water utilities in Participating States.

Rationale
Outputs

1. Customer enumeration completed, and database created (59,797 customers, existing and new)

2. Tariff studies with pro-poor policies completed in Bauchi and Ekiti.

Outcomes

At the time of appraisal, the original PDO indicator for measuring financial viability outcomes was the "percentage of O&M cost recovered in the Selected States" and had a target of 80 percent. By comparison, the performance of the states was seriously deficient, e.g., 2.7 percent by the midterm review. During project implementation period, the average performance was an exceedingly low 4.65 percent.

This ambition of PDO indicator was revised and downscaled "billing efficiency" at the first restructuring. Against the baselines set in 2018 (Bauchi: 73 percent, Ekiti: 76 percent, Rivers: 0 percent), the target was 95 percent. The project supported the establishment of a customer database, billing and collection (B&C) systems, and the development of a pro-poor tariff framework in Bauchi and Ekiti.

Bauchi was able to complete customer enumeration and the testing of an automated B&C system. Although these activities helped to improve billing efficiency, the overall collection performance remained low because Bauchi wanted to raise the collections only upon completion of service improvements, which were being delayed in the meantime. At the time of ICR preparation, collection performance had yet to improve in Bauchi.

Ekiti launched an automated B&C system in 2017 and changed the head of its commercial department. While this helped initially in increasing B&C, the COVID pandemic had a significant negative impact in 2020 because of the limitations imposed on door-to-door bill distribution.

Regarding pro-poor tariffs, the project supported the development of a framework in Bauchi and Ekiti in developing a pro-poor tariff framework, but by project closing, the proposed tariffs had not been adopted.

In summary, although there were some improvements in overall billing efficiency (the revised indicator), the overall achievement was weakened by the serious delays in completing the infrastructure investments to improve access (PDO 1) because the state governments did not want to raise tariffs unless the services have been actually improved. Bauchi's collection performance remained low while that of Ekiti started improving only towards the very end of the project. A the time of ICR preparation, the collected revenues had not yet met at least the O&M costs, thus failing to demonstrate financial viability.

The achievement of PDO 2 before restructuring was negligible. In light of the weak performance on collection efficiency, the efficacy rating after restructuring is modest. Overall rating is modest.

Rating
Modest

OBJECTIVE 3

Objective
To increase the investment planning capacity of participating States.

Rationale
Output

By project closing, as targeted the 13 Participating States (original target was 9), have completed their medium-term investment plans. These include tariff studies, customer enumeration and mapping, B&C software, and supervision for rehabilitation works

Outcome

The scope of the outcome indicator for PDO3 was increased at the first restructuring through the addition of four Participating States. The indicator, i.e., "Medium-term investment plans completed for Participating States", measures the progress of the states in initiating reforms. With Bank inputs, FMWR initiated the reform process through a January 2015 workshop wherein the Participating States prepared the Organizational Diagnostics and Sector Reforms Action Plan. The related analyses were comprehensive and covered access, service, institutional, legal, technical, financial, commercial and human resources issues. A sector reform road map and the medium-term investment plans were prepared with the states, thus complying with the PDO indicator. The 13 Participating States have completed their medium-term investment plans, institutional reorganization plans, and reform action plans. It should be noted, however, that (i) the plans are outputs; and (ii) detailed engineering studies for of the investments still remain to be done, hence, whether the states are "finance ready" seem to be debatable.

The efficacy rating for PDO 3 is **substantial**.

Rating
Substantial

OVERALL EFFICACY

Rationale
The project's efficacy in achieving PDO 1 is modest; the achievement of PDO 2 is also modest. PDO3 was achieved to a substantial extent. The project's overall efficacy rating is modest.

Overall Efficacy Rating	Primary Reason
Modest	Low achievement

5. Efficiency

The ICR conducted an efficiency analysis based on the same assumptions and methodologies that were used at the appraisal stage. The main comparison was through benefit-cost analysis (specifically, the calculation of comparative economic rates of return and benefit-cost ratios) covering 100 percent of project costs and expected benefits in economic terms, with the same time frame and 12 percent discount rate used at appraisal. The ICR also updated the appraisal's financial analysis of the water utilities and fiscal position of the states. In addition, the ICR also assessed implementation efficiency.

Two major shortcomings seriously diminished the project's economic viability by the time of project closing. First, the investments were delayed by several years, with most occurring only during the last two years of the implementation period that had already been extended by nine months. Second, up until closing, the number of beneficiaries were significantly less than originally targeted. Consequently, whereas the project's appraisal estimated the economic internal rate of return (EIRR) at 25.7 percent, the actual EIRR calculated by the ICR was at 12.09 percent, which is only marginally economically viable given the 12 percent discount rate. Similarly, whereas the benefit-cost (B/C) ratio was estimated at 1.61 during appraisal (i.e., benefits were 61 percent higher than costs), the B/C ratio at closing was around 1.0, indicating that benefits were just about equal to costs.

Financial efficiency remained low, as the commercialization of the water utilities made very little progress. The delays in service improvements led to the postponement of planned tariff increases. As a direct result, the water utilities did not have adequate revenues to finance operational costs. In Ekiti and Bauchi, cost recovery worsened when tariffs were not increased, and the cost coverage ratio indicator of financial viability was dropped. State governments had to continue providing capital and recurrent subsidies, otherwise the state water agencies would not be able to maintain and operate the project-financed infrastructure. The only observable improvement was in commercial procedures, through improved customer database and billing systems, but there were limited improvements in corporate governance overall.

The project experienced major implementation delay, leading to the cancellation of over 25 percent of project financing. Important sector benefits—namely, utility corporatization and the financial viability of participating water utilities—were not achieved, thus jeopardizing the sustainability of customer access to water services. Together with the much lower EIRR and marginal B/C ratio compared to appraisal, overall project efficiency is rated as **modest**.

Efficiency Rating

Modest

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal	✓	25.70	100.00 ☐ Not Applicable
ICR Estimate	✓	12.00	100.00 ☐ Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

The relevance of the project's objectives to the country and Bank strategies is **substantial**. Overall efficacy is **modest** under the first and second restructuring. Efficiency is also **modest**. The outcomes under the first and second restructuring were Moderately Unsatisfactory, leading to the overall project outcome of **moderately unsatisfactory.**

a. Outcome Rating

Moderately Unsatisfactory

7. Risk to Development Outcome

At the time of closing, the project had **substantial** risks to its modest outcomes. These risks are:

Institutional: There are substantial risks to maintaining the SWAs' accountability, which need to further improve by granting them greater operational autonomy in the provision of services while remaining accountable to their respective state governments. The longer-term sustainability of the modest institutional outcome achieved in the project remains uncertain at the level of the state governments.

Regulatory: The regulatory units for Bauchi and Ekiti (established under the project) and Rivers (established before the project) still remain subordinate to the state governments. These units are responsible for preparing regulatory policy; they have also gained experience and were given the requisite authority to regulate. However, their operational functioning remains to be demonstrated effectively.

Financial viability: Serious risks arise from the fact that the project's financial viability objectives were not achieved. Billing efficiency has improved but collection performance remains deficient. Thus, revenues generated by the utilities are insufficient to meet their O&M costs. Further, improvements in financial viability are dependent on better institutional performance, because the institutions have to ensure that costs are apportioned to their service areas, i.e., the capital cities which were served under the project need to be separated from the other LGA which were already being served. Any cross-subsidies also need to be separated out, either from one service area to another, or vis-à-vis the state governments. Those subsidies still need to be made predictable, transparent, and efficient. Finally, although the SWAs provided domestic water meters for new connections, most of the existing connections remain unmetered. Since not all connections are metered, risks arise for revenue recovery and fair cost sharing.

Sector financing: The WASH fund's framework materialized only at the project's completion; thus, with consultations with the states still pending, the fund's ownership by the federal and state governments remains in doubt and at risk. Moreover, development partners concur with the agenda for supporting a reform strategy but have not made any formal commitment.

8. Assessment of Bank Performance

a. Quality-at-Entry

The project had many positive aspects at entry. The project's PDOs were relevant to the priorities and strategies of Nigeria and the Bank. The project was economically justified, with an estimated EIRR of 26 percent. Financially, it was also good design to (i) make the states accountable for contributing 10 percent of the counterpart funds (which did not materialize in the end), and (ii) designate O&M recovery as a PDO indicator (which was later downscaled to monitoring billing efficiency). The project also explicitly intended to monitor gender-related benefits. The project also intended to support the states in designing pro-poor tariffs, which included capacity building measures to track impacts on poor and vulnerable populations (although such tracking eventually did not occur). Finally, establishing PIUs at the federal and state levels was appropriate (although in the end the PIUs struggled to maintain their staff).

There were also many major shortcomings. Regarding technical design, the decision to improve only part of the water systems was inadequate in terms of achieving service sustainability, although understandably this was in view of constraints in the financial capacity of the states. Rivers, in particular, focused on improving just a portion of the distribution network, which depending on the parallel financing of the African Development Bank to improve production and transmission facilities, which proved highly risky at entry. Moreover, another high risk was that the Selected States were not ready to make investments at the time of project approval. Project preparation focused on procurement planning instead of preparing detailed designs and bids ready for awarding, which would have jump-started implementation quickly. These risks materialized and caused significant implementation delays that negatively affected the progress of reforms.

The lack of readiness for reforms seemed to be the most serious shortcoming. There was a lack of a deep understanding of the local political economy, which mismatched the ambitious decision to form autonomous utilities. The federal-state and state-SWA relations were not clearly understood, hence some of the targeted outcomes were not really feasible. If that deep understanding had existed, it would have been possible to identify the minimum level of selective reforms required, and tie those with conditionalities. According to the ICR (page 33): “The project design had two serious shortcomings that affected implementation outcomes: (i) not properly assessing the weak enabling conditions for reforms; and (ii) overestimation of readiness of participating water utilities for reforms.” The Bank underestimated the level of efforts required to supervise the Participating States as they prepared their reforms and delineated their investment road maps.

The quality at entry was moderately unsatisfactory.

Quality-at-Entry Rating

Moderately Unsatisfactory

b. Quality of supervision

According to the ICR (page 34), the Bank teams were proactive in identifying issues and finding resolutions. Reporting was candid and timely. The Bank ensured compliance with fiduciary and safeguards policies (albeit baseline information was lacking). Two missions were conducted each year and included relevant team members with different skills. However, the Borrower did comment that the four changes in task team leaders from preparation to completion have presented challenges as the leadership style and approaches changed. The supervision missions initially focused on supporting the implementation of investments and achieving progress on reforms in the Selected States. This later shifted to a much greater Bank team focus on getting the investments implemented, which led to a reduced attention on reforms. Although Bank management provided relevant and timely advice to the team, the Bank was less effective and decisive in managing political economy issues and addressing the lack of progress at Rivers. Finally, the replacement of the strong PDO indicator of “O&M cost recovery” with the weak indicator of “billing efficiency” was not accompanied by an adequate reduction in scope, course correction, and a pragmatic revision of the PDO at the MTR in December 2017. Thus, the Bank ended up with only a partial and inadequate view of financial viability.

The quality of supervision was moderately satisfactory.

Overall Bank performance is rated Moderately Unsatisfactory. As the ICR itself indicates (page 34): “The project design was weak in its lack of investment readiness, lack of clarity on the reform road map to be pursued in each state, uneven balance of incentives and penalties, improper baseline information on some indicators, and less than adequate risk mitigation measures on some of the risks.” Supervision also shifted heavily toward implementing investments (because they were significantly delayed), thus weakening if not losing any leverage in advancing the reform agenda.

Quality of Supervision Rating
Moderately Satisfactory

Overall Bank Performance Rating
Moderately Unsatisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

There were major shortcomings in M&E design. The Results Framework did not have accurate indicators to measure the progress and effectiveness of critically important reforms, such as utility autonomy, operational efficiency, service accountability, and financial viability, which was the main outcome that the Bank sought under this project. Instead, albeit with the understandable aim of simplifying M&E to adapt to lack of capacity and local conditions, the project used the measurement of physical performance results as a proxy for measuring the effectiveness of reforms, which was an inadequate approach. Moreover, the definitions of some indicators were unclear, thus resulting in inconsistent reporting. For example, the targets for PDO indicators 1 “People in urban areas provided with access to improved water sources under the project” and 2 “Direct project beneficiaries” were same, hence it was not possible to separately monitor the benefits to existing versus new customers. According to the ICR (page 30): “The M&E design should have defined clear targets and methodologies on how to establish the beneficiaries to be tracked during implementation and at closing.”

b. M&E Implementation

In each of the Selected States, a dedicated M&E officer (within the SPIU) was responsible for monitoring project progress and its alignment with the Results Framework (RF). The M&E officers, which were given annual training courses, collected the data, which was later transferred to FPIU for compilation. In Participating States, the FPIU M&E officers conducted monitoring and progress reporting, including on the RF. The reporting on the target indicators and RF were updated quarterly and shared with the Bank task team. During missions, the Bank task team reviewed the updates from the SPIU M&E system for the purpose of cleaning up and adjusting the information to take into account clarifications from the PIUs. For example, given incorrect baseline assessments, the reported achievements were higher than the targets on some indicators (e.g., total beneficiaries, rehabilitated house connections). Another example is that PDO indicators 1 and 2 produced the same results because the lack of a distinction between the two was not corrected during implementation. During the early stages of project design and implementation, additional work could have been done to establish baselines and targets properly. This was recommended by the Country Management Unit (CMU) but was not carried out. Also, the assessment of benefits was not timely; it was only the last ISR that updated the number of final beneficiaries and rehabilitated house connections. Finally, the replacement of the “percentage of O&M cost recovered” indicator with a "billing efficiency" indicator meant that the tracking of the project's financial viability was only partial.

c. M&E Utilization

The issues related to indicator baselines and definitions were not corrected. Nonetheless, the Bank verified and used the information to prepare the ISRs and inform Bank management about issues and agreed actions. Although the available information gave some clarity on project progress and outstanding issues, the ICR preparation process required additional efforts to verify the final results achieved.

M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

The project was assigned a Category B since the potential environmental and social impacts were deemed to be minor, site-specific, and manageable. The project triggered four safeguard policies: Environmental Assessment (OP/BP 4.01), Involuntary Resettlement (OP/BP 4.12), Safety of Dams (OP/BP 4.37), and Projects on International Waterways (OP/BP 7.50). The ICR (page 31) indicated that the Bank provided implementation support to ensure compliance with safeguards.

Environmental Assessment. For Bauchi and Ekiti, the project sites were not yet identified at project start up and the investments were not yet ready, hence an environmental and social management framework and resettlement policy framework were prepared to delineate how environmental and social issues would be addressed. For Rivers, investment locations were already known at project start up. Thus, an Environmental and Social Impact Assessment (ESIA) and a resettlement action plan were prepared. All the safeguards-related documents were disclosed in Nigeria and in the Bank's Infoshop.

Dam Safety. At entry, consultants identified actions to maintain and enhance dam safety over the short, medium and long term. These actions included protection of the embankment was protected, and preparation of the slope and roads to allow for easy maintenance. The implementation of these measures was made a legal covenant, which was complied with, albeit with delay.

International Waterways. An exception to apply OP 7.50 was obtained based on the following reasons. First, the projects financed only rehabilitation works of an existing scheme. Second, the dams already existed. And third, the Ureje and Ero rivers ran only in Nigeria, and was therefore in line with paragraph 7(c) of OP 7.50, given Nigeria's status as the lowest downstream riparian of the Niger River. In Rivers, where the water came from an aquifer linked to the Niger River, the project supported the rehabilitation of a water treatment plant. Only marginal additional water withdrawals were expected, hence an exception was obtained under paragraph 7 (a) of OP 7.50.

Issues Addressed. The ICR (page 31) indicated that "the project had a **Moderate** risk rating for implementing and enforcing environmental and social safeguards." To mitigate this risk, dedicated environmental and social staff were to be hired, trained, and provided support from FMWR, which had experience with Bank projects. The ICR further states that there were no major compliance issues, except for the drowning in 2016 of four contractor staff at the Egbe Dam in Ekiti due to the human negligence of not following operational health and safety guidelines. Contractors were subsequently cautioned to follow the guidelines. While there were no major, non-compliance cases, other issues materialized. The due diligence in implementing environmental safeguards showed limited progress. The FMWR disclosed the ESIA for the Gubi Dam at Bauchi at the Ministry of Environment without Bank clearance; the ESIA was later revised to include the Bank's suggestions and was redisclosed before works commenced. Also, Ekiti did not have social safeguards staff for a long time. Capacity gaps resulted from the retrenchment of entire SPIU staff during implementation. Finally, the project affected persons (PAPs) showed low response to claim compensation in Bauchi and Ekiti. According to the ICR (page 31), "Resolution on the implementing agency and contractor side include training of SPIU staff, filling vacant positions, contractors' staff signing gender-based violence code of conduct, preparation of contractors' environmental and social management plan, Bauchi and Ekiti getting all contractors to sign code of conduct, completing an environmental and social audit, more intense efforts to reach out to PAPs, and opening escrow account by Ekiti to pay to PAPs after project completion".

Involuntary Resettlement. As mentioned above, Given the fact that all the actual sites for subprojects could not be identified before appraisal, the borrower prepared a Resettlement Policy Framework (RPF) in accordance with the Bank Safeguard policy on Involuntary Resettlement (OP/BP 4.12). The RPF outlined the resettlement process in terms of procedures for preparing and approving Resettlement Action Plans (RAPs); likely categories of affected people, eligibility criteria and categories, compensations rates, methods of valuing affected assets, community participation and information dissemination, Grievance Redress Mechanism and effective monitoring and evaluation.

b. Fiduciary Compliance

Financial Management. The responsibility for financial management (FM) was vested on federal finance units for Components 2 and 3 and state PIUs for Component 1. At entry, FM risks were assessed as Moderate. Risk mitigation measures included the computerization of the FM system (a legal covenant), an independent and effective internal audit (also a legal covenant), and the establishment of a skilled FM staff. Albeit with some delay, the states complied with the covenants, with the exception of Rivers, which maintained a manual FM system. The FPIU also complied with the submission of consolidated annual work plans and budgets. The 10 percent contributed by the states as counterpart co-financing was transferred directly to FPIU or deducted at source via federal budgetary transfers. The flow of funds between the federal and state governments was generally smooth. Despite initial delays, external and internal audits were conducted regularly, with quality acceptable to the Bank. Payments to contractors were also smooth and timely.

The project did encounter minor FM issues. Although the quality of the interim financial reports was acceptable to the Bank, their preparation and submission was delayed most of the time. The restrictions on use of funds (imposed by the Rivers governor) affected project implementation. There were also unretired advances, inadequate documentation for incurred expenditures, and some expenditures that were without the Bank's prior no-objection from the World Bank. These were addressed by the PIUs with Bank support.

Procurement. FMWR carried out procurement for Components 2 and 3 through its FPIU, while the SPIUs procured for Component 1. FMWR was already familiar with Bank procurement procedures, but Bauchi and Ekiti were not. Low capacity coupled with lack of investment readiness led to procurement delays. Ten contracts in Bauchi and six in Ekiti began only in late-2018, or four and a half years after project approval. Overall, the states had no major procedural compliance issues; however, despite prior completion of Bank clearances, their lengthy internal approval processes led to delays. For Rivers, the designs were ready but procurement could not start until a Project Management Committee was mobilized and the works contract was prepared as a single package of US$61 million. This entailed procurement issues when Rivers wanted to award a nonqualified bidder despite 10 months of correspondence. Ultimately, the Bank did not clear the package and canceled the allocated funds.

The Bank itself has some delays according to the SPIUs but those were addressed through improved coordination. Overall, contractors recognized the support received from the Bank team and the SPIUs, especially during the COVID-19 period. Nonetheless, post-procurement reviews revealed minor to moderate shortcomings, which were addressed towards the end of project implementation, such as incomplete file documentation in the Bank's STEP system, nonpublication of contract awards, improper record keeping, and payment in currencies other than mentioned in the bid documents and proposals (ICR, page 31).

c. Unintended impacts (Positive or Negative)

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d. Other

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11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Unsatisfactory	Moderately Unsatisfactory	
Bank Performance	Moderately Unsatisfactory	Moderately Unsatisfactory	
Quality of M&E	Modest	Modest	
Quality of ICR	---	Substantial	

12. Lessons

The ICR (pages 35-36) identified several lessons, of which the main ones are presented below with paraphrasing from IEG:

Implementation readiness needs to be ensured to achieve early service improvements and thereby create a better enabling environment for achieving reforms. In this project, investments were not ready for implementation, thus resulting in an imbalance among the key partners between focusing on either investments or reforms. Had the benefits from improved services been delivered much earlier, there would have been a more conducive framework for productive dialogue with the incumbent and new governments on the necessary policy, institutional, and regulatory reforms. The state governments may have been more willing and able to take the necessary actions, had the communities already been benefitting from service delivery.

Sector reforms must be supported by efforts to sensitize stakeholders and a better understanding of the local political economy and governance context. Although the importance of political economy and governance issues were considered, and mitigation measure were proposed, the Bank's intensive involvement and effectiveness were lacking. Special efforts, including from Bank management, would have contributed to deepening the project team's understanding of the evolving political and governance dynamics at the sector and country levels. There was initially strong leadership during preparation and implementation, hence some reform momentum may have been achieved. However, the continued heavy reliance on such leadership proved risky, given the major changes after elections or administrative reshuffling. Finally, there was clearly a need for wider and deeper consultations to sensitize stakeholders on reforms.

A long-term programmatic engagement (beyond a single project) and the right lending instrument are required to achieve major institutional changes and deeper reforms. The project promised significant reforms such as utility autonomy, efficiency, and governance and regulatory improvements. Achieving reforms requires the prior delivery of services, which would build credibility, and follow an iterative process (particularly for regulatory reforms - these outcomes require long-term programmatic engagement with the federal and state governments, sustained partnerships with stakeholders (civil society, development partners, government officials), strategic communication, and agility to build on evolving opportunities. Traditional investment project finance may not be the right instrument for such a long-term engagement. A programmatic approach through a development policy lending or Program-for-Results financing would have been a better choice, which allows states to graduate based on performance and creates an incentive through a longer time frame.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR focused strongly on providing detailed, quantitative evidence to support the performance assessments vis-a-vis the PDO and the ensuing ratings. The ICR was candid and well prepared. While recognizing its strong emphasis on accountability, the ICR was repetitious in some parts and too long at 36 pages, or more than double the 15 pages suggested in the ICR preparation guidelines. A credible effort was done to prepare a theory of change, which was provided in the PAD. Overall, the lines of evaluative argumentation were logical and based on the theory of change. The tables and graphs provided throughout the main text were highly useful, especially since they were calibrated to present the two major restructurings of the project when outcomes and targets were changed (without changing the PDO). The lessons were well selected and formulated.

This ICR would have been rated High, if not for the excessive length and the occasional "loss of evaluative messaging" due to the repetitiveness of material and abundance of incidental detail that make some parts slow and/or hard to read. There were also minor inconsistencies, e.g., the presentation of the project costs in the annexes versus the Data Sheets in front of the report.

a. Quality of ICR Rating

Substantial