Nigeria

Sustainable Urban and Rural Water Supply, Sanitation and Hygiene Program

(P170734)

Program for Results (PforR)

Technical Assessment (Draft)

May 4, 2021

Contents

List of Tables

List of Figures

List of Boxes

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
AFD	French Development Agency (Agence Française de Développement)
COVID-19	Disease caused by infection with coronavirus SARS-CoV-2
CPF	Country Partnership Framework
CWIS	Citywide Inclusive Sanitation
DLI	Disbursement-linked Indicator
ERGP	Economic Recovery and Growth Plan
E&S	Environmental and Social
FCDO	Foreign, Commonwealth & Development Office
FCT	Federal Capital Territory
FGN	Federal Government of Nigeria
FMEdu	Federal Ministry of Education
FMH	Federal Ministry of Health
FMWR	Federal Ministry of Water Resources
FPIU	Federal Program Implementation Unit
FSC	Federal Steering Committee
IRR	Internal Rate of Return
IVA	Independent Verification Agent
FTCF	Fast Track COVID-19 Facility
GBV	Gender-Based Violence
GDP	Gross Domestic Product
HCI	Human Capital Index
HCF	Health Care Facility
IBNET	International Benchmarking Networks for Water and Sanitation Utilities
IDA	International Development Association
IEC	Information, Education, and Communication

IPF	Investment Project Financing
JICA	Japan International Cooperation Agency
LAM	Local Area Mechanic
LGA	Local Government Area
M&E	Monitoring and Evaluation
MDA	Ministries, Departments and Agencies
MHM	Menstrual Hygiene Management
NAP	National Action Plan for the Revitalization of Nigeria's Water, Sanitation, and Hygiene Sector
NGF	Nigeria Governors Forum
NGO	Non-Governmental Organization
NRW	Non-Revenue Water
NWRI	National Water Resources Institute
O&M	Operations and Maintenance
ODF	Open Defecation Free
PAP	Program Action Plan
PDO	Program Development Objective
PEWASH	Partnership for Expanded Water Supply, Sanitation, and Hygiene
PFMU	Public Financial Management Unit
PforR	Program for Results
PIAP	Performance Improvement Action Plan
PIR	Policy, Institutional and Regulatory
PIU	Program Implementation Unit
POM	Program Operations Manual
PSP	Private Sector Participation
RA	Results Area
RUWASSA	Rural Water Supply and Sanitation Agency
SBCC	Social and Behavior Change Communication

SDG	Sustainable Development Goal
SMWR	State Ministry of Water Resources
SPIU	State Program Implementation Unit
SSC	State Steering Committee
STWSSA	Small Town Water Supply and Sanitation Agency
SURWASH	Sustainable Urban and Rural Water Supply, Sanitation, and Hygiene Program
SWA	State Water Authority
TA	Technical Assistance
TBO	Toilet Business Owner
UNICEF	United Nations Children's Fund
WASH	Water Supply, Sanitation, and Hygiene
WASH NORM	National Outcome Routine Mapping of WASH Services
WASHCOM	Water Supply, Sanitation, and Hygiene Committee
WASHIMS	Water Supply, Sanitation, and Hygiene Information Management System
WBG	Word Bank Group
WCA	Water Consumer Association
WSS	Water Supply and Sanitation

EXECUTIVE SUMMARY

Strategic Relevance

1. The WASH sector in Nigeria is in a state of emergency. Access to sanitation and hygiene is lagging with 80 million Nigerians without access to improved sanitation and 167 million without access to basic handwashing. 46 million Nigerians practice open defecation –Nigeria is set to become the country with the most open defecators in the world. Access to drinking water is limited with 60 million Nigerians without access to basic drinking water. Furthermore, non-functional infrastructure constitutes a major challenge: 38 percent of improved water points and 46 percent of water schemes are non-functional. 30 percent of water points fail in one year. Piped water access declined from 32 percent in 1990 to 7 percent in 2019. Urban water utilities perform below the average level of performance of utilities in Africa. Access to WASH in institutions is limited. Only 14 percent of schools and 7 percent of healthcare facilities have access to basic water supply and sanitation services. Only 3 percent of schools have provisions for menstrual hygiene management (MHM). The country and sector are facing multi-faceted challenges exacerbated by a growing population, persisted poverty, accelerated urbanization, security challenges, non-sustainable agriculture as well as climate change and depletion of natural resources. Sector investments are insufficient and 'business as usual' will not help achieve the objective of providing safely managed WASH to all Nigerians by 2030.

2. Access to water supply, sanitation and hygiene (WASH) is an important determinant of human capital outcomes, including early childhood survival, health and educational attainment – all of which in turn affect labor productivity and efficiency. Approximately 73 percent of the total burden of enteric infections in Nigeria is associated with inadequate WASH. About 253,800 WASH attributable deaths occurred in Nigeria in 2016, with 119,900 of those deaths occurring from diarrheal diseases. There is robust evidence that access to safe water supply and improved sanitation decreases the incidence of diarrhea in young children. Also, a large part of the chronic malnutrition burden is owing to the unhygienic environment in which children grow up, often a result of high levels of open defecation across densely populated areas. Access to WASH can impact years of schooling by freeing up time that children spend collecting water to attend school, reducing the prevalence of disease that can keep them out of school, and contributing to a safe and healthy learning environment while at school.

3. Lack of access to WASH disproportionately affects women and girls. They often bear the burden of fetching water over long distances, which has been associated with negative effects on well-being, social and economic opportunities and school attendance, as well as a higher risk of gender-based violence (GBV). The limited access to WASH and the poor quality of sanitation facilities also compromises the convenience, safety, health, and dignity of women and girls. Among households where at least one member reported not using the toilet, adult women were three times (18 percent) less likely to use the household's latrine than were adult men (5.6 percent). It is estimated that only 25 percent of women in Nigeria lack adequate privacy for defecation or MHM. These estimates vary across states. For instance, while 85 percent of women in Lagos reported having what they need to manage their menstruation, this figure was only 37 percent in Kaduna State.

4. Limited or no access to WASH services has damaging effects on development outcomes. It adversely affects individuals' health, limits their access to educational and economic opportunities, and hampers their work efficiency and labor productivity. The COVID-19 pandemic has highlighted the

importance of WASH to prevent the spread of the disease and to keep essential services operational and available to all. The economic effects of the COVID-19 pandemic hit Nigeria in an unprecedented proportion. The lockdown measures that followed government decision and programs to curtail the spread of the novel virus came with huge consequences for communities with pre-existing water and sanitation challenges. The domino effect was felt mostly in the private sector particularly the small businesses in the informal sector. The setbacks occasioned by the economic crunches due to COVID-19 exacerbated disruptions in the supply chain especially for small enterprises which were still struggling to recover from the 2016 recession.

Technical Soundness

The Program's Results Areas under the USD$640 M performance-based financing component are: RA 1. Strengthened Sector Policies and Institutions for Improved Services and RA 2. Improved access to water supply, sanitation and hygiene services. The technical design is found to be sound. Gap filling measures will be used to mitigate the identified weaknesses.

Results Area 1: Strengthened Sector Policies and Institutions for Improved Services

The Technical design for Results Area 1 is informed by a preliminary Policy, Institutional and Regulatory (PIR) analysis to identify the most binding institutional constraints. Informed by the Water GP's PIR Framework of analysis, main findings based on assessment of Nigeria's WASH sector policy and institutional framework are summarized below:

Nigeria's intergovernmental systems and implications on WASH sector: preliminary analysis of the federal / intergovernmental systems in Nigeria identified the following challenges: (a) lack of clear functional assignments; (b) weak subnational political accountability mechanisms (which may lead to weak political buy-in and ownership at the state and local level); (c) weak state and local administrative capacity; (d) the absence of appropriate intergovernmental funding mechanisms; and (e) the absence of mechanisms for meaningful participation and accountability mechanisms to ensure effective front-line service delivery performance.

Financial Sustainability: Challenges in financial management across Nigeria's intergovernmental system combined with low revenues have undermined financial sustainability of the WASH sector. Delays in transfers from the Federation Account Allocation Committee to state governments, their major source of revenue, could lead to delays in budget appropriations and project implementation. Low investment levels coupled with poor cost recovery and low collection rates are insufficient for Operations and Maintenance (O&M) of existing infrastructure, let alone expansion.

WASH Regulatory Framework: state government WASH sector policy features the establishment of independent regulatory commissions as a key priority. Several states supported by the Program have enacted water laws which stipulate establishment of independent regulatory commissions and outline responsibilities broadly covering performance management, tariff approval, pro-poor, and service quality functions. In practice, operationalization of regulatory policy and law has varied across states due to lack of data availability and monitoring and evaluation (M&E) systems, institutional overlaps in carrying out regulatory functions, and low technical capabilities. State-level regulatory frameworks should address existing gaps including: (1) pro-poor regulation, (2) regulation of private sector providers;

(3) regulation across the sanitation value chain; and (4) create an enabling environment for Private Sector Participation (PSP) as a matter of priority of national and state WASH policy.

Institutional roles and responsibilities: lack of clarity and overlapping institutional roles and responsibilities impede progress in the sector, particularly concerning the sanitation sub-sector. Multiplicity of institutions and agencies in the WASH sector leads to duplication and overlap of roles and responsibilities, which results in inefficiencies and sometimes ineffectiveness of the institutions. Political interference coupled with unsustainable governance structures and practices lead to delays in budgetary allocations, growth and development of an operation and maintenance culture, including implementation of capital projects for construction of new works, rehabilitation, expansion and upgrade of existing ones. This leads to non-performance or under-performance of the agencies and water utilities, neglect and consequently depreciation and deterioration of sector assets, and poor service delivery.

Monitoring and Evaluation (M&E): the National Action Plan for the Revitalization of Nigeria's Water, Sanitation, and Hygiene Sector (NAP) includes implementation of an M&E system to monitor and incentivize performance through reward mechanisms and increased competition. State government policy is well aligned with the NAP in acknowledging the importance of establishing M&E frameworks, however, capacity building support in operationalizing M&E systems is essential in putting these plans in to action.

Implications of the preliminary results of the PIR analysis suggest the following:

Intergovernmental financing mechanisms can be an effective mechanism to promote sustainable financing and accelerate program implementation in addition to promoting intergovernmental coordination. Accordingly, this RA incentivizes establishment of a National WASH Fund as a mechanism to promote effective and efficient intergovernmental coordination and provide funding to states in a predictable and equitable manner. The Program will finance the establishment of the WASH fund but not its capitalization. The National WASH Fund should be made to include broad representation from the federating States at Board and possibly management levels to ensure fairness and equitable disbursement and allocation of funds for interventions, assistance programs and projects.

Establishment and operationalization of state-level WASH regulatory frameworks is key to promote achievement of the program's objectives and achieve sustainable outcomes. This is aligned with state-level sector policy and legal frameworks which promote and prioritize the need for establishment of effective regulatory frameworks. Strengthening of state-level WASH regulatory frameworks is incentivized through DLI2 of this RA via a performance scorecard mechanism.

Addressing intergovernmental challenges implies the need for strengthening the role of federal government in policymaking, regulation, monitoring and facilitating state and local progress in the sector. Technical assistance should be targeted at state-level institutions to pursue and achieve improved WASH outcomes. Moreover, institutional coordination mechanisms between federal, state and local governments should be in place to achieve program objectives. Accordingly, this Program supports establishment of an M&E system and provides comprehensive TA support to state-level institutions to deliver positive sector outcomes.

This RA incentivizes institutional reform to create an enabling environment for sustainable performance and includes activities to enhance institutional capacity required for effective and sustainable service delivery, including state and local governments, service providers, technical assistance providers, and community-based organizations. Its DLIs and sub-DLIs are designed to incentivize relevant institutions to progressively undertake a series of interconnected and self-reinforcing reforms and measures that will ultimately result in sustained, strengthened capacity for service delivery.

Supported activities improve capacities to monitor, ensure quality, and improve and sustain water service delivery, and to strengthen environmental management supervision and mitigation of impacts. These activities include:

Building the capacity of urban water utilities to deliver safely managed and sustainable water supply services. Utilities will be incentivized to undertake a series of policy, institutional, and operational reforms and measures deemed necessary to improve their autonomy, accountability, and sustainability. With these actions, participating utilities will develop a sustained revenue stream that helps insulate service providers from political considerations, providing them with a higher degree of autonomy in management, and allows them to accurately budget for necessary operations, maintenance, rehabilitation, and expansion activities.

Enacting policy reforms to improve service provision in rural communities and small towns and establishing and/or building the capacity of Rural Water Supply and Sanitation Agencies (RUWASSAs), Small Town Water Supply and Sanitation Agencies (STWSSAs), and local government areas (LGA) WASH units/departments to support the maintenance and repair of WASH facilities and in related behavior change, including in training community-level WASH committees (WASHCOMs), water consumer associations (WCAs), and other community-level water providers, ensuring that both men and women are trained and given equal career opportunities;

Building the capacity of RUWASSAs, STWSSAs, and LGA WASH units/departments to facilitate the development of water safety plans (WSPs) by communities and/or service providers to ensure consistent safe and acceptable drinking water;

Building the capacity of WASHCOMs, WCAs, and other community water providers to plan, operate and manage their WASH facilities and undertake household-level WASH activities, including their legalization while assuring the participation of women;

Enacting necessary policy reforms and building the capacity of state and local ministries, departments and agencies (MDAs) responsible for sanitation service delivery in urban and rural areas in the planning, construction supervision and operation and maintenance of sanitation and hygiene systems/facilities, taking into consideration the principles of city/LGA-wide inclusive sanitation;

Support the development of peer learning mechanisms amongst states, LGAs, and communities, such as regular forums and discussion platforms, that foster the scaling of piloted approaches proven to improve sector performance and sustainability.

Training local area mechanics (LAMs), toilet business owners (TBOs), masons, and artisans in the construction, maintenance, and repair of WASH facilities;

Providing training and capacity building activities for all types of sanitation workers with a focus on health, safety and dignity and ensuring that both men and women are given equal career opportunities;

Supporting the development of a comprehensive supply chain to facilitate the availability of required parts and materials for maintenance and repair;

Preparing memorandums of understanding (MoUs) and performance-based contracts with different stakeholders for improved service delivery;

The piloting and establishment of innovative WASH facility management and business modalities as developed through the technical support provided under the Investment Project Financing (IPF) funding window; and

Leveraging women- and youth-led micro enterprises to address supply chain and O&M challenges.

The Technical design for Results Area 1 incorporates valuable lessons learnt from Nigeria as well as international experience to inform the design of effective policy, institutional and regulatory incentives:

Institutional and governance reform are key to sustainable service delivery. Major interventions in the sector have largely focused on addressing technical issues and physical infrastructure aspects. Despite this, progress has stifled due to institutional and governance bottlenecks. Given the primary responsibility of states in service delivery and of the federal government in policy making, financing, and capacity building, adequate incentives need to be institutionalized within the sector's intergovernmental structure. Lessons learnt and experiences from other Federal countries demonstrate that: (1) intergovernmental coordination mechanisms are essential; (2) monitoring and evaluation systems create performance incentives as results become more visible and strengthen accountability to citizenry; (3) relatedly, regulatory functions become fundamental at the national level; and (4) the national government's role in providing TA support, particularly to subnational institutions, combined with strong political will can yield substantial results. Creation of financial instruments with transparent rules and incentives for performance can be an effective approach to collectively achieving results across different levels of government and institutions.

High-level buy-in at the state level is essential to success. The critical role of the state governors as the main beneficiary and driver of reform had not been adequately considered in previous projects, resulting in delays in effectiveness, political interference, and slow implementation progress. Early consultation with governors is key to avoid misunderstanding, build trust, and garner their support. Part of the success factors to consider is to improve communication flow to the states and their involvement and participation in major decisions where their buy-in is essential. It should be a participatory approach, rather than a top-down approach.

Just-in-time support to federal and state sector agencies is critical. Lessons learnt from other Programs for Results (PforRs) emphasize the importance of TA. Successful outcomes can be realized in low-capacity governance systems with well-defined and targeted support to subnational government and service providers. TA support should be well-aligned with Program implementation. This can include in-country sector coordination platforms that enable knowledge sharing, evidence-based decision making, and consensus building among Government, donors and other stakeholders. In addition, the TA can

explore effective service delivery models, as well as regulatory structures and modalities at the state level.

The PforR can motivate increased PSP in the WASH Sector. Promotion of an adequate enabling environment, clear, time-bound targets and investment plans, and a focus on financial and operational sustainability can motivate PSP in the sector.

Results Area 2: Improved Access to Water Supply, Sanitation and Hygiene Services

The technical design of Results Area 2 aims to support an integrated package of investments to expand access to and the use of WASH services in urban and rural areas and small towns. The Program promotes an LGA-wide approach to WASH service delivery, whereby participating LGAs will be supported to address critical gaps simultaneously in water supply, sanitation, and hygiene, and within communities, public institutions and public places.

Urban Water Supply. The Program will support rehabilitation activities and small scale works that improve the optimization of existing infrastructure given the underutilization of existing water systems nationwide. Specific activities may include: (a) the expansion of access to improved water supply through installation of metered household connections, public standposts and water kiosks; (b) the rehabilitation of water supply infrastructure to boost production, including the rehabilitation of production facilities and pump and treatment plant components replacement; (c) the improvement of power supply to production facilities, prioritizing the use of renewable energies and improvements in energy efficiency; (d) the rehabilitation of transmission and distribution networks, including leak detection and repairs; (e) the installation of bulk, zonal, commercial, and domestic meters; (f) the rehabilitation and furnishing of customer service centers, central stores, and electrical and mechanical workshops; (g) the expansion of water quality testing capacity through the renovation and construction of laboratories; (h) the development of water master plans; and (i) the development of feasibility studies for selected urban centers. (j) the establishment of management information systems supported with well-equipped data centers for monitoring, control and management of installed water facilities, water meters, preparation, collation and monitoring revenue collection system, in addition to storing and retrieval of information, data, documents, reports, as-built drawings etc. The activities will vary based upon identified state needs.

Rural and Small Towns Water Supply. The Program will support the development of new infrastructure and the rehabilitation of existing water points and schemes. Different options promoted by Federal projects are presented in Table A.1. The use of solar energy will be prioritized under the Program in adherence with the standards elaborated in the Program Operations Manual (POM). RA 2 will also support the continued functionality of supported water points and schemes by promoting effective infrastructure operations, management, and maintenance by service providers and ongoing technical and financial support by relevant government agencies.

Given the high rate of failure of water points and water schemes, the Program will prioritize the rehabilitation of dilapidated water infrastructure over new construction, when technically feasible. Water supply services supported under the program will include: (1) rainwater harvesting systems; (2) protected springs; (3) boreholes equipped with a handpump; (3) simple motorized systems (borehole equipped with a motorized pump, water tank, and public tap); and (4) complex motorized water

systems (borehole equipped with a solar-powered motorized pump, water tank, and distribution network to public standpipes and/or household connections). Whenever technologically feasible, motorized systems will make use of solar power to mitigate climate change through the reduction of greenhouse gas emissions. Water supply technological options will be determined based upon contextual characteristics as elaborated within the POM, including the total population to be served.

Sanitation and Hygiene. This RA supports the implementation of the Clean Nigeria: Use the Toilet Campaign in urban and rural areas and small towns by means of: (a) household-level sanitation and hygiene activities consisting of a gender-sensitive community-driven total sanitation approach tailored to the Nigerian context, market-based sanitation, hygiene promotion, safe water handling, storage and treatment, and child-focused social and behavior change communication (SBCC) aiming at improving hygiene practices and promoting the construction and use of latrines; (b) provision of incentives to help the poorest households in urban and rural areas, with special provisions for households with persons with limited mobility, to access improved sanitation; and (c) Information, Education and Communication (IEC) activities which take into consideration the entire sanitation service chain to promote the development of local actors such as artisans and small businesses to participate in the delivery of sanitation products and services.

The Program will finance the construction of fecal sludge treatment plants to support the safe management of excreta in urban areas when appropriate and based on the recommendations of environmental and social risk and capacity assessments. Adequate environmental and social screening mechanisms will be put in place to assess such interventions on a case by case basis.

WASH in Institutions and Public Spaces. The RA will support the construction and rehabilitation of sanitation facilities and handwashing stations in institutions (schools and healthcare facilities [HCF] in accordance with relevant Federal Ministry of Education [FMEdu] and Federal Ministry of Health [FMH] guidelines) and public spaces (markets, motor parks, etc.) in urban and rural areas and small towns with a focus on child and women safety and comfort, accessibility for people with limited mobility, and adequate provisions for MHM. Where necessary, the facilities will be constructed or rehabilitated based on a sector-approved menu of technology options, to be developed through technical support under the IPF window. The RA will promote the development and adoption of management models and arrangements to ensure that sanitation cabins are operational and adequately maintained.

Institutional Arrangements

The institutional arrangements in place at the federal and state level are sound to implement the Program. Capacity gaps vary from state to state and subsector to subsector. In general, state agencies have proven track record to plan, design, execute and monitor project related to the following subsectors: urban water supply, small towns water, rural water supply and rural sanitation. Overall, capacity to deliver on urban sanitation is limited. Reforms for urban sanitation service delivery are either ongoing or were recently completed in certain states. This could constitute a risk in the implementation of the urban sanitation activities as they have not shown proven track record to implement projects at scale. At the federal level, the lack of clarity regarding the lead institution responsible for sanitation could jeopardize progress towards preparing a holistic national policy on sanitation to consolidate the necessary institutional and regulatory reforms which take into consideration the principles of city/LGA-wide inclusive sanitation. Nonetheless, such conflicts were not noted at the state level. WASH sector

coordination at the state level seems to be well established through lead ministries or steering or technical committees. Nonetheless, coordination platforms would need to be strengthened under the Program.

Expenditure Framework

The PforR Program supporting the implementation of the NAP in the initial participating states is estimated at US$815 million over the same period. Within these seven states, state government allocations are estimated at US$175 million, complimenting the $640 million International Development Agency (IDA) credit towards the PforR Program (Table 1). The Program Expenditure Framework (PEF) presents the expenditures of the Federal Ministry of Water Resources and the 7 participating states, each of which covers expenditures by the implementing agencies involved in the implementation of the PforR in the two Result Areas of the Program: (a) Strengthened sector policies and institutions for improved services, and (b) Improved access to water supply, sanitation and hygiene services.

Table 1: Draft Program of Expenditures

Source	Amount (US$ Million)	Percent of Total
International Development Association (IDA) Credit	640	78.5
Government Contribution (from Participating States)	175	21.5
Total Program	815	100.0

The budgetary and accounting information provided by the participating states shows that systems are in place to track the expenditures (capital or recurrent) incurred under the Program using accounting policies consistent with national and state public sector policies and standards. Nevertheless, close implementation support will be provided by the Bank to support states to strengthen the arrangements and modalities to produce the Program Annual Financial Statements. The Program is aligned with the Government's programs objectives and resources allocations in the different state budgets. The Program will mostly be financed by the World Bank loan as shown in the summary program expenditure framework presented in Annex 5. Unit costs are relatively high and vary largely from state to state. A detailed study would need to be conducted to find cost efficiencies, both for capital investments and operating costs. Tariffs and billing and collection rates are low. A revision of the tariff structure is necessary to cover costs of production and take into account inflation. Analysis of historical budget release and execution data showed that low budget execution rates in many instances were a result of

low rates of budget releases. The DLIs have been designed to eliminate cashflow constraints for the implementing agencies to be able to implement the Program activities.

Results Framework and Monitoring and Evaluation

The Program M&E system will be based on the Program Results Framework to monitor activities, outputs, and intermediate outcomes. Monitoring of the indicators will be completed annually during Program implementation to course-correct, if necessary, to achieve the Program Development Objective (PDO). A mid-term review by the Bank will be undertaken before the third year of implementation to take necessary corrective measures in the M&E system. The federal and state-level PIUs will be responsible for the M&E function. The PIUs will be strengthened to undertake this function with the recruitment of dedicated M&E specialists and the organization of regular meetings to facilitate knowledge sharing, review progress, identify and address any weaknesses, and propose modalities for scaling up successes beyond the Program.

The indicators have been proposed to align with the theory of change to reach the different intermediate outcomes and objectives of the Program. The DLIs were designed to create clear incentives for Program implementation and achieve enhanced WASH service delivery.

The Program will leverage the efforts under implementation and the routine monitoring activities to establish a comprehensive sector-wide data collection and monitoring program which will involve all levels of government. The program will facilitate the long-term sustainability of the WASH sector and support decision-making in policy formulation, planning and resource allocation. It will be underpinned by a simple, updated, and comparable management information system (MIS) that not only tracks the physical condition of infrastructure, but also gathers data on access, service quality, and sustainability of service provision. This real-time MIS will be complemented by the Federal Ministry of Water Resources (FMWR) annual WASH sector survey WASH National Outcome Routine Mapping (NORM), which was first conducted in 2018 with support from the World Bank and UNICEF and measures relevant sector indicators at the national and state level.

In addition to these national monitoring efforts, a qualified independent verification agent (IVA) will be contracted throughout the Program period to provide independent verification and confirmation of the results reported by implementation agencies. The IPF will finance the engagement of an IVA throughout the Program period to undertake verification of the achievement of DLIs across the RAs in all participating states. The FMWR is preparing a detailed verification protocol and TOR to engage the IVA using the agreed procurement process and supervise and manage them in line with the POM. The results of the annual verification exercise as submitted by the IVA and validated by the FMWR will serve as a basis of annual disbursement after the World Bank task team has provided necessary concurrence. In addition, the IVA will provide a quarterly report on the progress of environmental and social (E&S) risk management activities to assess compliance with relevant policies and requirements.

Risk Assessment

The risk assessment is informed by the results of the technical, fiduciary, and environmental and social systems assessments. The overall risk rating of the operation is Substantial. Risks for Sector strategies and policies, Technical Design of the Program and Institutional capacity for implementation and sustainability are all rated Substantial.

Economic Evaluation

Rationale for Public Financing. The program is expected to complement the Government's efforts to achieve its WASH sustainable development goals (SDG) targets by providing critical financial resources for the sector, as the total investment needs to achieve the objectives of the NAP by 2030 over the six years of the Program for federal and state governments is estimated at US$30 billion, which is equivalent to annual sector investment of approximately US$5 billion, or 1.3 percent of gross domestic product (GDP). The WASH sector is in a state of emergency and inadequate WASH in Nigeria leads to 73 percent of the total burden of enteric infections and 255,000+ preventable deaths each year. Public financing is essential to scale up WASH services especially in rural areas where access is lagging. Access to sanitation and hygiene is also lagging and Nigeria is set to become the country with the most open defecators in the world. Financing in WASH is associated with health, time saving, and economic benefits especially for women and girls.

Given that water supply and sanitation service providers have not yet achieved cost recovery, the sector will remain the domain of public finance for the foreseeable future. To this end, the Program is expected to reduce government fiscal burden by strengthening the cost recovery and cost effectiveness through improved design and implementation capacity, increased life of facilities, and increased user contributions towards investment and operating costs stemming from higher user satisfaction. The Program is expected to improve the customer and revenue bases of service providers through improved operational efficiency, gradual tariff reform that promotes increasing cost-recovery, and mechanisms to support the poor and vulnerable and sustain economic benefits. Finally, the establishment of autonomous service providers operating on a commercial basis, capacity building, and the early involvement of beneficiaries in technology selection are major instruments to ensure the financial sustainability of the Program.

Program Economic Impact. A cost-benefit analysis is used to assess the economic viability of the water supply and sanitation interventions and their sensitivity to key variables. Benefits and costs are discounted at six percent over a period of 25 years (2021-2045). The potential economic benefits that have been quantified include: (1) increased household income due to time saved in fetching water; (2) increased income gained as a result of reduced absenteeism of the working age population and caretakers due to reductions in diarrheal illness; (3) reduced household health-related expenditure resulting from decreased prevalence of diarrheal disease; and (4) an annual average net emissions reduction of 104,719 tons of carbon dioxide equivalent (tCO2-eq). The Program is expected to contribute to the improved financial sustainability of utilities through increased operational efficiency, reduced non-revenue water (NRW), and increased average tariff levels. The economic analysis projected Program benefits and costs over a period of 25 years and discounted at a rate of six percent based on World Bank guidance. The analysis yielded a net present value (NPV) for the program of US$891.16 million and is positive for both water supply and sanitation. The internal rate of return (IRR) is estimated as 26.35 percent, demonstrating the Program's economic viability as it is greater than the discount rate.

Recommendations

The technical assessment identified the following recommendations which will be detailed in the POM:

The Program should prioritize rehabilitation of water systems and schemes over new construction given the high rate of failure and the non functionality of almost half of the existing water points and schemes in Nigeria; in urban areas, the Program should prioritize investments that ensure that existing infrastructure is used effectively as opposed to new construction;

Reforms and software activities should be prioritized to ensure that the results of the Program will be sustained, and modalities and financing of operation and maintenance will be taken into consideration;

SBCC and market-based sanitation should be implemented based on national and global lessons learned and the limitations of past interventions in Nigeria and with a focus on providing financial support to the poor and vulnerable to build their own toilets;

The Program should support the preparation of a detailed study to find cost efficiencies, both for capital investment and operating costs.

Actions have been proposed in the Program Action Plan to complement the abovementioned recommendations.

OBJECTIVE OF THE TECHNICAL ASSESSMENT

A Technical Assessment of the Program was carried out as part of preparation, consistent with Bank Policy and Bank Directive 'Program-for-Results Financing' and in accordance with the World Bank Guidance Notes for 'Program-for-Results Financing' in the proposed participating states, namely, Delta, Ekiti, Gombe, Imo, Kaduna, Katsina and Plateau. The objective of the Technical Assessment was to assess the adequacy of the Program arrangements and their performance in four main areas: (i) strategic relevance and technical soundness; (ii) expenditure framework; (iii) results framework and M&E capacity; and (iv) economic justification.

The Technical Assessment concluded that the Program is strategically relevant and technically sound. A number of gaps have been identified which could be addressed through the adoption of key measures included in the Program Action Plan (PAP) and the Investment Project Financing (IPF) window. Moreover, the Program design Recommendations are included in the Technical Assessment to strengthen the implementation of the Program. The Technical Assessment was carried out virtually given the travel restrictions during the global COVID-19 pandemic.

PROGRAM DESCRIPTION AND STRATEGIC RELEVANCE

Country Context

Nigeria, Africa's giant, plays a critical role in the World Bank Group's (WBG) twin goals of eradicating global extreme poverty and promoting shared prosperity. A multi-ethnic and diverse federation of 36 autonomous states, with an abundance of resources, and a young and dynamic society, Nigeria is Africa's largest country (over 200 million people) and largest economy (nominal gross domestic product [GDP] of around USD 450 billion in 2019), and has the potential to be a giant on the global stage. But with over 40 percent of its population (over 80 million people) in poverty, Nigeria is also the country with the largest number of absolute poor in the world. Economic growth, at 2.2 percent in 2019, has been below the rate of population growth since 2016, when Nigeria experienced its first recession in two decades. Fragility, conflict and insecurity afflict many parts of the country, in particular the northeast, corruption and weak capacity plague the public sector, and on many human development indicators, Nigeria ranks amongst the lowest in the world. To realize its considerable potential, and to fulfill the government's ambition to lift 100 million Nigerians out of poverty by 2030, Nigeria has to make tangible progress on multiple fronts, at both the federal and sub-national levels.

Nigeria needs to create more jobs for its young and growing population. With a median age of 17.5 years, Nigeria is a young country. The working-age population is growing rapidly, by about 3.5 million per year, and in 2019 numbered almost 120 million. Between 2014 and 2019, 19 million Nigerians entered the labor force but only 4 million found a formal job, while 15 million ended up under or unemployed. With a growing labor force and stagnating job creation, 23 percent of the labor force is unemployed, and 20 percent remain underemployed. Catalyzing private investment and job creation is hence an imperative for Nigeria.

Nigeria's structural transformation is yet to happen and economic diversification away from dependence on oil remains a core challenge and a central preoccupation of the government. Over 80 percent of the labor force derive their livelihoods from the informal economy—agriculture and the lower end of the service sector—where value-added per worker is low. Nigeria's economy and the

government's finances are highly dependent on production and sales of crude oil—90 percent of exports, 30 percent of banking sector credit, and 50 percent of (consolidated) government revenues—and hence highly vulnerable to fluctuations in oil prices. Non-oil industry and services are exposed to the spillover effects of a downturn in the oil industry.

The lack of diversification and governance and implementation challenges are reflected in Nigeria's very low levels of government revenues and expenditures relative to the size of its economy. At 8 percent of GDP in 2019, Nigeria's consolidated government revenue to GDP ratio was one of the lowest in the world. Non-oil revenues are particularly low, at 4 percent of GDP. Nigeria's government spending (12 percent of GDP in 2019) is about half the level expected for its level of development.

Nigeria's poor human capital outcomes reflect the low levels of public expenditure and weaknesses in service delivery. In terms of the Human Capital Index (HCI), Nigeria, in 2018, was the 6th lowest in the world—152nd out of 157 countries. A baby born in Nigeria today, will, if the levels, quality and coverage of human capital investments and service delivery remain unchanged, enter the labor force 18 years from now only 34 percent as productive as she would be if she were to enjoy the benefits of a complete quality education and full health. Human development outcomes are particularly low among girls and young women in Nigeria. Girls have fewer educational opportunities, and more limited access to credit and productive resources, and poorer labor market outcomes even when gaps in human capital are considered.

The economic and human impact of the COVID-19 pandemic on Nigeria will be severe, even if Nigeria manages to contain the outbreak locally. Because of Nigeria's vulnerability to oil price shocks, with the sharp fall in oil prices as a result of the COVID-19 crisis, the economy is projected to contract by over 3 percent in 2020, and consolidated government revenues to fall by over 3 percent of GDP (nearly USD 15 billion) or more, at a time when fiscal resources are urgently needed to contain the outbreak and initiate counter-cyclical and pro-poor fiscal measures to protect the lives and livelihoods of the nearly 90 million Nigerians in extreme poverty and millions of others in urban areas who are dependent on the informal economy. Estimates suggest that the extreme poverty rate could go up by a couple of percentage points and that the number of poor could increase by between 10 to 15 million by 2022.1 The human and economic costs would be amplified if the outbreak becomes more severe, leading to a deeper recession and greater health-related costs. Since the first case was identified in late February 2020, by 4 January 2021 Nigeria had recorded 91,351 cases and 1,318 deaths.

Nigeria faces significant challenges in responding to the COVID-19 pandemic, but the government has responded proactively. The response has focused on containing the outbreak, marshaling the needed fiscal resources in the face of severe fiscal constraints, and taking steps to mitigate the adverse impacts of the economic downturn and lay the ground for a robust recovery. Because of Nigeria's size, population, socioeconomic, and federal administrative structure and longstanding unfinished structural reform agenda, implementation of the crisis response will be challenging.

1 See World Bank (June 2020), Nigeria Development Update (Spring 2020)—Nigeria in Times of COVID-19: Laying Foundations for a Strong Recovery.

Nigerian public health authorities moved proactively to contain the spread. The Federal Ministry of Health has activated an NCDC-national COVID-19 Emergency Operations Center (EOC) to coordinate the national public health response activities through Public Health EOCs in each state. Nationwide lockdown measures were announced in late March, but given the severe impact on livelihoods, the lockdown has been partially eased since mid-May and restrictions on inter-state travel were lifted in early July. The number of cases continue to be on the rise and the country is in the midst of a second wave with a cumulative test positivity rate of 9.3 percent of the nearly 1 million tests conducted in the country.

Nigeria's federal and state governments have initiated important steps to marshal the needed fiscal resources and deploy them towards a pro-poor fiscal response to the COVID-19 crisis. The federal government has adopted an amended budget for 2020 that cuts non-essential expenditures and allows for increased borrowing (from both the market and international financial institutions) to protect critical expenditures and provide for a pro-poor COVID-19 fiscal stimulus package. It has also adopted measures to safeguard and mobilize oil and non-oil revenues including establishment of a market-based gasoline pricing mechanism, timely collection of gas-flaring fees and robust roll-out of new VAT implementation measures. States are also preparing supplementary budgets to reprioritize spending in order to protect social expenditures.

To mitigate the adverse impacts of the COVID-19 crisis and lay the ground for a robust recovery, the government has formulated an ambitious Economic Sustainability Plan (ESP). The ESP was launched in July 2020 and lays out an ambitious package of policy measures and programs over the next twelve to eighteen months, from fiscal and monetary measures to mobilize revenues and maintain macro-financial stability to scaling up of social assistance and subsidized credit programs to support households and micro and small enterprises, to large-scale initiatives to stimulate activity and create jobs through investments in agriculture, roads, renewables, housing, and WASH. Nigeria's earlier multi-year plan, the 2017-2020 Economic Recovery and Growth Plan (ERGP), was formulated in the aftermath of the 2016-2017 recession. While the successor multi-year plan for 2021-2024 is being developed, and in the context of the COVID-19 crisis, the ESP serves as a bridge.

National Action Plan ('the program')

The National Action Plan for the Revitalization of Nigeria's Water, Sanitation, and Hygiene Sector (NAP) was launched in 2018 by President Buhari as the Government's overall strategy and vehicle for investment and sector reform to attain the sustainable development goals (SDGs) for Water, Sanitation, and Hygiene (WASH). The NAP is a response to the findings of the report 'A Wake Up Call: Nigeria Water Supply, Sanitation, and Hygiene Poverty Diagnostic' published in 20172. The WASH Poverty Diagnostic presented five key messages: (i) Nigeria's WASH Sector is in critical condition and requires immediate attention; (ii) Improving the WASH Sector will have significant implications for poverty reduction and human development; (iii) The sector is constrained by service delivery and failing facilities; (iv) To achieve the SDGs in WASH, Nigeria must invest at least three times more than it does today (2017); and

2 World Bank Group. 2017. A Wake Up Call: Nigeria Water Supply, Sanitation, and Hygiene Poverty Diagnostic. WASH Poverty Diagnostic. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/27703 License: CC BY 3.0 IGO.

(v) Sound Sector institutions are needed to better sustain existing and new WASH-related efforts. Annex 1 presents an overview of the national government WASH policy.

Over the last few years, the Federal Government of Nigeria has demonstrated strong commitment towards improving access to WASH services, motivated by the alarming degree to which Nigeria's WASH sector is underdeveloped compared with other countries in the region. This led to the President declaring a State of Emergency in 2018 and launching the NAP aimed at ensuring universal access to sustainable and safely managed WASH services by 2030, in line with the SDGs. The NAP is a 13-year strategy prioritizing actions within three phases: Emergency Plan, Recovery Plan, and Revitalization Strategy. It builds upon the Partnership for Expanded Water Supply, Sanitation and Hygiene (PEWASH) strategy launched in 2016 which sought to better harmonize and expand efforts to improve rural WASH services. In 2019, the Federal Ministry of Water Resources (FMWR) launched the Clean Nigeria: Use the Toilet campaign to achieve an open defecation free Nigeria by 2025. In launching the NAP, the president stressed the important roles of both state governments and sector stakeholders in achieving the SDG targets and announced that Federal support to the states would be conditioned on their commitment to implement the NAP and end open defecation by 2025.

As the responsibility for WASH service provision rests with state governments, participating states are required to develop their own 5-year state action plans for the sector that better detail the state-level actions to be implemented, which are then translated into state-level annual investment plans. The overall goal of the NAP is to ensure that all Nigerians have access to sustainable and safely managed WASH services by 2030. It is made up of five components with defined strategic objectives:

Governance: WASH sector governed by reformed policy, legislative, institutional and regulatory frameworks through which service providers (public and private) are accountable to customers and government and provide efficient, sustainable and equitable services;

Sustainability: Autonomous and functional service providers are equipped with the necessary capacity to provide efficient, sustainable and equitable service delivery for all;

Sanitation: Every Nigerian will have access to safely managed sanitation and hygiene facilities in cities, small towns, and rural communities by 2030;

Funding and Finance: Service providers generate revenue to cover their operations and maintenance expenses, with the intention to partially, if not completely, fund their capital investments in the long run. Communities without access to networked services are supported with the education, training and financial mechanisms necessary to achieve sustainable access to safely managed water supply and sanitation facilities and

Monitoring and Evaluation: To ensure availability of reliable data to inform decision making, manage performance and contribute towards greater public accountability.

The NAP was developed through a process of consultations and engagement between the Federal and State Governments as well as several non-state actors and development partners. These processes included:

The 24th Regular Meeting of Council on Water Resources, in Akure, April 2017, which received the WASH Poverty Diagnostic Report;

A National Stakeholders' Retreat to develop a response to the WASH Poverty Diagnostic Report – held in September 2017, Abuja;

A Task Force which met to develop a draft Action Plan, with support of the World Bank, in Accra, Ghana, in December 2017;

Presentation of the draft Action Plan to the National Economic Council in January 2018;

Finalization of the Action Plan at the 2nd Stakeholders Retreat held in March 2018, Abuja;

Presentation of the Action Plan to the Federal Executive Council (FEC) for approval in April 2018;

President Muhammadu Buhari demonstrated high commitment with launch of the National Action Plan for the Revitalization of the WASH Sector and declared a "State of Emergency for the WASH Sector on November 8, 2018; and

The 25th Regular Meeting of the National Council on Water Resources, in Abuja, November 12 -16, 2018, which approved the adoption and commitment by States to implement the National Action Plan. The meeting also established the selection criteria for State Participation in the National WASH Fund and the Technical Assistance Program of the National Action Plan.

The National Action Plan is a three-phase plan and comprises the following:

An 18-month Emergency Plan, up to October 20193

A 5-year Recovery Program, up to December 2022

13-year Revitalization Strategy, through end-2030

A 2-Day Workshop of all State Commissioners, development partners and Federal Stakeholders on the Implementation of the NAP was held in Abuja from March 25-26, 2019 to guide the state selection process at the point of entry and access to the National WASH Fund to support States in the implementation of State Action Plans. To be selected, states must satisfactorily comply with the following conditions:

Review the Nigeria WASH Poverty Diagnostic report to understand the status of WASH in their State;

Declare a State of Emergency on the WASH Sector in their State;

Inaugurate an inter-ministerial State Emergency Action Steering Committee chaired by the Governor or designate;

Establish State Action Plan Implementation Coordination Office, as the Secretariat to the State Emergency Action Committee; and

3 The 18-month Emergency Plan has been extended to secure as much political will and sense of urgency as possible from the states. This will be measured by the level of preparedness of state action plans, domestication and launch of state-level Clean Nigeria Campaigns and the level of funding mobilized or allocated by states to WASH.

Clarify State Interventions or processes to develop:

A State Action Plan to set the State Vision, Mission and Targets, and;

A State Investment Plan informed by a State WASH Master Plan.

Thus far, 26 states across all 6 geopolitical zones have declared a state of emergency in the sector and have reached various levels on the different criteria. They are now engaged in the planning phase. These states are presented below:

North West: Katsina, Jigawa, Kaduna, Kebbi, Sokoto;

North East: Adamawa, Yobe, Taraba, Gombe;

North Central: Benue, Plateau, Niger, Kwara, Federal Capital Territory (FCT);

South West: Ekiti, Ondo, Osun, Ogun, Oyo;

South East: Ebonyi, Enugu, Imo;

South-South: Delta, Cross River, Rivers, and Edo.

Following the National Stakeholders Implementation Workshop, key activities of the NAP were undertaken, namely:

NAP Coordination: The FMWR established a National Coordination Office (NCO) following the official launch of the NAP to provide leadership, management and coordination for the implementation of the NAP and ensure flexibility and reduce bureaucracy. The NAP Coordination Office provides the PEWASH, Clean Nigeria, and other sub-programs with necessary technical assistance, program harmonization, performance monitoring and joint sector reporting platforms. It also liaises with state governments for technical assistance and funding support offered by the National Action Plan and the various sub-programs to achieve national WASH targets. The National Coordinator (NAP-CO) reports to the Director of Water Supply within the FMWR. The NAP-CO is supported by the Collaboration and Partnership Division of the FMWR.

Advocacy with State Governors: Advocacy visits were paid by the Honorable Minister of Water Resources to some State Governors. This resulted in 14 State Governments signing up to the NAP process and 33 States signing up to the PEWASH program.

Clean Nigeria: Use the Toilet Campaign: The Campaign was launched on the 2019 World Toilet Day by the Vice President. Subsequently, the President signed Executive Order 009 to give legal backing to the Campaign. The Clean Nigeria Campaign (CNC) Secretariat has been established and is operational.

National Research and Capacity Building Program: A key challenge identified by the NAP is limited knowledge, capacity, and capability. This disproportionately affect WASH service delivery. The NAP Coordination Office has outlined a series of program activities to strengthen human capacity to drive the plan to achieve outlined national targets including the development of a capacity building and research program to clarify Nigeria's overall needs and objectives in the areas of capacity building and research. The program was designed to develop a new corps of artisans and professions to fill existing human resources gaps in the WASH sector in Nigeria. Discussions are ongoing with the National Universities

Commission, the National Board for Technical Education and the Nigeria Educational research and Development Council on how to develop and introduce WASH related curriculum to Nigeria universities, technical and teacher training schools, as well as primary and secondary schools, respectively. A MoU was signed with IHE, Delft Institute for Water Education to replicate the Global Sanitation Graduate School (GSGS) curriculum across Nigerian Universities. Selected Nigerian Universities are to commence a M.Sc. Sanitation Program by next academic year. The program will also support strengthening the coordination role of the National Water Resources Institute (NWRI), as the capacity building arm of the FMWR/WASH sector.

Establishment of the National WASH Fund: A consultancy for the development of the architecture and the guidance documents for the establishment of the National WASH Fund is ongoing.

To achieve the objectives of the NAP by 2030, the total investment needs through 2026 of Federal and state governments are estimated at US$25 billion, which is equivalent to annual sector investment of approximately US$5 billion, or 1.3 percent of GDP. Federal and state governments nationwide are expected to allocate approximately 2.2 billion USD towards the NAP through 2026 (US$300 million from the Federal Government of Nigeria (FGN) and US$1.9 B from state governments).

PEWASH and Clean Nigeria Campaign

The Partnership for Expanded Water Supply, Sanitation and Hygiene (PEWASH) program, launched in 2016, is a national multi-sector partnership that seeks to improve public health and eradicate poverty through achieving equitable and sustainable access to WASH services in Nigeria's rural communities by 2030. The program builds upon the National Rural Water Supply and Sanitation Programme, which ended in 2015, and seeks to ensure effective coordination of all rural WASH projects and programs, cost-sharing between Federal and state governments, technical support, and capacity building backed by an M&E framework. 34 states have signed the PEWASH protocol for inclusion in the program. It has thus far been implemented in Kano and Ogun states, with 18 additional states to be included in Phase 2 after achieving the readiness criteria.4

The Clean Nigeria: Use the Toilet Campaign has the ambitious goal of enticing behavior change to get 47 million Nigerians to use the toilet and stop open defecation by 2025. The campaign objectives are as follows: i) develop and implement a national sanitation campaign agenda to end open defecation; ii) prioritize sanitation and hygiene in national development plans and mobilize support and resources accordingly to ensure sanitation budget lines are consistently increased annually; iii) create a pool of resource persons to support local actors in all communities to implement sanitation promotion; iv) instill a new culture of safe and sustainable sanitation through behavioral change communication and advocacy; and v) establish mechanisms to track progress, document lessons learned and share knowledge to support program improvements. Executive Order 009 entitled, 'The Open Defecation-Free Nigeria by 2025 and Other Related Matters Order', authorized the established Secretariat to implement the Order on behalf of the President. 12 states have thus far developed their open defecation free (ODF) roadmaps and established steering committees to coordinate their state level campaigns.

4 Readiness criteria include having a baseline survey and investment plan for the sector, a PEWASH unit with critical staff, and a budget line for the Program.

The Nigeria Sustainable Urban and Rural Water Supply, Sanitation and Hygiene Program for Results ('the Program')

The Nigeria Sustainable Urban and Rural Water Supply, Sanitation and Hygiene Program for Results ('the Program') supports the implementation of the National Action Plan (NAP). Its program development objectives are to increase access to water, sanitation, and hygiene services and to strengthen sector institutions in select states of Nigeria. The Program is structured around two results areas, namely: RA 1. Strengthened Sector Policies and Institutions for Improved Services; and RA 2. Improved Access to Water Supply, Sanitation and Hygiene Services.

Program Boundaries. The Program will support the implementation of a subset of activities set out in the NAP within the seven selected participating states by state implementing agencies and the FMWR over a six-year period (2021-2027). These states have been selected by the FMWR through a transparent evaluation process against predefined eligibility and readiness criteria. The Program will support the construction and rehabilitation of WASH infrastructure in urban and rural areas and small towns, as well as various activities to support the development and use of WASH services. In addition, it will specifically incentivize key policy and institutional reforms at the state level, as well as the establishment of the National WASH Fund housed at the FMWR.

Program Financing. This proposed US$700 million lending operation will be implemented for a duration of five years by participating states and the FMWR to deliver an integrated package of WASH interventions in select urban and rural areas and small towns of Nigeria. The Program will pursue an local government area (LGA)-wide approach, whereby all communities will be targeted within each Program LGA. LGAs will be prioritized by states through a transparent selection process using established criteria. Table 2 presents the overall Program financing.

Table 2: Program financing (US$ million)

Source	Amount (US$ million)
Borrower	175
IDA	640
Total Program financing	815

Participating States. The Program will support states that have been selected through a clear and transparent evaluation process. It will initially support seven participating states: Delta, Ekiti, Gombe, Imo, Kaduna, Katsina and Plateau (Figure 1). Additional interested states may access TA under the IPF window upon meeting the Program's eligibility criteria. These assisted states may then be considered for inclusion in the Program upon achieving the relevant criteria and may be incorporated through Program restructuring.

Figure 1: Map of Nigeria with participating states

Expected results and beneficiaries. The Program is expected to provide basic drinking water services to approximately 6,100,000 people and improved sanitation services to 1,400,000 people. It is expected that approximately 500 communities will become ODF+ and 2,000 schools and healthcare facilities will be provided with improved WASH services.

Rationale for the choice of financing instrument. The Program for Results (PforR) is the most appropriate instrument for supporting and upscaling Nigeria's WASH program. This instrument will enhance the impact of the World Bank's financial and technical support through a focus on results. In doing so, it will contribute to:

Program ownership. The FGN has demonstrated high-level commitment to the WASH sector agenda in the past couple of years through the launches of the NAP and the Clean Nigeria Campaign at the Presidential level and the FMWR's continued development of the PEWASH program.

Improvements in implementation of government programs. The Program provides an opportunity to support and strengthen the implementation of government programs, improve the sector's institutional framework, and build stakeholder capacity for the management of WASH services. Although the Program will support specific interventions, the World Bank's contribution could foster improvements in

terms of effectiveness and efficiency in the overall WASH sector over the duration of the NAP (through 2030).

Improvements in national systems and procedures. The Program builds upon the country's existing fiduciary (financial management and procurement) and environmental and social management systems (ESMS). Through the Program Action Plan (PAP) and the Program's TA component, the Program will strengthen country fiduciary systems related to audits, budgeting and planning, and compliance with procurement guidelines. As E&S systems require considerable improvement for implementation, the PAP also includes actions to strengthen the Environmental and Social Management Systems (ESMS), which will then be supplemented through partnership with the SPESSE project to build the E&S management capacity of the FMWR and state level implementing agencies.

Implementation of key sector policy and institutional reform. The PforR instrument allows the Program to go further than previous IPF projects in delivering key policy and institutional reforms required to improve sector performance. DLIs are designed to disburse when policies and reforms are established and operational, providing an important incentive for the sector to follow through on its priorities.

Results orientation. As the focus of previous sector projects (including the three successive urban water IPFs, culminating with the UW3 Project) has been on infrastructure rather than the service delivery institutions, their ability to address the sector's performance issues and to build efficient and sustainable service providers was limited. Drawing from this experience, the PforR instrument will establish clear links between IDA disbursements and the delivery of results, as demonstrated by the inclusion of DLIs. In doing so, the instrument will facilitate a cultural shift in incentivizing service delivery to citizens and foster greater accountability between policy makers, service providers and citizens.

Flexibility and innovation in sector approaches. The Program is designed to be flexible. The Program seeks to improve sector Policy, Institutional and Regulatory (PIR) governance by leveraging state specific PIR plans that serve as reform roadmaps tailored to the local needs and context. Furthermore, although the Program does incentivize the achievement of specific results, such as improvements in access and functionality, it does not mandate specific technologies or approaches and affords states the flexibility to allocate more resources to those subsectors with the greatest need. The Program therefore aspires to be a platform for innovation and evidence-based approaches that can be individually tailored to the differing contexts found across the country.

Rationale for use of a separately disbursing IPF component for Technical and Program Management Support. A key lesson from global and national PforR experience is that the results-based approach is more effective and implementation more efficient when complemented by substantial technical assistance to support client governments in addressing weaknesses identified through the technical, environmental, social, and fiduciary assessments that may otherwise threaten its success. The component will, therefore, fund a set of selected and discrete technical assistance and capacity-building activities that address the specific constraints of participating states and the FMWR, particularly the Program Implementation Units (PIUs). In addition, the component will support technical assistance to any states that achieve the Program's eligibility criteria to become investment ready, therefore preparing a pipeline for future financing. While participating states will implement their own technical assistance and capacity-building activities under the IPF component, the FMWR will implement such activities for assisted states as they work to fill identified gaps towards Program readiness.

Strategic Relevance

The COVID-19 pandemic has highlighted the importance of safely managed WASH services to protect human health and mitigate secondary impacts on community livelihoods. One of the most cost-effective strategies for increasing pandemic preparedness, especially in resource-constrained settings, consists of investing to strengthen core public health infrastructure, including WASH services. Good and consistently applied WASH and waste management practices serve as essential barriers to waterborne diseases and to human-to-human transmission of infectious diseases in communities, homes, health care facilities, schools, and other public places. Additionally, WASH services are essential to enable schools, workplaces, and other public spaces to maintain effective hygiene protocols when they re-open, and therefore reduce the potential for further disease outbreaks such as cholera. Finally, WASH has a crucial role in mitigating the effects of the crisis on employment and economic growth in the years to come. Beyond its tremendous potential for direct job creation through labor-intensive works, WASH is a critical input to employment across the economy, including to 40 percent of jobs in the services sector. Previous stimulus packages have been estimated to result in 17,600 man-days of work in direct and indirect jobs for every million USD invested in the sector.

The Government of Nigeria has recognized the importance of WASH to COVID-19 response. One of the most cost-effective strategies for increasing pandemic preparedness, especially in resource-constrained settings, consists of investing to strengthen core public health infrastructure, including WASH services. Good and consistently applied WASH and waste management practices serve as essential barriers to waterborne diseases and to human-to-human transmission of infectious diseases in communities, homes, health care facilities, schools, and other public places. Additionally, WASH services are essential to enable schools, workplaces, and other public spaces to maintain effective hygiene protocols when they re-open, and therefore reduce the potential for further disease outbreaks such as cholera. Finally, WASH has a crucial role in mitigating the effects of the crisis on employment and economic growth in the years to come. Beyond its tremendous potential for direct job creation through labor-intensive works, WASH is a critical input to employment across the economy, including to 40 percent of jobs in the services sector.5 Previous stimulus packages have been estimated to result in 17,600 man-days of work in direct and indirect jobs for every million USD invested in the sector.6

As a key element of the ESP's first pillar of "Real Sector Measures," the Federal Ministry of Water Resources (FMWR) is implementing a WASH sector emergency response plan with ongoing interventions across all States. In addition, the Bank is supporting critical WASH interventions to complement the public health focused Nigeria COVID-19 Preparedness and Response Project (P173980) under the Fast-Track COVID-19 Facility (FTCF). Project financing supports emergency measures to ensure the provision of safe water and hygiene services in healthcare facilities and temporary isolation centers as well as within affected communities, with an emphasis on poor and vulnerable populations.

Well before the pandemic, Nigeria's WASH sector was in a state of emergency. In 2019, approximately 60 million Nigerians were living without access to basic drinking water services, 80 million without

5 UN World Water Development Report 2016.

6 Schwartz et al, 2009

access to improved sanitation facilities and 167 million without access to a basic handwashing facility.7,8 Strikingly, Nigeria is set to become the country with the most open defecators in the world,9 with 23 percent of Nigerians practicing open defecation. The situation is even worse regionally – 51 percent of the population in the North Central Region practices open defecation. In rural areas, 39 percent of households lack access to at least basic water supply services, while only half have access to improved sanitation and almost a third (29 percent) practice open defecation – a fraction that has marginally changed since 1990.10 Figure 2 shows the prevalence of open defecation across the different states.

7 Basic drinking water services are from an improved source, provided collection time is not more than 30 minutes roundtrip including queuing. Improved drinking water sources are those that have the potential to deliver safe water by nature of their design and construction, including piped water, boreholes or tubewells, protected dug wells, protected springs, rainwater, and packaged or delivered water. Improved sanitation facilities are those designed to hygienically separate excreta from human contact, including flush/pour flush to piped sewer system, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets or pit latrines with slabs. Basic handwashing facilities are those located on premises with soap and water.

8 Federal Ministry of Water Resources (FMWR), Government of Nigeria, National Bureau of Statistics (NBS) and UNICEF. 2020. Water, Sanitation and Hygiene: National Outcome Routine Mapping (WASH NORM) 2019: A Report of Findings. FCT Abuja. Nigeria.

9 Although India still had a greater number of open defecators per JMP's latest 2017 data, it has continued to make significant progress on improving access to improved sanitation and changing behaviors.

10 WASHNORM 2019

Figure 2: Prevalence of open defecation across Nigeria (Source: WASHNORM 2019)

The low rates of WASH access in rural areas and small towns are compounded by weak service delivery models and inadequate sector capacity, resulting in failed infrastructure and wasted investment. In 2015, more than 38 percent of the 90,500 improved water points and around 46 percent of the 5,100 water schemes in the country were nonfunctional.11 Strikingly, nearly 30 percent of water points and water schemes appeared to fail within one year of construction. This lack of sustainability is driven by a combination of poor siting, subpar construction quality, water scarcity and seasonality exacerbated by climate change, and insufficient management and operations and maintenance (O&M).12 Rural sanitation programming, which has depended heavily on social mobilization and behavior change approaches such as Community Led Total Sanitation (CLTS), has shown limited results in Nigeria.13 Vital complementary approaches have not yet been implemented at scale, such as sanitation marketing and incentive mechanisms for the poor rooted in a deep understanding of the local context and in consideration of the entire sanitation service chain.

11 A water point provides access to a number of beneficiaries at one designated collection point. A water scheme, conversely, includes a water distribution system from the point of origin to destinations such as households and farms.

12 World Bank, 2017. A Wake-Up Call: Nigeria Water Supply, Sanitation, and Hygiene Poverty Diagnostic.

13 Abramovsky, L. et al. 2020. Community-Led Total Sanitation: A Global Evaluation. Draft.

In urban areas, poor performance has plagued Nigeria's water utilities for decades, while fecal sludge is largely released untreated into the environment. While 92 percent of urban residents had access to basic drinking water services in 2019, this figure is distorted by the fact that urban water utilities largely fail to meet the needs of their already small customer base, forcing a majority of people to rely on expensive and often unsafe coping alternatives, such as private water vendors and shallow private wells.14 Tragically, access to piped water on premises in urban areas has declined from 32 percent in 199015 to 7 percent in 2019,16 and the performance of Nigeria's utilities is significantly below the African average across most indicators.17 Although access to improved sanitation in urban areas is relatively high at 82 percent, access to safely managed sanitation services18 is a paltry 25 percent,19 as only the capital city of Abuja has a piped sewer network and wastewater treatment plant. Emptying services for on-site sanitation facilities are mostly provided by an unregulated network of private vacuum trucks operators and manual emptiers. Collected fecal waste is usually discarded in open drains or informal dumping sites on the outskirts of towns without treatment, causing serious environmental impact.20

WASH access in health care facilities (HCF) and schools is lagging, increasing the risk of infection for both patients and staff and hindering educational outcomes. In 2019, just 55 percent of HCF had a basic water service; just 10 percent provided basic sanitation services21; and just 20 percent had access to basic hygiene services. 22 In rural areas 29 percent of HCF had no sanitation service, while on average these facilities had just one toilet for patients. Meanwhile only 33 percent of schools had access to basic

14 In 2019, only 16 of 36 states plus FCT had functional urban water utilities that produce water. About 58 percent of waterworks were nonfuctional. More than two-thirds (64 percent) of urban water utilities' consumers did not depend solely on their public tap for drinking water (WASHNORM 2019).

15 WHO (World Health Organization), and UNICEF (United Nations Children's Fund). 2015. 25 Years Progress on Sanitation and Drinking Water: 2015 Update and MDG Assessment. Geneva: WHO.

16 WASHNORM 2019.

17 World Bank, 2017. A Wake-Up Call: Nigeria Water Supply, Sanitation, and Hygiene Poverty Diagnostic.

18 Use of improved facilities which are not shared with other households and where excreta are safely disposed in situ or transported and treated off-site

19 WASHNORM 2019.

20 World Bank, 2017. Technical Assistance to Fecal Sludge Management Services in Port Harcourt, Nigeria. World Bank, Washington, DC.

21 Basic sanitation services are defined as improved facilities which are usable, with at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility.

22 Basic hygiene services require that functional hand hygiene facilities (with water and soap and/or alcohol-based hand rub) are available at all points of care, and within 5 meters of toilets.

water services, while 39 percent had no water service. Only 26 percent had access to basic sanitation services (meaning improved facilities which are single-sex and usable) while 76.4 percent did not have handwashing facilities. A paltry 3 percent of schools had girls' sanitation facilities with provisions for menstrual hygiene management (MHM), while only 19 percent of schools with latrines had at least one compartment accessible to those with limited mobility.23

Such poor sector performance is especially concerning given that access to WASH is an important determinant of human capital outcomes, including early childhood survival, health and educational attainment – all of which in turn affect labor productivity and efficiency. Approximately 73 percent of the total burden of intestinal infections in Nigeria is associated with inadequate WASH.24 About 253,800 WASH attributable deaths occurred in Nigeria in 2016, with 119,900 of those deaths occurring from diarrheal diseases.25 There is robust evidence that access to safe water supply and improved sanitation decreases the incidence of diarrhea in young children.26 Also, a large part of the chronic malnutrition burden is owing to the unhygienic environment in which children grow up, often a result of high levels of open defecation across densely populated areas. Access to WASH can impact years of schooling by freeing up time that children spend collecting water to attend school, reducing the prevalence of disease that can keep them out of school, and contributing to a safe and healthy learning environment while at school.27 Gender inequities exacerbate such impacts on human capital.

Women and girls suffer disproportionately from the lack of adequate WASH services. They bear the burden of water collection over long distances, which has been associated with negative effects on well-being, economic opportunities, school attendance, and a higher risk of GBV. A high prevalence of open defecation and the poor quality of sanitation facilities also compromise the convenience, safety, health, and dignity of women and girls, particularly in managing their menstrual hygiene needs. For example, the UN reports that one in ten girls in Sub-Saharan Africa misses school during their period – and may

23 WASHNORM 2019

24 World Bank, 2017. A Wake-Up Call: Nigeria Water Supply, Sanitation, and Hygiene Poverty Diagnostic.

25 Prüss-Ustün et al. 2019. "Burden of disease from inadequate water, sanitation and hygiene for selected adverse health outcomes: An updated analysis with a focus on low- and middle-income countries." International Journal of Hygiene and Environmental Health 222: 765-777.

26 A synthetic review and meta-analysis of health impact assessments of WASH interventions show water interventions reduce diarrhea morbidity by 34 percent, sanitation interventions reduce it by 28 percent, while promotion of handwashing with soap results in a 40 percent reduction (Wolf et al. 2018. Impact of drinking water, sanitation and handwashing with soap on childhood diarrheal disease: updated meta-analysis and meta-regression. Tropical Medicine and International Health 23(5): 508–525.).

27 A meta-analysis of school-based WASH interventions found that overall these resulted in a 69 percent reduction in school absenteeism and were similarly associated with lower dropout rates (Andres et al. 2018).

eventually drop out – largely due to the lack of proper sanitation and hygiene facilities.28 Gender disparities are exacerbated by the relatively low participation of women and vulnerable groups in the planning, implementation, and O&M of WASH facilities. Women are underrepresented in water jobs, especially in engineering and managerial positions. For example, in Sub-Saharan Africa, women represent fewer than one in five employees in water supply and sanitation (WSS) utilities. Average share of female engineers in a utility is 11 percent and the share of female managers is 13 percent (compared to global averages of 20 and 22 percentages, respectively). Data from the International Benchmarking Networks for Water and Sanitation Utilities (IBNET)29 shows that among utilities in the participating states, on average 17 percent of employees in water corporations are women (ranging from 2 percent in Katsina to 37 percent in Imo State) and less than 1 percent are women engineer. Barriers that prevent women from entering the sector include occupational segregation, and low levels of female graduates in technical fields, while lack of access to technical and managerial training opportunities, and factors related to work environment and human resources policies, contribute to lower share of women in decision making positions. The cost of gender gaps to the Nigerian economy is estimated at US$9.3 billion, or 2.3 percent of GDP, and could be as high as 5.8 percent of GDP or US$22.9 billion. Closing the gender gaps in key economic sectors could yield additional gains of US$9.3 billion to US$22.9 billion30.

Challenges within the WASH sector are compounded by climate-related risks. Nigeria experiences a diverse climate that ranges from arid in the north to tropical in much of the country and is routinely listed in the top third of countries exposed to climate risks.31 The country faces a high water scarcity hazard level, with droughts expected to occur on average every 5 years, with potential increased frequency due to climate change.32 Business-as-usual could cost the country an estimated 2 to 11 percent of GDP by 2020 and between 6 and 30 percent by 2050, affecting the livelihoods of more than 90 million households.33 Nigeria has already been substantially impacted by climate risks, including more and harsher torrential rains and windstorms in the southern states in recent years than in the past 40 years, major floods in 2012, 2015, and 2016, and more heat and less rain in Nigeria's north, with

28 UNESCO (2014). Puberty education & menstrual hygiene management - good policy and practice in health education - Booklet 9. Paris, France.

29 Based on last available data in https://database.ib-net.org/. Share of female employees varies by state, from highest in Imo State Water Corporation (37%), to Plateau State Water Board (28%), Ekiti State Water Corporation (18%), Kaduna State Water Board (14%), Delta State Urban Water Board (13%), Gombe State Water Board (5%) and Katsina State Water Board (2%).

30 World Bank. Nigeria Gender Diagnostic (forthcoming).

31 Nigeria is ranked 18 of 135 countries according to GermanWatch's Climate Risk Index (link, the higher being more vulnerable) and 160 of 181 countries based on Notre Dame's Global Adaptation Initiative Index (link, the lower being more vulnerable).

32 Assessment of thinkhazard.org web-based tool developed by GFDRR.

33 According to the 2017 climate assessment.

portions of the northern Sahelian area receiving 25 percent less rain than 30 years ago.34 Four major climate related changes are predicted to occur over the next several decades with major economic and social implications for Nigeria: (1) by 2050, the average temperature is projected to rise by 1-2 degrees Celsius, especially in the north; (2) rainfall patterns are likely to become more variable; (3) extreme weather events are likely to become more frequent; and (4) rising sea levels will threaten coastal settlements, towns, and cities. All these changes threaten the reliability and quality of both ground and surface waters, while the rising sea levels – and related increases in the water table – threaten the structural integrity of sanitation facilities, potentially leading to further contamination of water sources.

PROGRAM TECHNICAL SOUNDNESS

The Program is found to be technically sound. It constitutes a good opportunity to transform Nigeria's WASH sector and address weaknesses such as service accessibility, sustainability, and resiliency. The Program will maintain the momentum of sector reforms initiated through the Bank's support of the NAP, resulting from the evidence presented in the Nigeria WASH Poverty Diagnostic. Within the urban water supply sector, it builds upon the Bank's series of lending operations culminating with the ongoing Third National Urban Water Sector Reform Project35.

At this stage, the exact locations of targeted sites that will benefit from the Program haven't been defined. Therefore, it was not possible to carry out a detailed assessment of the technical soundness of specific investments. Instead, the present Technical Assessment reviewed the soundness of key technical choices and evaluates whether they will lead to cost-effective and sustainable service delivery. Furthermore, the technical assessment was conducted virtually due to the travel restrictions during the COVID-19 pandemic. The federal government and the different states assessed exhibited a high level of commitment and proactivity during the assessment period which enabled the team to gather enough data for the analysis.

The Technical Assessment identified a few technical weaknesses on the different themes covered under the Program. This especially relates to the lack of awareness or understanding on innovative solutions for 'business as unusual' and improved service delivery. Nevertheless, the different states can count on the federal government and its technical and financial partners to address these gaps. Additional gap filling measures are proposed to mitigate the weaknesses identified during the assessment of the different interventions.

The design of the results areas is based on lessons learned from previous and on-going Bank-financed water projects in Nigeria and internationally. A summary of lessons is presented below while additional ones can be found in Annex 4.

Adequate project preparation and readiness to be achieved prior to effectiveness. Without sufficiently advanced technical preparation and E&S management and fiduciary capacities, implementation in prior projects has lagged through the first half of the implementation period. The Program seeks to ensure

34 Nigeria's 3rd National Communication to the United Nations Framework Convention on Climate Change (2020)

35 Closing date is on March 30, 2021.

readiness of participating states both by ensuring a minimum level of capacity through the eligibility and readiness criteria and by providing robust technical assistance. All seven states have developed strategies, master plans, policies and institutional frameworks through the support of the UW3 Project or by other development partners, such as African Development Bank (AfDB), French Development Agency (AFD), European Union (EU)/ Foreign, Commonwealth & Development Office (FCDO)/ United Nations Children's Fund (UNICEF), WaterAid, and United States Agency for International Development (USAID). There is therefore a set of investment-ready projects that should begin in short order. They have also adequate human and material resources to kick-start program activities, although additional support would be needed based on the findings the capacity assessment conducted in the participating states.

Institutional and governance reform are key to sustainable service delivery. Major interventions in the sector, which have largely focused on addressing technical issues and physical infrastructure, have achieved limited progress due to institutional and governance bottlenecks. Given the primary responsibility of states in service delivery and of the federal government in policy making, financing, and capacity building, adequate incentives need to be embedded in the sector's intergovernmental structures. The Program adapts lessons learnt from other Federal countries, including: (1) the development of intergovernmental coordination mechanisms; (2) the establishment of monitoring and evaluation systems that create performance incentives as results become more visible and that strengthen accountability to citizenry; (3) the operationalization of regulatory functions; and (4) support for the national government's role in providing TA support, particularly to subnational institutions, combined with strong political to yield substantial results. The Program's transparent rules and incentives for performance has also proven to be an effective approach in collectively achieving results across different levels of government and institutions.

High-level buy-in at the state level is essential to success. The critical role of state governors as the main beneficiary and driver of reform had not been adequately considered in previous projects, resulting in delays in effectiveness, political interference, and slow implementation progress. The Program is therefore consulting early and often with governors, including through the National Governors' Forum (NGF), to avoid misunderstanding, build trust, and garner their support.

Just-in-time support to federal and state sector agencies is critical. Lessons learnt from other PforRs emphasize the importance of TA. Successful outcomes can be realized in low-capacity governance systems with well-defined and targeted support to subnational government and service providers. TA support will therefore be well-aligned with Program implementation and will include in-country sector coordination platforms that enable knowledge sharing, evidence-based decision making, and consensus building among Government, donors and other stakeholders. In addition, the TA will explore effective service delivery models, as well as regulatory structures and modalities at the state level.

PforRs can spur increased Private Sector Participation (PSP). Promotion of an adequate enabling environment; clear, time-bound targets and investment plans; and a focus on financial and operational sustainability can attract PSP in the sector. The Program recognizes the difficulty in attracting PSP given the current state of the WASH sector, but follow this roadmap to make the sector more attractive to PSPs in the future and leverage the private sector where currently feasible and appropriate, such as for sanitation activities.

Support for PIU project management should be discussed and agreed during project preparation. A major contributor to poor implementation is lack of capacity for project management by the PIU. Therefore, the PIU will be assisted through a capacity building strategy that leverages relevant national and international experience. This strategy will be agreed upon upfront during preparation, with agreements clearly reflected in the Program Operations Manual (POM).

Continued engagement with participating states is essential to sustaining achieved progress. Institutional reform is a long-term process. Also, in prior projects, implementation has been rushed towards project closing, during which time the physical completion of infrastructure garners the most attention. As a result, little or no time is spent developing utility O&M capacities to ensure the sustainability of investments. This Program will therefore seek to build upon progress made under previous projects, both by the World Bank and by other development partners, while preparing the pipeline for future investments through TA.

The PforR has also taken lessons learned from previous PforRs in the water sector. Relevant lessons from the Vietnam Rural Water Supply and Sanitation Under the National Target Program (P127435)36 are presented below.

The Program showed that rural water system sustainability can be achieved and incorporated into RWSS planning, investments, and operations. Operational and financial sustainability of rural water systems had been a major weakness and challenge prior to the PforR. Under the Program, sustainability was included in the PDO and comprehensively defined in clear DLIs. In all eight provinces, program-supported water supply schemes met those DLIs and, still after two years, were operating under recognized management models, with low NRW rates, a high ratio of paying HH connections, and a positive cost recovery ratio. The clear sustainability definition encompassed operational, institutional, and financial key elements; and was employed and monitored under the Program to shift the mindset and financially incentivize Provincial implementing agencies away from a focus only on capital construction and toward a new approach based on demand-driven design and professional, business-minded operations. Sustainability related DLIs and disbursements were a major innovation and success factor. Future operations should incorporate clear sustainability indicators and DLIs in the program RF, with clearly defined criteria specified in the POM and verification protocol.

The PforR instrument can work well, even in contexts with low-capacity governance systems; however, enhanced technical assistance will be needed. The PforR instrument can be successful in low-capacity client settings, can help to address long-term institutional barriers, and can reshape sector incentives. Future PforR operations should carefully consider use of the instrument, and sufficient scope and funding should be included for TA and capacity building. Given that PforR operations are implemented as budget support to existing government programs, it is recommended to provide specific additional funding for TA and capacity building through grant support (as was the case for this Program), through an IPF component, and/or though enhanced implementation support from the Bank. Technical assistance should be synchronized to Program implementation, and capacity building should be targeted to the provinces.

36 Source: Project ICR.

The Program was a catalyst for significant private sector participation in the RWSS sector – attracting new private investment and more private enterprises from inside and outside Program provinces to finance and operate water schemes in the Program areas. The private sector operators brought a business-minded perspective which helped to improve the quality of water supply services delivered to rural residents in the Program areas while also helping to achieve the water sustainability criteria of the DLIs. The PforR's promotion of clear, time bound RWSS investment plans, the improved certainty around financing, and the focus on operational and financial sustainability helped to give confidence and attract private enterprises to invest. Future operations, whether PforR or otherwise, should ensure that clear and transparent RWSS planning capacity for counterpart institutions and results-based performance standards are embedded in program/project designs so that an enabling environment is created to attract private sector participants.

Policy, Institutions, and Regulation (PIR) Analysis

A preliminary Policy, Institutions, and Regulation (PIR) Analysis was conducted to identify the most binding institutional constraints of Nigeria's WASH sector and inform the technical design of Results Area 1. The analysis adopts the Water GP's PIR Framework embodied in the flagship report on Aligning Institutions and Incentives for Sustainable Water Supply and Sanitation Services. The analysis also builds on the body of knowledge produced by the Water Global Practice including, the Nigeria WASH Poverty Diagnostic, the working paper on Regulation of Water Supply and Sanitation in Bank Client Countries: A Fresh Look, working paper on Decentralization of WSS Services, PIR case studies and other knowledge products. Due to travel restrictions, the analysis was carried out virtually, primarily through analysis of documentation received from each of the seven participating states in response to specific information requests. Findings of the PIR analysis are summarized below. A SWOT analysis of National and State Government WASH policy and regulation is included in Annex 3.

The PIR analysis of Nigeria's WASH sector is carried out with acknowledgement of the broader institutional context of Nigeria's Federal Government structure. Specific implications of Nigeria's intergovernmental dynamics and challenges on the PIR interventions supported by the Program at the federal, state and LGA levels (including the design of intergovernmental systems) are outlined below. Annex 2 presents the implications of the federal government structure in WSS Sector.

Federal Government Level Interventions:

Implication 1: There are many intergovernmental weaknesses and constraints; The Sustainable Urban and Rural Water Supply, Sanitation, and Hygiene Program (SURWASH) will have to identify and focus on the main binding constraints. SURWASH will have to identify the most urgent binding constraints that can be addressed in the current political economy context. As such, much of the operational focus of SURWASH will have to be placed on activating state-level institutions to pursue and achieve better water and sanitation outcomes.

Implication 2: The WSS sector lacks an appropriate intergovernmental funding mechanism; SURWASH should try to act as a catalyst to address this issue. Given that water and sanitation situation has been declared a national disaster, the national (federal) government ought to "put its money where its mouth is". Indeed, a cost sharing formula set out in The National Water Supply and Sanitation Policy (2000) sets the policy expectation for federal government to provide 30-50% matching funding (i.e., grants) for state

and local water and sanitation infrastructure. While on-granting of SURWASH infrastructure funds should be considered a first-best option, it appears that political economy constraints at the federal level are preventing this, with federal officials expressing a strong preference for on-lending of Bank loan proceeds (implications of on-lending on state-level incentives are discussed further below). On-lending of water and sanitation infrastructure funds should be considered an acceptable but second-best option. Within these political economy constraints, SURWASH should try to act as a catalyst for a future conditional grant mechanism by (a) demonstrating—on a pilot basis—the ability of state governments to improve water and sanitation performance when properly funded and incentivized; (b) to ensure that as much of the capacity building support provided under SURWASH is on-granted rather than on-lent; and (c) promote possible on-granting solutions through other mechanisms, where possible (e.g., supporting the National WASH Fund as an on-granting modality (at least 30-50%), rather than exclusively as an on-lending fund).37

Implication 3: Strengthen the federal role in policy and regulation. FMWR has to transform itself from an implementing ministry (that focuses on managing and implementing federally funded sector projects and externally funded projects) into a ministry that champions and facilitates state and local progress in the sector. This will require strengthen the ministry's role in monitoring the performance of state and local governments (and their respective providers and agencies) in the context of PEWASH. In this regard, SURWASH should consider supporting FMWR in (a) improving vertical sector coordination by launching a registration and reporting platform of all state and local water (and waste water) departments and providers; and (b) requiring state and local governments to report on water and sanitation access (and other relevant sector performance indicators) in a disaggregated manner (LGA by LGA), thereby encouraging "competitive federalism" (as discussed further below) and allowing federal and state governments to better target their resources where the need is greatest.

State Government Level Interventions:

Implication 1: SURWASH should ensure that the state-level incentive is big enough to capture and retain political commitment at the state level (but individual states should not become "too big to fail"). SURWASH must ensure that state-level incentives are big enough to capture and retain political commitment at the state level.

Implication 2: SURWASH should seek to maximize incentives, while minimizing project risks. The lowest risk/highest reward approach to stimulating state-level expansion of water and sanitation infrastructure would be to funnel national-level sectoral funding in the form of grants directly to state-owned water and sanitation agencies and authorities. This would maximize the fiscal incentives on a limited number of actors, while at the same time reducing the possible risks of resources being diverted or held up along the way. Since federal resistance to on-granting WASH infrastructure funds to states may be impossible to overcome (despite it being in line with FMWR's own cost-sharing rule), an on-lending approach is still

37 In most cases, on-lending of Bank resources to state or local governments is a risky endeavor in the absence of a federal guarantee. However, given that the primary source of revenue for state and local governments in Nigeria is formed by unconditional federal allocations, the Federation has a long-standing practice of clawing back loan repayments as a first charge against federal allocations. This makes federal-state on-lending in Nigeria a low-risk approach.

not likely to provide considerable incentive to the state's elected leadership to support SURWASH investments.38,39

Implication 3: SURWASH should leverage competitive federalism. An important benefit of federal systems is that federalism may encourage "competitive federalism" or "yardstick competition": a healthy competition among subnational jurisdictions to effectively serve their constituents, and to copy effective public sector management techniques from successful reformers. SURWASH should leverage this tendency as part of the program's design, for instance, by not guaranteeing funding to participating states for the entire project period. Instead, it is recommended that the program design include an assessment of state performance into the program ahead of the mid-term review. This review would allow one or two assisted states to step into participating by Year 3 (or Year 4) of the program, thus providing a considerable incentive to these states to improve their WASH institutions (even without receiving WASH infrastructure funds during initial years). In addition, the assessment would credibly allow the project to drop any non-performing participating states, which would provide a considerable incentive for states to perform up to par for the duration of the program.

Implication 4: Provide a conditional grant for institutional capacity development. In addition to providing state governments access to infrastructure funding, a core feature of SURWASH will be the provision of technical assistance and capacity building support, not only to the federal government, but also to state governments and state-level WASH institutions. It is suggested that—alongside technical assistance provided in-kind by the project—part of this capacity building support comes in the form of a capacity development grant to state governments.40 Such a capacity development grant would provide resources to funds state-level capacity building efforts, thus reducing (or possibly eliminating) the extent to which the project would place a claim on existing state-level resources. While it is unlikely that a capacity building grant would provide a major fiscal incentive in its own right for states to undertake

38 After all, as long as repayment is delayed by a few years and spread out over a sufficiently large number of years, sitting politicians can claim the electoral credit for the program's benefit without paying the electoral cost associated with the repayment.

39 Among the downsides are that (a) on-lending will change the relationship between the program and the states from states being beneficiaries (under on-granting) to clients (under on-lending), and (b) on-lending resources may have to be channeled through the state budget (rather than being released directly to the state water agency or authority, as approved by the state government), which increases the risk of resources getting stuck in state budgets.

40 As an illustration, capacity building grants might amount to around $100,000-$200,000 per state per year. Participating state governments could receive Capacity Building Grants based on signing MOU and meeting minimum conditions/ eligibility requirements. The discussion whether the capacity building grants should be provided as P4R support or under the IPF component of the project falls beyond the scope of the current note.

specific institutional reforms, the grant is likely to generate goodwill with state authorities and might reduce the risk of governors "leaning" on State Water Authorities (SWAs) for favors.41

Local Government Level Interventions:

Implication 1: Local-level reforms cannot be leveraged the same way as state-level reforms. This approach is simply not an option, due to the large number of LGAs to be engaged (even if SURWASH operates only in a few states).

Implication 2: State-level operation and maintenance requirements should be leveraged to help incentivize LGA behavior. a state-level operation and maintenance requirement could help incentivize LGA behavior in an effective manner: if the state rural water supply and sanitation authority is only reimbursed by SURWASH for results in LGAs that have taken steps to ensure the proper operation and maintenance of sectoral infrastructure, these authorities have a strong incentive to direct their water and sanitation resources to compliant LGAs. If state water authorities target their sectoral investments away from LGAs that are unwilling to make the necessary local-level reforms, this will result in a strong incentive for LGAs to stand up a local WASH section and play a more active role in water and sanitation provision. Without leveraging the state-level operation and maintenance requirements, it is unlikely that SURWASH can bring about enough of an incentivize to effectuate local-level institutional reforms.

Within Nigeria's intergovernmental context outlined above, Table 3 below summarizes the main findings and recommendations of the PIR analysis, specific to Nigeria's WASH sector.

Table 3: Summary of PIR gaps and recommendations

Finding	Recommendations
WASH Policy	
Reform signaling rather than implementation is common in the water sector. Many draft national laws, policies, and strategies for public water provision have not been officially adopted or approved through appropriate channels. Further, once approved, formal policies have not automatically resulted in changes to how systems for water service delivery function in practice (Nigeria WASHPD).	Target Setting and Planning: goal and target setting clarify intentions to achieve policy objectives and strengthen accountability to achieve results. Successful plans should include details on who is responsible for what and when; and should be fully resourced. This in turn enables long term planning and monitoring of progress. Including, emplacing target setting, and monitoring mechanisms can strengthen accountability and transparency and rebuild trust between service providers and citizenry.
Lack of national WASH Sector Strategy. The NAP is a wish list, not grounded in quantitative needs, costs assessments, WASH	Established and Operational Monitoring and Evaluation Frameworks: successful global experience has repeatedly demonstrated M&E and close follow-up from senior leadership as key to successful

41 Furthermore, the provision of capacity development grant could be a steppingstone for more on-granting in the future.

financing principles and rules, service/investments options. Gaps and weaknesses identified in target setting; lack of financial resources; weak capacity; and lack of data availability and monitoring mechanisms.	outcomes. The SURWASH PforR can incentivize federal and state governments in roll-out and operation of a comprehensive M&E framework that also provides data and information on progress publicly to reinforce accountability. Operational Inter-Ministerial and Inter-Governmental Coordination Mechanisms: vertical and horizontal institutional coordination is indispensable to achieving successful outcomes, particularly in the case of Nigeria. Establishment and operation of inter-governmental and inter-ministerial coordination mechanisms is key. This can include well-staffed and resourced steering committees, councils or equivalent unit as well as incentives for specific outputs/achievements of the unit, in addition to the WASH Fund (see rows below).
Institutional Framework	
Lack of clear functional assignments; weak subnational political accountability mechanisms (which may lead to weak political buy-in and ownership at the state and local level); weak state and local administrative capacity; the absence of appropriate intergovernmental funding mechanisms; and the absence of mechanisms for meaningful participation and accountability mechanisms to ensure effective front-line service delivery performance.	National WASH Fund: establishment of conditional intergovernmental transfer mechanisms can be efficient and effective means to distribute funds; enable planning and construction; and motivate performance, provided they are distributed in a predictable and timely manner. Clarifying Role of Federal and State Government: as the bulk of water and sanitation providers and authorities are owned and operated at the state level, the program should largely focus on strengthening state-level WSS institutions. Federal government institutions should focus on setting up appropriate federal / intergovernmental policies (such as the introduction of conditional or matching grants) or strengthen the federal regulatory and oversight role. In this regard, SURWASH should consider supporting FMWR in (a) improving vertical sector coordination by launching a registration and reporting platform of all state and local water (and waste water) departments and providers; and (b) requiring state and local governments to report on water and sanitation access (and other relevant sector performance indicators) in a disaggregated manner (LGA by LGA).
Multiplicity of institutions and agencies in the WASH sector leads to duplication and overlap of roles and responsibilities, which results in inefficiencies and sometimes ineffectiveness of the institutions. Political interference coupled with unsustainable governance structures and practices lead to delays in budgetary allocations, growth and development of an operation and maintenance culture, including	

implementation of capital projects for construction of new works, rehabilitation, expansion and upgrade of existing ones. This leads to non-performance or under-performance of the agencies and water utilities, neglect and consequently depreciation and deterioration of sector assets, and poor service delivery.	Interinstitutional Coordination Mechanisms: strengthened vertical and horizontal institutional coordination mechanisms must be in place considering the large number of state-level service providers and the different institutional functions across the three tiers of government.
Regulation	
De jure, state level regulatory commissions hold responsibility for performance management of WSS services; performance management; licensing of public and private operators; standard setting and monitoring; and tariff review and approval. De facto, not all states have established commissions and those that do, are yet to be fully operational and lack capacity.	Establishment of M&E and Performance Management Mechanisms: data collection and monitoring systems should be in place to monitor performance and progress towards achieving the objectives of the NAP. Making data publicly available can also improve transparency and accountability. Availability of data can also enable target setting and improved planning. SURWASH PforR should create incentives targeted at Federal and State Governments for upkeeping data collection and management. Promoting Financial Sustainability: regulators should play a role in promoting financial sustainability in the sector by gradual introducing cost recovery tariffs and by seeking to improve creditworthiness of SWAs in the long run. Pro-Poor Policy: through target setting, regulators can play a role in motivating pro-poor policy in terms of access targets for service providers, regulation of the informal private sector, and implementation of subsidy schemes. Enabling PSP: regulators should play a role in creating an enabling environment to attract PSP.

Specific findings of the analysis on Nigeria's WASH institutional and policy frameworks are outlined below (a detailed SWOT analysis of the WASH policy framework is included in annex 3):

Complex Intergovernmental Context: Nigeria is administered through a complex and still evolving federal structure, with a federal government, 36 state governments, the FCT, and 774 local governments. States are marked by varying degrees of autonomy from the political center, as well as varying degrees of institutional capacity. The incentives, technical skills, and availability of resources for

public officials to carry out assigned functions are constrained across states and even more so for local government areas (LGAs). Governors are powerful actors at the subnational level since decision making for the use of public resources is centralized in their offices (Nigeria WASHPD). Placing the water sector within this broader intergovernmental context is imperative for successful design of the SURWASH PforR.

Federal vs State Government: Whilst the Federal Government can promulgate national legislation and policies in the WASH Sector, its' legal authority to influence how these are adopted by the states is limited.

Variation in State-Level PIR Frameworks and Institutional Capacity: the analysis reveals some variation in the WSS PIR framework between each of the states including, institutional roles and responsibilities (e.g. sanitation service delivery and regulation); not all states have established a Ministry of Water Resources; differing degrees of autonomy of SWAs; variability in WASH policy; financial arrangements between States and LGAs; financing; tariff setting; and institutional capacity. The level of detailed information available and responses to information requests from each state also shed light on the variation in level of prioritization and understanding of PIR related challenges. In that regard, it seems that Kaduna, Plateau, Imo and Ekiti are amongst the better performing states, with Gombe, Katsina and Delta, perhaps, being amongst the least performing states. In fact, the Nigeria WASHPD highlights the Kaduna SWA for showing improved performance. Design of the DLIs and TA will need to take this in to account to incentivize achievable, yet, impactful reform across all states.

Urban Sanitation Sub Sector: informal private sector operators fill in the gap for sanitation service delivery in urban communities. In addition, regulation of urban sanitation falls under the purview of the Ministry of Environment in some states. SWAs are to assume new responsibilities to deliver wastewater services in urban communities. The role of the informal water vending, well-drilling, and fecal sludge disposal businesses should be better recognized within the existing legal and political frameworks, and thus better integrated, through regulation, into the water and sanitation service delivery chains (Nigeria WASHPD). Design of the PforR should consider potential institutional risks concerning urban sanitation service delivery and regulation in terms of capabilities to deliver and political economy.

WASH Policy: According to Mumssen et al., the process by which policies are designed comprises of several dimensions: (a) problem definition; (b) goal setting; and (c) choice of instruments to adopt (Cochran and Malone 2014). Effective policies are designed to best fit the local political economy and governance context in question. Successful policy incentives require coherence and consistency of intended policy goals, objectives, targets and tools. Mumssen et al. list the following factors as crucial for successful design and implementation of policy: (1) clear goals and targets; (2) financial resources; (3) capacity; (4) program of policy; (5) data and monitoring; (6) inertia and goal consensus; (7) implementing entities; (8) political economy and governance structure; and (9) behavioral factors. Within the intergovernmental context of Nigeria's WASH sector, this would entail close coordination of policy goals, targets and tools across national, state and LGA government levels (Mumssen et al., 2018).

A SWOT analysis of state-level WASH regulatory frameworks was conducted. Specific findings are outlined below:

Regulation: According to the Nigeria WASHPD, although a number of states have adopted legislation establishing independent regulators (de jure), as of 2017 only three states had established independent regulators. However, evidence suggests that these regulators have not been able to take up their functions in practice, as also confirmed by the findings of this assessment. In many cases, the State Ministry of Water Resources serves as the regulator. Performance based contracts between the State Government and SWAs, an additional form of regulation, have been referred to but are yet to be implemented. Most participating states of the SURWASH PforR reference establishment of a regulatory commission in their WSS sector laws, however, de facto, not all states have established commissions. Those that have established commissions, are yet to be fully operationalized. Moreover, regulation of the sanitation sub sector is not always under the purview of the water sector and is the mandate of the State Ministry of Environment.

Establishment of Functioning State Regulatory Commissions: in most states, water regulatory commission are yet to be established and operationalized. Currently, few regulatory functions are carried out by units housed within the state level water ministry.

Performance Management: Generally, there is lack of application of robust performance management mechanisms. For example, in Kaduna State, performance monitoring is current solely carried out through site and community visits.

Lack of Regulation of Private Service Providers and Creating Enabling Environment for PSP: to address the gap in access to reliable WSS services, informal private service providers perform services such as water vending, drilling of wells, fecal sludge disposal etc. Currently, the private sector is largely unregulated. Mechanisms to formalize private service providers and regulate their activities can support state governments in achieving quick wins in expanding access to WSS. Furthermore, PSP and exploring opportunities for PPPs is repeatedly emphasized in policy documents and action plans, thus implying a greater role for regulation in creating the right enabling environment to attract private sector investments.

Role of Regulation in Achieving Financial Sustainability of WASH Sector: Setting regulations for tariff setting is under the purview of the newly established state regulatory commissions, according to the state level WSS laws. Although cost recovery and affordability are frequently mentioned in WASH sector policies and laws, this isn't implemented in practice. This is mainly due to the constraints in increasing tariffs for consumers for poor quality services. For example, a memorandum for water tariff review issued by the Kaduna State Water Sector Regulatory Commission, rejects a requested tariff increase of 260% by the SWA due to: (1) low metering levels of the SWA (only at 9%); (2) high levels of NRW (estimated at 66%); and (3) poor billing and collection efficiency. In its recommendations, the regulator insists that the SWA improve its commercial efficiency as a means to generate the needed increase in revenues (Source: Kaduna State Water Sector Regulatory Commission Memorandum for Review of Water Tariff in Kaduna, 2017).

Recommendations for Regulatory Reform Incentives in SURWASH PforR. Lessons learned from global experience (see Annex 4) demonstrate the following main factors that a newly established regulatory framework/regulators must consider in order to build a solid foundation for optimal regulatory performance:

Information (data collection covering the regulated market);

Reputation (related to regulatory independence, budgetary constraints, reporting requirements etc.); and

Use of simple methodologies (set of rules) applicable to regulated service providers, i.e. general target to be achieved concerning OPEX – with more information it should be possible to identify more targets to be reached.

Overall, the regulatory framework needs to strike the right balance between integration and coordination and between consistency and flexibility along three dimensions: spatial, sectoral and regulatory approach.42

The spatial dimension relates to the allocation of regulatory authority and functions to local, regional, national or international levels. These aspects are particularly complicated for water due to the mismatch between the administrative boundaries (service supply areas) and physical boundaries (catchments) that are central to source management and environmental quality. Governance structures need to provide strong and effective mechanisms for coordination between levels and layers of government. In countries where services are a responsibility at the local or municipal level, regulation is also conducted at the local level. While regulating at this level can help to tailor decisions to local conditions, it also poses challenges because of the limited technical and financial resources of local administrations; the dense social networks in which the actors are embedded; and the profound information asymmetries that result from limited competition. Other countries have developed forms of 'indirect regulation' in which the centre issues guidelines that are implemented by local authorities, or 'consultative regulation' in which municipalities voluntarily submit to regulation by a central oversight body. The evolving regulatory regime in the Philippines described illustrates some of the challenges that may be encountered. Ironically, a clear division of responsibility between administrative zones risks leaving some areas under-regulated. This issue is highly pertinent in rapidly growing cities in the global south, like cases of Ghana and Argentina, demanding regulatory capacity to: i) diagnose location and quantification of peri urban population, ii) verify planning of infrastructure, iii) identify financing sources and costs (adapting tariffs if proceeding), iv) monitor and evaluate services, and v) solve conflicts.

The sectoral dimension refers to potential synergies across sectors to overcome resource constraints and benefit from economies of scale by setting up multi-sector utility regulators. Perhaps more important than economies of scope, is the reputational effect.

The third dimension, regulatory approach, is concerned with the differences in the design and implementation of rules-based regulation, economic incentives and natural resource management. Reforms in regulatory governance should take advantage of existing institutional strengths rather than trying to apply an ideal model. The reform process could begin with an institutional analysis mapping the formal and informal powers of existing institutions against the required functions of water regulation. To address budget constraints many regulators, like OFWAT in the UK, MWSS Regulatory

42 Based on the discussions of the 2nd International Water Regulators Forum of IWA, summarized in Jensen, O. et al, Fit for purpose regulation, Working Paper No.3, November 2015, 2nd International Water Regulators Forum, IWA.

Office in Manila (Philippines) and MEKH in Hungary are funded through a fee levied on regulated companies, thereby reducing the pressure on the public budget. For countries with difficulties in implementing regulation due to resource constraints and small markets one option could be to set up a multi-country regulatory agency with jurisdiction over several neighboring states or states with similar market conditions. Although there do not seem to be any examples of multi-country water service regulators currently in existence, there is experience with multi-country competition authorities, such as the Caribbean Community Competition Commission. Bilateral and multilateral river basin authorities, which allocate resources and regulate environmental quality, are more common. These could potentially provide an institutional basis for multi-country environmental regulation.

Result Area 1: Strengthened sector policies and institutional capacity for improved services

The achievement of Program objectives will require the enactment of necessary institutional, policy and regulatory reforms and enhance the capacity of institutions required for effective and sustainable service delivery, including the FMWR, state and local governments, service providers, technical assistance providers, and community-based organizations. DLIs offer mechanisms that can incentivize such interventions.

The Result Area seeks to incentivize the establishment of the National WASH Fund which the NAP identifies as the key intergovernmental mechanism "to promote a renewed Federal-State partnership towards the credible pursuit of the SDGs." The Fund seeks to improve efficiency in public spending and service delivery through the inclusion of performance incentives and needs-based prioritization mechanisms. It would reinforce the complimentary responsibilities of sector coordination and guidance by the FMWR and service delivery by state institutions. As such, the Fund would facilitate acceleration in the delivery of sustainable and climate-resilient WASH investment projects in participating states that are equitable, effective, efficient and economic in the use of investment, energy, and water resources. The Result Area does not capitalize the Fund,43 but instead incentivizes the FGN to take the critical steps of establishing and operationalizing the Fund, including an adequately staffed and equipped governing body. As a consequence, the Fund should be made to include broad representation from the federating States at Board and possibly management levels to ensure fairness and equitable disbursement and allocation of funds for interventions, assistance programs and projects. Although other Program activities are not dependent upon the Fund's establishment, the Fund is a critical platform to complement the Program's results and reinforce its results-based approach long term. As an intermediate step, critical milestones towards the consolidation and expansion of the PEWASH, for which the financing is to be subordinated to the Fund once established, will also be incentivized.

43 The NWF will be capitalized through the government's own resources.

The Result Area seeks to incentivize the strengthening of the enabling environment for PIR to support state- and local-level policies, regulations and institutions. This will ultimately result in the improved sustainability and efficiency of WASH services that build resilience to Nigeria's climate risks. Based on the analysis of information provided by State Governments, some variation in the WSS PIR framework across each state is evident. The level of detailed information available and responses to information requests from each state also shed light on the variation in level of prioritization and understanding of PIR related challenges. In that regard, it seems that Kaduna, Plateau, Imo and Ekiti are amongst the better performing states, with Gombe, Katsina and Delta, perhaps, being amongst the least performing states. Design of the DLI and TA took this aspect into account to incentivize achievable, yet, impactful reform across all states. Each state will be supported in developing and approving their own PIR plan that outlines a series of annual targets towards the establishment and effective operationalization of state- and local-level ministries, departments and agencies (MDAs). State progress in implementing their PIR plan will be assessed on an annual basis through an annual performance assessment.

Box 1: Principles of Citywide Inclusive Sanitation

Everybody benefits from adequate sanitation service delivery outcomes

Human waste is safely managed along the whole sanitation service chain

Effective resource recovery and re-use is considered

A diversity of technical solutions is embraced, being adaptive, mixed and incremental

Comprehensive approaches to sanitation improvements needed, with planning, technical innovation, institutional reforms and financial mobilization

Cities will need to demonstrate political will and technical and managerial leadership, and to

A large number of federal agencies are involved in sanitation and hygiene activities, yet policy implementation has been limited and ineffective to date, hindered in part by the government's historical focus on water supply. The Program will seek to clarify roles and responsibility. In urban areas, a sanitation authority should be established and operational. A holistic urban sanitation policy should be prepared in accordance with the principles of city/LGA-wide inclusive sanitation (Box 1). States should develop standards and regulations for urban sanitation.

Result Area 2: Improved access to water supply, sanitation and hygiene services

The activities under this Result Area are suitable to achieve the objectives of the Program. This Result Area will support an integrated package of investments to expand access to and the use of WASH services in urban and rural areas and small towns. The Program embraces an LGA-wide approach, whereby participating LGAs will be supported to address critical gaps simultaneously in water supply, sanitation, and hygiene, and within communities, public institutions and public places. It includes the development of priority infrastructure to improve water supply service delivery, support to implement the Clean Nigeria: Use the Toilet Campaign to improve sanitation and hygiene practices, and the development of WASH infrastructure in institutions (schools and healthcare facilities) and public places (markets, motor parks, etc.). Infrastructure planning and design will ensure inclusive access for all Nigerians and directly address climate risks, namely water scarcity, droughts, and floods, using a resilient

design process.44 In addition, Result Area 2 supports relevant state implementing institutions in preparing Performance Improvement Action Plans (PIAPs) to incentivize and track improvements against a number of key performance metrics. The Program will prioritize women while supporting the development of local entrepreneurs, artisans, technicians, and suppliers of spare parts for infrastructure and WASH materials.

Urban Water Supply

The interventions seek to address the problems of underutilization of existing water systems nationwide leading to insufficient capacity in production, distribution and access. The Program will place an emphasis on rehabilitation activities and small scale works that improve the optimization of existing infrastructure. Specific activities will vary based upon state needs, but may include: (a) the expansion of access to improved water supply through installation of metered household connections, public standposts and water kiosks; (b) the rehabilitation of water supply infrastructure to boost production, including the rehabilitation of production facilities and pump and treatment plant components replacement; (c) the improvement of power supply to production facilities, prioritizing the use of renewable energies and improvements in energy efficiency; (d) the rehabilitation of distribution networks, including leak detection and repairs; (e) the installation of bulk, zonal, commercial, and domestic meters; (f) the rehabilitation and furnishing of customer service centers, central stores, and electrical and mechanical workshops; (g) the expansion of water quality testing capacity through the renovation and construction of laboratories; (h) the development of water master plans; (i) the establishment of management information systems (MIS) supported with well-equipped data centers for monitoring, control and management of installed water facilities, water meters, preparation, collation and monitoring revenue collection system, in addition to storing and retrieval of information, data, documents, reports, as-built drawings etc.; and (j) the development of feasibility studies for selected urban centers to identify needs and optimizations. Where feasible, larger-scale works may be undertaken.

Due diligence should be given to the studies and works activities to ensure that consultants and contractors have the adequate skills and capacity to guarantee quality. The different urban water authorities should take into account in their planning the challenges linked to the COVID-19 pandemic (travel restrictions, oversea orders, manufacturing and delivery timelines, etc.). The different utilities do not have adequate qualified technical manpower. There is a need for more technical staff to be recruited to ensure the day-to-day operation service as well as maintenance of good quality for the various components of urban water supply. Customer outreach and sensitization will be essential to address the poor attitude towards bills, repair of bursts or unmetered connections.

Rural and Small Towns Water Supply

Rural water facilities are constructed by federal, state, and local governments, as well as international donors, and to a lesser degree, non-governmental organizations (NGOs), philanthropists, and the private

44 The resilient design process will follow the principles outlined in the World Bank's Resilient Water Infrastructure Design Brief, Building the Resilience of WSS Utilities to Climate Change and Other Threats, and the Decision Tree Framework.

sector. While water facility design and implementation practices vary across implementers, the FMWR has developed a menu of technology options according to a beneficiary community's population. Interventions under the Program will build upon FMWR and state experience of infrastructure development and adopt technologies which are best suited for the Nigerian environment. For example, new handpump construction will use exclusively the Afridev pump, which has proven to be easier to maintain by communities and its parts have the potential for local manufacturing.

Lessons learned from the World Bank's WASH PD and 2019's "Nigeria Rural Water, Sanitation and Hygiene Services: Access and Sustainability" were incorporated. These reports synthesized lessons from the data and from the interventions of the Government and other development partners, such as:

Move beyond policy-making to implementation through concerted efforts to increase institutional strength and capacity at all levels of government, and especially LGAs and WASH committees (WASHCOMs);

Ensure basic institutional structures are in place to support LGAs and WASHCOMS, while allowing for the tailoring of projects to local needs and preferences;

Develop and implement a more cohesive approach to WASH service delivery predicated upon well-designed modalities supported by corresponding government structures;

All levels of government should substantially increase their financial commitment to rural WASH, accompanied by a carefully designed investment strategy;

A comprehensive data collection and monitoring program involving all levels of government must be established to ensure the long-term sustainability of the WASH sector;

Conduct routine monitoring of water points and water schemes to support operators with their day-to-day operation and maintenance as well as the local, state and federal government with planning and policy development.

Interventions build upon recent progress under UNICEF-, AfDB-, and Japan International Cooperation Agency (JICA)-implemented projects to develop institutional capacity at state and LGA level. In particular, UNICEF has provided TA to convert LGA WASH Units to Departments. Interventions also build upon UNICEF-supported WASH Information Management System (WASHIMS) to develop and implement a more comprehensive system that can be used for better decision making at all levels of government.

Sanitation and Hygiene

In rural areas, community-led total sanitation (CLTS) has been adopted to address the high levels of open defecation. However, its emphasis on a non-subsidy approach precludes the participation of the most vulnerable households who face financial hurdles to pay for services, particularly when it comes to improved sanitation facilities. Therefore, access to financing will be important to moving vulnerable households in rural Nigeria up the sanitation ladder. The Call for Action to rethink rural sanitation programming launched in October 2019 advises to use the following five principles to deliver at scale, with equity and sustainability: a) government leadership; b) stakeholder alignment; c) area-wide programming; d) inclusive solutions; and e) evidence-based and adaptive implementation.

There are several options for household sanitation facilities available in the sector. However, there are no standard designs and technical guidelines available. Under the IPF window, the Program could support the development of a menu of technology options and standard guidelines for the construction and rehabilitation of sanitation facilities, with special consideration given to water source and environmental protection, water quality standards, gender and disability inclusion. The potential technologies include single or double pit latrines for rural areas and septic tanks in urban areas. Training and capacity building will need to be given to local masons and artisans to ensure quality construction.

Sanitation and hygiene are plagued by an underlying lack of funding. More advocacy is needed at federal and state levels to highlight the critical role that sanitation and hygiene play in determining development outcomes and increase funding towards facilitating access to improved sanitation and hygiene and eliminating open defecation. At lower levels of government, legislation is required to formally establish WASH agencies, departments and units, all of which necessitate increased staffing. Rural sanitation and hygiene services are typically funded by households themselves. Given that CLTS advocates a non-subsidy approach, access to micro loans and savings products could be critical for making improved sanitation facilities more accessible to the country's poorest. While micro-financing is well-established in Nigeria, the market has not yet fully expanded to sanitation and current micro-financing interest rates seem exorbitant. Alternative methodologies to increasing household-level access to sanitation should also be explored.

Sanitation is generally managed at the household level making asset management more difficult to evaluate than in the case for water. However, the private sector involvement (e.g. toilet business owners and skilled laborers to build latrines, and other private actors to build and manage toilet blocks in public places) is underway. Furthermore, significant steps have been taken under the Clean Nigeria Campaign as well as earlier partners interventions to develop educational materials and hygiene promotion activities designed to raise awareness of the importance of access and asset management at the household level. Under the IPF window, the FMWR will develop an evidence-based gender and child focused social and behavior change communication (SBCC) strategy which will be a national framework for implementing/scaling up sanitation and hygiene in urban, small towns and rural Nigeria45. The strategy will constitute a guiding document and framework for states to develop state-level contextualized SBCC Strategies.

The Program will finance the construction of fecal sludge treatment plants to support the safe management of excreta in urban areas when appropriate and based on the recommendations of environmental and social risk and capacity assessments. Adequate environmental and social screening mechanisms will be put in place to assess such interventions on a case by case basis.

WASH in Institutions and Public Spaces

The Result Area will support the construction and rehabilitation of sanitation facilities and handwashing stations in institutions (schools and HCF in accordance with relevant FMEdu and FMH guidelines) and public spaces (markets, motor parks, etc.) in urban and rural areas and small towns with a focus on child

45 The strategy will take cognizance of the present COVID-19 pandemic and be adaptable to the situation.

and women safety and comfort, accessibility for people with limited mobility, and adequate provisions for MHM. Where necessary, the facilities will be constructed or rehabilitated based on a sector-approved menu of technology options, to be developed through technical support under the IPF window. The Result Area will promote the development and adoption of innovative management models and arrangements to ensure that sanitation cabins are operational and adequately maintained. Financing mechanisms to support the establishment, operations and maintenance of adequate sanitation and hygiene services in schools and HCF are also needed. The interventions will adopt global guidance on WASH in HCF and Schools (WHO and UNICEF). Existing MIS systems to strengthen M&E will be leveraged for improved decision making at all levels of government.

Sustainability

Sustainability challenges will be addressed through various avenues using suitable incentives. DLI2 seeks to incentivize states to adhere to progressively undertake a series of reforms to strengthen their PIR enabling environment, ultimately resulting in the improved sustainability and efficiency of WASH services that build resilience to Nigeria's climate risks. The infrastructure-focused DLIs (DLIs 3.1, 5.1, and 7) incentivize the adherence to standards and codes of practice for high quality design and construction. DLIs 3.2, 3.3, and 5.2 incentivize relevant sector agencies to improve their performance across key metrics critical for service quality and sustainability.

INSTITUTIONAL ARRANGEMENTS

Institutional Arrangements and Capacity

The institutional arrangements in place at the federal and state level are sound to implement the Program. Table 4 below outlines the general institutional roles and responsibilities according to the National Action Plan. Table 5 presents the Institutions responsible for WASH and their functions in the participating states.

Table 4: General WASH Institutional Framework46

Institution	Roles and Responsibilities
Federal Government	Provision of capital investments to support state and LGA institutions.
FMWR, Federal Ministry of Environment and State Governments	While the Federal Ministry of Environment is responsible for the overall coordination of environmental sanitation in Nigeria and the provision of wastewater and fecal sludge management, President Buhari's 2019 Executive Order 009 entrusted the FMWR with leading the national campaign to end open defecation. FMWR is responsible for leading the formulation of national WASH policy and strategy.

46 Source: FMWR National WASH Action Plan

	Through the State Ministries of Water Resources, State Governments adopt national policy and implement state level policy, legislation and institutional framework in line with national policy. They also carry out regulatory functions.
State Government and LGAs	Responsible for urban and rural WSS service delivery.
SWAs	State-level autonomous corporations responsible for urban water service delivery. SWAs are formally accountable to the State Government.
STWSSAs	State-level agencies responsible for WSS service delivery in small towns.
LGAs	In most states, LGAs are responsible for construction, operation and maintenance of rural water supply schemes and sanitation facilities in rural areas. In some states, Water, Sanitation and Hygiene Departments have been established to oversee WSS service delivery and provide support to communities in operation and management of WSS schemes. Other LGAs have established Water, Sanitation and Hygiene Committees (WASHCOMs), which are responsible for O&M of WSS activities at the community-level. Many states have also established State RUWASSAs, which are responsible for supporting LGAs in management of WASH interventions. SWAs hold responsibility for service provision to rural areas in some states.

Table 5: Institutions responsible for WASH and their functions in the participating states

		Responsible Institutions						
		Delta	Ekiti	Gombe	Imo	Kaduna	Katsina	Plateau
Functions	Sector Policy Direction and Sector Coordination	Ministry of Water Resources Development Delta State Water and Sanitation Sector Coordination Committee Local Government Technical Committee on Water and Sanitation	Ekiti State Ministry of Infrastructure & Public Utilities	Ministry of Water Resources And Environment	Ministry of Public Utilities State Steering Committee	Urban Water Supply: Ministry of Public Work and Infrastructure Rural WASH: Ministry of Local Government Affairs Kaduna State Infrastructure Development Council State WASH Steering Committee	Ministry of Water Resources	Ministry of Water Resources and Energy
	Regulation	State Water Regulatory Commission	Ekiti State Water Sector Regulatory Unit (Agency)		Regulator Performance Based Monitoring and Review Committee (PCMRC)	Kaduna State Water Service Regulatory Commission Ministry of Environment (Sanitation)		Water Sector Regulatory Commission
	Service Delivery	DESUWACO STOWWASSA RUWASSA Private Sector	Ekiti State Water Corporation Ekiti State Rural Water Supply and Sanitation Agency Ekiti State Small Town Water Supply and Sanitation Unit Private Sector	Gombe State Water Board RUWASSA	ISWSC STOWASSA RUWASSA Private Sector	Kaduna State Water Corporation (KADSWAC) Kaduna State Rural Water Supply and Sanitation Agency Private Sector	Katsina State Water Board RUWASSA Private Sector	Jos Water Services Corporation Plateau Municipal Water Supply and Sanitation Agency Plateau Rural Water Supply and Sanitation Agency Private Sector
	Support O&M and Sustainability	WASHCOMs WCAs	WASHCOMs WCAs	WASHCOMs WCAs	WASHCOMs WCAs	WASHCOMs WCAs	WASHCOMs WCAs	WASHCOMs WCAs
	Sector Support (e.g. Sanitation)	Other MDAs Delta State Task Group on Sanitation (DSTGS) CSOs and CBOs	Other MDAs (EKWMA, SEPA) CSOs and NGOs	Other MDAs	Other MDAs WCF CSOs	Other MDAs (Ministry of Health, SUBEB, KEPA)	Other MDAs (State Ministry of Justice, State House of Assembly House Committee on Water Resources, Ministry of Education and its Parastatals, Ministry of Health and its Parastatals, Ministry of Finance and Budget, Ministry of Environment and its Parastatals, All Local Governments and their LGA WASH Departments in the state) The media NGOs/CBO	Other MDAs CSOs

Capacity gaps vary from state to state and subsector to subsector. In general, state agencies have proven track record to plan, design, execute and monitor project related to the following subsectors: urban water supply, small towns water, rural water supply and rural sanitation. Overall, capacity to deliver on urban sanitation is limited. Reforms for urban sanitation service delivery are either ongoing or were recently completed in certain states. This could constitute a risk in the implementation of the urban sanitation activities as they have not shown proven track record to implement projects at scale. At the federal level, the lack of clarity regarding the lead institution responsible for sanitation could jeopardize progress towards preparing a holistic national policy on sanitation to consolidate the necessary institutional and regulatory reforms which take into consideration the principles of city/LGA-wide inclusive sanitation. Nonetheless, such conflicts were not noted at the state level. WASH sector coordination at the state level seems to be well established through lead ministries or steering or technical committees. Nonetheless, coordination platforms would need to be strengthened under the Program. Figure 3 and Figure 4 present the proposed implementation arrangements at the federal and state levels as well as the gap filling measures to carry out the Program.

At the Federal level, the FMWR is responsible for overall WASH policy reform, the allocation of national-level financial resources, and coordination between states, development partners, and other key

stakeholders. While the PEWASH Coordination Office maintains responsibility for overall rural WASH subsector coordination, investment management, and oversight, a Federal Steering Committee (FSC) will be responsible for overall Program coordination and policy guidance and will approve the Program annual work plan and budget, prepared by the federal project implementation unit (FPIU). The FSC will also monitor and evaluate the performance of the FPIU and overall Program results. The FSC is chaired by the Honorable Minister of Water Resources and includes all participating state commissioners of water resources or equivalent, and representatives of the Federal Ministries of Finance, Budget, and National Planning; Education; Environment; Health; and Women Afffairs and Social Development. To minimize delay in Program implementation, decisions before the FSC must be taken no later than 15 days after submission. The FSC will meet annually to review the overall performance of the preceeding year and planning for the following year. The FPIU will be responsible for overall Program management and implementation, and jointly with the World Bank Program team, the development of a detailed verification protocol.

The FPIU's key functions are to: (1) administer capacity assessments of relevant state agencies and implement required TA to additional (non-Program) states to strengthen required capacities for Program implementation; (2) lead Program communications and outreach activities in accordance with the Program's communications strategy described in the POM; (3) lead M&E activities for the Program to assess overall performance and monitor results, as well as identify Program-related gaps to be addressed through TA; (4) ensure compliance with the ESSA, PAP, procurement and fiduciary management guidelines, and other World Bank standards; (5) oversee DLR verification through the engagement of a independent verification agent (IVA); (6) disburse annual PforR financing to the states on the basis of the IVA's Results Verification Report; (7) provide accounting and reporting for the Program; (8) act as the interface with the Bank's supervision and implementation support team; and (9) act as the secretariat for the Federal Steering Committee. Its work will be guided by the POM. The FPIU's capacity to carry out its responsibilities will be strengthened through the TA component, which may involve the hiring of required specialists or consulting firms.

At the State level, the State Ministry of Water Resources (SMWR), or equivalent state-level agency responsible for WASH, will lead state-level policy reform, service delivery improvement, and sector coordination. To support the implementation of the Program in each state, a state steering committee (SSC) will be established for overall state-level coordination and policy guidance in each of the participating states. The membership of the committee shall include representation from the key sector institutions responsible for achieving the DLIs and the following state ministries, or equivalent: Water Resources; Finance, Budget, and Planning; Education; Environment; Health; Women Afffairs and Social Development; and Local Government and Chieftaincy Affairs. The state water commissioner or equivalent will chair the state steering committee. The SSC will approve the Program annual work plan and budget, prepared by the State Program Implementation Unit (SPIU), and monitor and evaluate the performance of the SPIU and overall state-level Program results. To minimize delay in Program implementation, decisions before the SSC must be taken no later than of 15 days after submission. The SPIU, meanwhile, will be responsible for management and implementation of state-level Program components, as well as for supervision and M&E of LGA-level activities. It will also implement TA to state and local sector institutions under the IPF component.

Although each state's SSC and SPIU will be led by the SMWR, both entities will be composed of representatives of the state-level institutions responsible for each subsector. Although particular sector institutions vary from state to state, they will generally include the following, or equivalent: (1) the RUWASSA for rural WASH, (2) the STWSSA for small town WASH, (3) the SWA for urban water supply, (4) the state urban sanitation authority, and (5) the state WASH regulatory function. State Ministries of Environment, Health, Education, and Social Development and Women Affairs as well as any other institutions with responsibility for relevant subsectors, will also be included.

Extensive state-level communication and outreach activities will support Program implementation. The NGF will be leveraged to regularly update governors on the Program to generate competition between states and demand from other states to join the Program. Starting during Program preparation and spanning through the implementation period, the Bank will work alongside the SPIUs to organize regular communication and outreach activities with key state-level stakeholders responsible for implementation to both keep the Program as a high priority for them and to clarify their responsibilities. It is envisaged that at least twice a year, there will be a forum convening peers from all states to collectively review progress (based on the results of the APA), showcase success stories, learn from implementation difficulties, and plan future activities. The forum will leverage the existing communities of practice of state commissioners of finance, budget and planning.

The Bank's implementation support for the Program will account for the scale of the Program, the institutional capacity of implementing agencies, associated risks, and the need for close monitoring and continued TA to facilitate timely responses to implementation challenges across participating states. Implementation support will include: (a) formal joint review missions (JRM) on a quarterly basis, or more frequently if needed; (b) monthly technical meetings and field visits, when possible, to provide oversight and TA of capacity building, M&E, communications and outreach activities, and on audit and FM reporting requirements; (c) on-demand external technical expertise; and (d) audit and fiduciary reporting (including safeguards, procurement, and financial management). Support will also be provided by relevant World Bank GWSP-supported initiatives, including global support for implementation and capacity building on PIR, utilities turnaround, Citywide Inclusive Sanitation (CWIS), and WSS information systems (IBNET for urban utilities and SIASAR for rural and small-town services). See Annex 7 for additional detail.

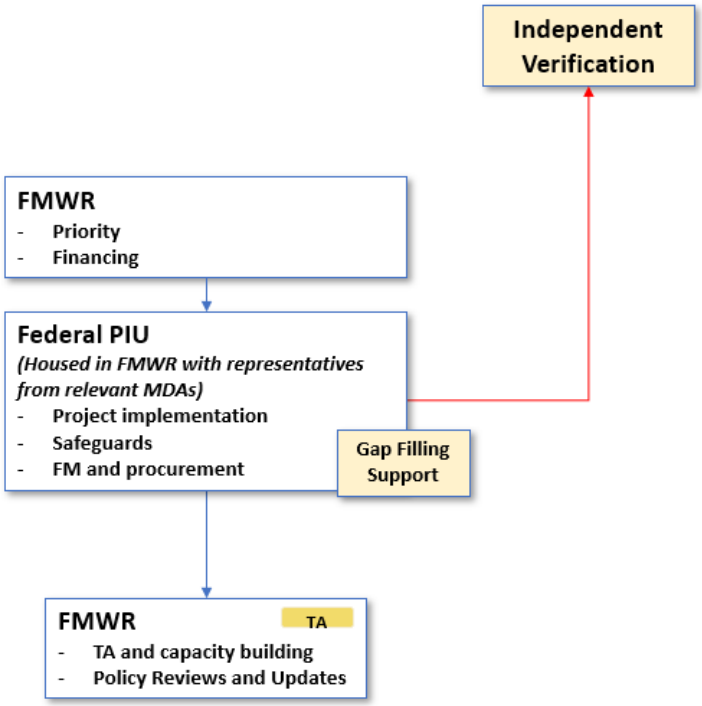


Figure 3: Implementation Arrangements at the Federal Level

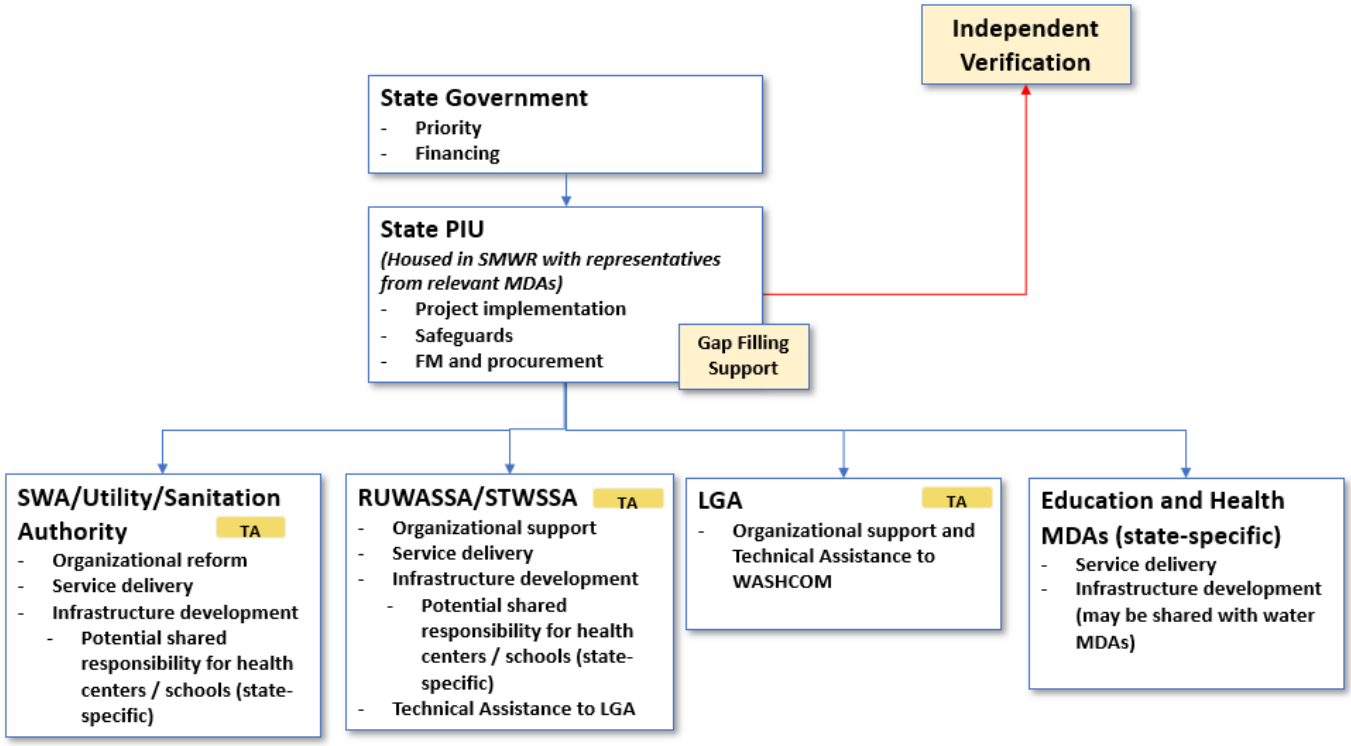


Figure 4: Implementation Arrangements at the state level

Borrower Commitment

The program is a high priority for the government. The NAP was launched by President Buhari in 2018 as the Government's overall strategy and vehicle for investment and sector reform to attain the SDGs for WASH following the declaration of a state of emergency in the WASH sector. The Clean Nigeria: Use the Toilet Campaign was launched in 2019 by the Vice President. The FMWR has demonstrated its commitment to the Program by establishing a FPIU. At the state level, commitment and proactivity have been noted at all levels including at the Governor's level. Priority activities that have been identified to be implemented under the Program present different levels of readiness. Studies at different levels are available for most of the infrastructure activities.

Institutional Strengthening under the 'Program'

The Technical Assessment, the Environmental and Social Systems Assessment (ESSA), and the Integrated Fiduciary Systems Assessment (IFSA) carried out by the World Bank identified a number of capacity gaps and institutional deficiencies that should be addressed to support Program implementation in participating states. The Program will finance technical support activities to address these gaps and deficiencies through the Program's IPF financing window. The technical assessment identified human and material resources needs for the implementation of the Program. Technical support should be provided at all the federal and state levels to ensure that the Program activities will be properly implemented and that results will be sustained. Capacity building activities will be provided by in-country institutions, such as the NWRI, and consultants embedded in the relevant implementing agencies. Activities may include a mix of approaches, including embedding specialists within the relevant institutions to promote knowledge and skills transfer, just-in-time support, curriculum-based structured learning, central and regional technical workshops, and regular peer learning forums with different sector stakeholders for common needs across states. The NWRI has unique capabilities and extensive experience in organizing and delivering capacity building and learning activities to states. The objective of the TA is not to create parallel implementing entities but to strengthen the different institutions and sustain the capacity acquired during the Program implementation.

EXPENDITURE FRAMEWORK

Expenditures

The budgetary and accounting information provided by the participating states shows that systems are in place to track the expenditures incurred under the Program using accounting policies consistent with national and state public sector policies and standards. Nevertheless, close implementation support will be provided by the Bank to support states to strengthen the arrangements and modalities to produce the Program Annual Financial Statements. The expenditure framework presents the share of the Program's expenditures that is allocated to operating and capital expenditures. The Program expenditure framework has been summarized and shows the specific budget codes and lines under which transactions will be processed (Annex 6). A detailed expenditure framework was prepared showing the different Program's interventions and sub-interventions (if applicable) in each program state (implemented by the different agencies) or implemented by the FMWR. This detailed version shows clear alignment with the results areas and will be included in the POM and will be used to track the Program expenditures during implementation and to facilitate the audit of the Program's Financial

Statements as well as the overall expenditure reconciliation at the end of the Program. Expenditures under RA1 are predominantly operational costs as well as procurement of goods and services whereas expenditures under RA2 correspond predominantly to procurement of works and services.

Accounting under the Program will be done by the FPIU and the Public Financial Management Unit (PFMU) of each State, with the implementing agencies also maintaining their books of records. Financial reporting under the Program will be done bi-annually by the SPIU (with support from the PFMU) of each State, and consolidated financing reporting will be done by the FPIU. Further details on accounting, financial reporting, treasury management and funds flow can be found in the IFSA report.

Program Financial Sustainability and Efficiency

Challenges in financial management across Nigeria's intergovernmental system combined with low revenues have undermined financial sustainability of the WASH sector. Frequent delays in transfers from the Federation Account Allocation Committee to state governments, their major source of revenue, lead to delays in budget appropriations and project implementation. States rely on intergovernmental transfers from the federal government. Poor predictability in the budget amount and timing of transfers results in cash rationing and discretionary decision making by the governor. Data from Nigeria States' Fiscal Database indicate that the average expenditure for housing and community affairs (including WSS) ranged between 42-62% of the approved budget between 2008 and 2013. Furthermore, the federal government does not set targets or provide guidance to states regarding resource allocation to WSS.

The 2011 PEFA documents suggest low execution rates for state capital budgets. Procurement and management of capital investments is largely centralized, with decisions on large and medium contracts directly under the purview of the governor. Historical data for budget releases and budget execution in the participating states revealed varying degrees of performance depending on the nature of funding (counterpart versus donor funded) and nature of expenditure (CapEx versus OpEx). The analysis and discussions showed that low budget execution rates in many instances were a result of low rates of budget releases (detailed tables for budget releases and budget execution are provided in Annex 7).

The Program is aligned with the Government's programs objectives and resources allocations in the different state budgets. The Program will mostly be financed by the World Bank loan as shown in Annex 6. Close monitoring during supervision will be paramount to ensure that the necessary resources are made available to the implementing agencies when required.

Low investment levels coupled with poor cost recovery and low collection rates are insufficient for O&M of existing infrastructure, let alone expansion. Between 2006 and 2010 (the latest available data), Nigeria's investment in WASH capital expenditure was on average 0.32 percent of GDP, lower than the regional average of 0.70 percent and wholly inadequate to achieve the SDGs: through 2030, state governments and the FGN would have to invest an estimated 1.30 percent of GDP annually on capital expenditure alone. Furthermore, innovative approaches to increasing sector financing through the private sector have yet to be seriously explored, such as through the establishment of enabling laws and regulation. The WASH sector continues to be plagued by various challenges as summarized below which impede financial sustainability and efficiency.

SWAs are legally mandated to collect tariffs for water services. However, tariff collection practices vary state by state. For the top performing 20% of SWAs, operational cost recovery is close to the African regional average. However, the bottom 20% of SWAs cost recovery is close to zero. Due to poor tariff collection rates, state governments must fund SWA operations, expenses and salaries, compromising the SWA's financial autonomy. A 2015 SWA performance assessment found that almost 50% of SWAs do not have the authority to decide how to allocate their revenue, and only 26% have discretion on spending. For the remaining 24%, decisions are made jointly between the SWA and state government.

As the Program will mostly rely on public investments, it will be essential to build in incentives for delivering the Program in the most efficient way possible. The unit costs used to estimate the costs of access to WSS will need to be closely examined, so as to reflect efficient market costs. They were based on a global study conducted by the World Bank47 and estimates provided by the FMWR. Unit costs are relatively high and vary largely from state to state. A detailed study would need to be conducted to find cost efficiencies, both for capital investment and operating costs. Tariffs and billing and collection rates are low. A revision of the tariff structure is necessary to cover costs of production and take into account inflation. The DLIs have been designed to eliminate cashflow constraints for the implementing agencies to be able to implement the Program activities. Given that the exact localities where the Program will be implemented have not yet been defined, there are no detailed studies on which to rely for estimating such costs. There is always a risk that, for a Program of this scale undertaken with external financing, contractors seek to apply a mark-up on costs. A full review of detailed designs will be needed to refine the estimates of unit costs provided (these could vary depending on technical considerations) as well as unexpected construction delays. The current COVID-19 pandemic has also shown to exacerbate shocks in the construction and manufacturing markets. Nevertheless, large-scale procurement undertaken by the Program's executing agency is expected to generate savings, by allowing larger works packages to be bid out.

Advances up to a maximum of 25 percent of the notional allocation for the federal and each participating state will be disbursed to FPIU upon effectiveness of the operation. The funds will be on-lent to the participating states upon execution of the subsidiary agreements. The advance will be adjusted against amounts due to the federal and participating states for verified DLI achievement. In the event the advances from the Bank exceed the payments to be made against achieved and verified DLIs or exceed the actual expenditures incurred under the PEF, the excess advance will have to be refunded to the Bank. This will be specified in the Subsidiary Agreements.

RESULTS FRAMEWORK AND MONIORING AND EVALUATION

Monitoring and Evaluation of the Program

The Program M&E system will be based on the Program Results Framework to monitor activities, outputs, and intermediate outcomes. Monitoring of the indicators will be completed annually during Program implementation to course-correct, if necessary, to achieve the PDO. A mid-term review by the

47 Hutton, Guy; Varughese, Mili. 2016. The Costs of Meeting the 2030 Sustainable Development Goal Targets on Drinking Water, Sanitation, and Hygiene. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/23681 License: CC BY 3.0 IGO.

Bank will be undertaken before the third year of implementation to take necessary corrective measures in the M&E system. The federal and state-level PIUs will be responsible for the M&E function. The PIUs will be strengthened to undertake this function with the recruitment of dedicated M&E specialists and the organization of regular meetings to facilitate knowledge sharing, review progress, identify and address any weaknesses, and propose modalities for scaling up successes beyond the Program.

The indicators have been proposed to align with the theory of change (Figure 5) to reach the different intermediate outcomes and objectives of the Program. The DLIs were designed to create clear incentives for Program implementation and achieve enhanced WASH service delivery.

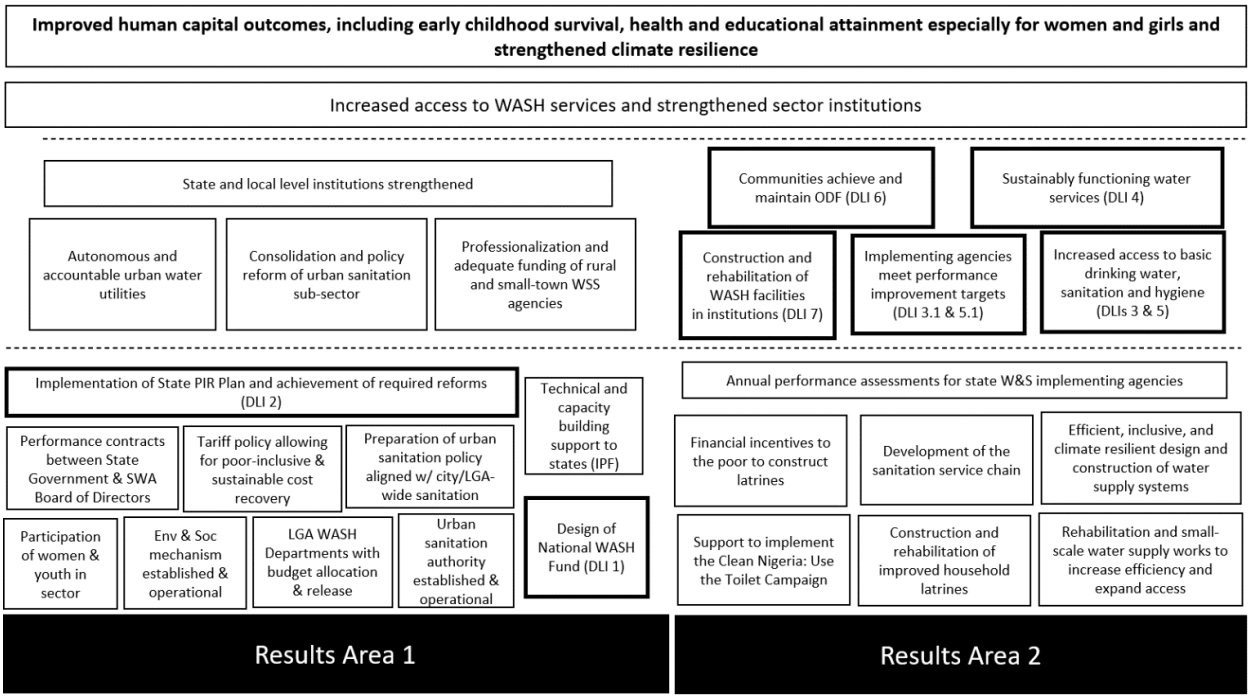


Figure 5: Theory of Change

The Program will leverage on the efforts under implementation and the routine monitoring activities to establish a comprehensive sector-wide data collection and monitoring program which will involve all levels of government. The program will facilitate the long-term sustainability of the water, sanitation and hygiene (WASH) sector and support decision-making in policy formulation, planning and resource allocation. It will be underpinned by a simple, updated, and comparable MIS that not only tracks the physical condition of infrastructure, but also gathers data on access, service quality, and sustainability of service provision. This real-time MIS will be complemented by the FMWR annual WASH sector survey WASH National Outcome Routine Mapping (NORM), which was first conducted in 2018 with support from the World Bank and UNICEF and measures relevant sector indicators at the national and state level.

In addition to these national monitoring efforts, a qualified IVA will be contracted throughout the Program period to provide independent verification and confirmation of the results reported by implementation agencies. The IPF will finance the engagement of an IVA throughout the Program period to undertake verification of the achievement of DLIs across the RAs in all participating states. The FMWR

is preparing a detailed verification protocol and TOR to engage the IVA using the agreed procurement process and supervise and manage them in line with the POM. The results of the annual verification exercise as submitted by the IVA and validated by the FMWR will serve as a basis of annual disbursement after the World Bank task team has provided necessary concurrence. In addition, the IVA will provide a quarterly report on the progress of E&S risk management activities to assess compliance with relevant policies and requirements.

Results Framework and Disbursement Linked Indicators

Seven (7) DLIs grouped into two results areas were identified to incentivize the achievement of results. The DLIs intend to incentivize the achievement of tangible outputs and outcomes and strengthen the institutions that support the delivery of WASH services. The DLIs have been developed according to the following criteria: (a) importance for successful Program implementation; (b) potential to incentivize improvements within the Government programs; (c) practicality and cost effectiveness of verification; and (d) the Government's capacity to achieve the DLI during the Program implementation period. The DLIs are presented in Table 6.

Table 6: Disbursement-Linked Indicators

Name		Amount
		IDA US$ million
RA 1: Strengthened Sector Policies and Institutions for Improved Services		40.0
DLI 1	Design of National WASH Fund to enable its establishment.	5.0
DLI 2	Design, adoption and implementation of State PIR Plans and achievement of annual targets.	35.0
RA 2: Improved Access to Water Supply, Sanitation and Hygiene Services		600.0
DLI 3	People provided with basic drinking water service under the Program.	233.5
	Sub-DLI 3.1: Performance improvement of state water supply implementing agencies.	52.5
DLI 4	People with access to a sustainably functioning water service.	33.3
DLI 5	Households with improved sanitation facilities constructed or rehabilitated under the Program.	156.1
	Sub-DLI 5.1: Performance improvement of state sanitation implementing agencies.	$52.5
DLI 6	Communities having achieved community-wide sanitation status (ODF+) or number of ODF+ communities having maintained their status.	16.6

DLI 7	Schools and healthcare facilities with functional, improved water supply, sanitation and handwashing facilities constructed or rehabilitated under the Program.	55.5

RISK ASSESSMENT

Risk Ratings, Assessments and Mitigation Measures

The risk assessment is informed by the results of the technical, fiduciary, and environmental and social systems assessments. The overall risk rating of the operation is Substantial. Risks related to sector strategies and policies, technical design of the Program and institutional capacity for implementation and sustainability as well as their respective mitigation measures are presented below.

Sector strategies and policies: The risk is rated Substantial. In recent years, the FGN has demonstrated increased political will in tackling the crisis in Nigeria's WASH sector. Renewed political commitment by the President to achieve universal access to WASH can galvanize the momentum necessary to address critical bottlenecks in the sector. However, existing strategies lack sufficient detail for implementation, and the government has a history of reform signaling. National laws, policies, and strategies are often adopted but not properly implemented, therefore failing to achieve results on the ground. At the state level, political will varies, as do institutional arrangements, strategies, and policies. Since states are responsible for WASH service provision, Nigeria's ability to attain its WASH sector goals depends upon state adoption of the Federal strategy. Further, the number of sector institutions responsible for implementation adds a substantial management and coordination risk, especially at state level. This risk is mitigated through the rigorous and transparent state selection process conducted against established eligibility and readiness criteria that help ensure that participating states demonstrate the necessary political commitment, policy environment, ownership and capacity required prior to investment. In addition, TA will be provided to all relevant levels of government to build capacity and strengthen coordination.

Technical design of the Program: The risk is rated Substantial. While the actual technical design of infrastructure and related activities under the Program are of moderate risk – they are largely consistent with the regular activities of the implementing agencies – the Program's technical design is rated substantial due to lack of prior results-based lending operations in Nigeria's WASH sector. The Program will primarily be implemented at the state level, with state agencies responsible for the design and implementation of activities under Results Area 2. Given the complexities and the heterogeneous technical capacity of state agencies, potential challenges include ensuring proper resource allocation, effective program implementation, infrastructure quality, and M&E. To mitigate these risks, a central SPIU will coordinate the activities in the state and will require predetermined minimum capacity levels. Local, state, and federal governments will work together in developing and implementing standard guidelines for a sector-approved menu of technology options. The Program will support sector institutions, service providers, private sector actors, and communities in developing their technical skills to properly construct, install, use, and maintain relevant infrastructure, as relevant. Furthermore, the Program will seek to avoid distrust by publicly disclosing beneficiary targeting mechanisms, conducting

regular stakeholder consultations, and implementing communication and outreach strategies that engage communities in planning and oversight.

Institutional capacity for implementation and sustainability: The risk is rated Substantial. Institutional arrangements and capacities of sector institutions vary greatly across states. While some states have a Ministry of Water Resources, others place responsibility for WASH alongside other sectors, such as a Ministry of Public Utilities or a Ministry of Infrastructure. Some states have LGA WASH units, while others have fully converted them into WASH departments. Most of the state-level agencies, with whom implementation responsibility falls most heavily, lack experience in implementing large Bank-financed projects. These issues render large investments at the state level an inherently risky activity. To mitigate these risks, a central SPIU will coordinate activities with an obligation to develop sufficient capacity in project implementation, E&S, FM and procurement. The SPIU will be strengthened by TA under the IPF component. During implementation, the FMWR will provide oversight through a holistic M&E structure and a credible results-verification mechanism. To strengthen the sustainability of investments, the Program supports the strengthening of relevant sector institutions.

PROGRAM ECONOMIC EVALUATION

Rationale for Public Provision or Financing

Access to WASH services is critically low in Nigeria compared to regional averages. As low access levels severely hamper the overall economic productivity of the nation, the cost of no action is substantial. The multisectoral benefits expected from the provision of improved WASH services, particularly in education, health, nutrition, poverty reduction, and overall economic growth, justify the use of public funding. In addition, the proposed Program targets unserved households that are most deserving of public sector support. These households, in most cases, represent the poorest and most vulnerable, are frequently affected by emergencies, and are served by health facilities and schools without adequate WASH services.

The WASH sector in Nigeria has been characterized by insufficient investments with underfunding and inefficient resource utilization among the major contributing factors. It is estimated that Nigeria should triple its investment in the WASH sector to achieve the SDG targets by 2030. Average investments stand at 0.32 percent of GDP annually. Public financing is essential to achieve the objectives of the NAP by 2030. The total investment needs through 2026 of federal and state governments are estimated at US$25 billion, which is equivalent to annual sector investment of approximately US$5 billion, or 1.3 percent of GDP. The WASH sector is in a state of emergency and inadequate WASH in Nigeria leads to 73 percent of the total burden of enteric infections and 255,000+ preventable deaths each year. Public financing is essential to scale up WASH services especially in rural areas where access is lagging. Access to sanitation and hygiene is also lagging and Nigeria is set to become the country with the most open defecators in the world. Financing in WASH is associated with health, time saving, and economic benefits especially for women and girls.

Economic Evaluation of the ‘Program’

The economic analysis confirms that the PforR Program will generate positive economic returns. A cost-benefit analysis is used to assess the economic viability of the water supply and sanitation interventions and their sensitivity to key variables. Benefits and costs are discounted at six percent over a period of 25

years (2021-2045). The potential economic benefits that have been quantified include: (1) increased household income due to time saved in fetching water; (2) increased income gained as a result of reduced absenteeism of the working age population and caretakers due to reductions in diarrheal illness; (3) reduced household health-related expenditure resulting from decreased prevalence of diarrheal disease;48 and (4) an annual net emissions reduction of 104,719 tons of carbon dioxide equivalent (tCO2-eq). The Program's resilience against potential risks that may result in implementation delays, cost overruns, and a reduction in Program benefits is assessed by estimating the amount by which the estimated cost would have to increase or the estimated benefits would have to decrease for the Net Present Value (NPV) to be zero. The results of the Program's economic viability as measured by the NPV, the Internal Rate of Return (IRR), and its sensitivity to cost increases and benefit reductions are summarized in Table 7.

Table 7: Summary of Program Net Present Value (NPV) and Internal Rate of Return (IRR)

No.	Scenario	NPV (US$ Million)	IRR (%)	Revenue reduction or cost increase from base case (%) for NPV=0
1	Economic Base Case Water Supply	851.95	33.96	Over 39.35% revenue reduction and Over 49.79% increase in cost
2	Economic Base Case Sanitation	39.22	18.72	More than 16.79% reduction in revenue and over 20.17% increase in cost
3	Economic Base Case (WS+S)	891.16	26.35%	

The analysis yielded an NPV for the program of US$891.16 million and is positive for both water supply and sanitation. The IRR is estimated as 26.35 percent, demonstrating the Program's economic viability as it is greater than the discount rate. It is important to note that this analysis does not include other positive externalities that are not easily quantified, including (1) the increased educational attainment of girls due to time saved in fetching water and proper sanitation and hygiene facilities; (2) increased capacity to manage the risks posed by the COVID-19 and other future pandemics and similar

48 Nigeria's DHS 2018 estimated that the provision of improved water supply services would reduce the prevalence of diarrhea in beneficiary communities by an average of 30.6 percent, while improved sanitation would reduce it by an average of 29.4 percent.

emergencies through improved critical WASH services; (3) positive impacts on business growth; and (4) and the decrease in mortality.

The data collected from states on efficiency of SWAs revealed the very low operational cost coverage ratio of about 30%. This is partly due to the tariff structure which is very low or non existent49. Most poor consumers accessing SWA are provided water through standpipes or public taps, some of which charge lower tariff and others do not charge at all. A flat tariff for a connected customer can be as low as $1.20 a month50. However, those relying on alternative source can pay a bulk rate between $3 to $8 per cubic meter51. Customers cope by purchasing water in small volumes – usually 20 liter plastic cans - that retail form $0.15–0.25. The resulting expenditure is estimated at 20 percent of typical household incomes. The Program is expected to contribute to the improved financial sustainability of utilities through increased operational efficiency, reduced non-revenue water (NRW), increased billing and collection efficiency and increased average tariff levels, therefore reducing the fiscal burden on the state governments52.

From its Water supply interventions the proposed program resulted in an annual net emissions reduction of -64,474 tons of carbon dioxide equivalent (tCO2-eq). due to a combination of energy efficiency gains from NRW reduction and improved pumping, as well as shifting from diesel- and grid-powered pumping towards greater use of renewable energy sources. Similarly, from the sanitation interventions the program has resulted in an annual net emissions reduction of -40,245 tons of carbon dioxide equivalent (tCO2-eq) from investments in septage treatment, upgrading latrines, and using treated sludge as a fertilizer replacement. The global benefits of reduced GHG emissions due to the proposed program is estimated using the Social Values of Carbon recommended for World Bank projects. The net shadow monetary value is added to the programs incremental financial cash flows and the economic return is recalculated. With consideration of the carbon shadow pricing, the NPV for the program has increased by US$79.5 million using the upper bound value and US$ 11.8 million for the lower bound.

---

49 According to NORM II 18 percent of households pay some form of tariff to get water from their communal (main) water sources. Tariff collection in rural areas is two times less than in urban areas as only 14 percent households characterized as rural pay for water collection compared to 30 percent of households in urban areas.

50 A household earning a disposable income equal to the minimum wage (US$77/month) can afford up to US$ 3.85/month (5% of his/her disposable income) for water bill per month. With five members and 40 litter per capita per day the household consumes 7.2 M3/ month and with 5% of his/her income can afford up to US$ 0.53/m3.

51 Source: (Olajuyigbe & Fasakin, 2010).
http://documents.worldbank.org/curated/en/187701499877134252/pdf/115782-PPAR-P071075-PUBLIC.pdf

52 International Benchmarking Networks for Water and Sanitation Utilities (IBNET) estimated that during 2011 to 2019 the average percentage of government transfers over total operating revenues in the participating states is about 40 percent.

Bank's Value Added

The proposed Program will address all four pillars of the FY21 to FY25 Country Partnership Framework (CPF). In particular, the Program is identified as the principle large scale financing and support towards core objective 4 "Increase Access to Basic Water and Sanitation Services," housed under the "Investing in Human Capital" pillar. Improved access to WASH services would significantly reduce critical human capital deficits by: (i) improving health and nutrition outcomes through reduced prevalence of water- and excreta-related diseases, (ii) improving educational outcomes through reduced absenteeism and drop-out rates, and (iii) reducing the risk of health care-associated infections. The Program will also contribute to the other three pillars of the CPF. The transparent planning and utilization of public resources through increased accountability in service delivery can help break the vicious cycle of low trust in the public sector and help fundamentally in "Strengthening the Foundations of the Public Sector" – the first pillar. Simultaneously, the Program will boost employment and economic opportunity directly through labor-intensive interventions and indirectly as a fundamental input for job creation, therefore "Promoting Jobs and Economic Transformation and Diversification." Finally, ensuring a reliable source of water supply for Nigerians and the incorporation of resilient design to address the risks posed to WASH services by climate-induced drought and flood, as applicable in target regions, will curtail a major source of conflict and build resilience to the threats of climate change ("Enhancing Resilience") while addressing key elements of the National Adaptation Strategy and Plan of Action on Climate Change for Nigeria (NASPA-CCN; 2011) and the country's Nationally Determined Contributions (NDCs) towards climate adaptation.

RECOMMENDATIONS

The technical assessment identified the following recommendations which will be detailed in the POM:

The Program should prioritize rehabilitation of water systems and schemes over new construction given the high rate of failure and the nonfunctionality of almost half of the existing water points and schemes in Nigeria; in urban areas, the Program should prioritize investments that ensure that existing infrastructure is used effectively as opposed to new construction;

Reforms and software activities should be prioritized to ensure that the results of the Program will be sustained, and modalities and financing of operation and maintenance will be taken into consideration;

SBCC and market-based sanitation should be implemented based on national and global lessons learned and the limitations of past interventions in Nigeria and with a focus on providing financial support to the poor and vulnerable to build their own toilets;

The Program should support the preparation of a detailed study to find cost efficiencies, both for capital investment and operating costs.

Actions have been proposed in the Program Action Plan to complement the abovementioned recommendations.

Program Action Plan

100. The Program Action Plan (PAP) includes legally binding actions that are considered crucial for advancing water and sanitation service delivery in Nigeria and improving human capital for service

delivery and were identified as potential constraints in the three assessments (Technical, Fiduciary, and E&S). Additionally, disbursements for DLIs will only be made if their achievement fully conformed to related PAP actions. The PAP will be monitored through regular supervision missions and will be reported on annually by the PIU. The actions will be executed through instructions contained in the POM. The POM sets forth the government's regulations and laws that will govern the various aspects of the Program and the supplemental provisions necessary to address the gaps identified in the PAP. The list of the actions agreed upon is provided in Table 8.

Table 8: Program Action Plan

Action Description	Responsible Party	Timing Value	Completion Measurement
Technical Actions			
Prepare Program Operational Manual (POM), with comprehensive guidelines for E&S due diligence and core inclusion activities, such as gender, SEP, SEA/H, resettlement and protection of vulnerable groups. Use POM for all implementation.	Federal/State PIUs	Prior to Effectiveness	POM completed and disseminated to stakeholders prior to effectiveness. POM adopted by SPIUs prior to disbursement. Associated training provided, guidelines operationalized, and relevant POM requirements are applied to all Program activities.
Establishment of SPIUs, including at least a coordinator and specialists in procurement, financial management, environmental, social and inclusion, planning, and M&E, as well as technical staff. Implementation of capacity building program.	State PIUs	3 months after effectiveness or prior to disbursement, whichever is earlier	SPIUs est. with required staff (w/ clear ToRs) by 3 months after effectiveness or prior to disbursement for any state, whichever is earlier. Staff maintained

Action Description	Responsible Party	Timing Value	Completion Measurement
			through implementation. Training module & implementation support supervision report of WB team.
Hire the IVA to verify DLIs annually against verification protocol and conduct quarterly monitoring of progress on E&S risk management, particularly regarding the compliance of Program activities with the PAP & E&S due diligence, and ACG.	Federal/State PIUs	90 days after effectiveness; Every 3 months during Program implementation	IVA hired with Bank-accepted contract/TORs no later than 90 days after effectiveness. Submit qtly reports to Bank including progress of implementation of actions & compliance with E&S risk management & anti-corruption guidelines. E&S due diligence per POM.

ANNEXES

Annex 1: Overview of National Government WASH Policy

The three most recent national government WASH policies are the: (1) National Action Plan; (2) Clean Nigeria Campaign; and (3) Partnership for Expanded Water Supply, Sanitation, Hygiene (PEWASH). An overview of each is provided below.

National Action Plan (2018 - 2030)

In 2018, the President of Nigeria declared WASH as a national state of emergency to reinforce the political will to achieve the SDGs. The National Action Plan (NAP) recognizes WASH as an urgent policy priority and calls for urgent action led by the federal and state governments, recognizing the joint role federal and state governments play in achieving the WASH SDGs. The NAP requires state governments to develop state-level WASH emergency action plans. The NAP is a 13-year strategy comprised of:

Emergency Plan (2018 – 2020): renew federal-state partnership to achieve WASH SDGs.

Recovery Plan (2018 –2022): establish the enabling environment required to support the effective and sustainable management of Nigeria's WASH services and promoting universal access to WASH.

WASH Revitalization Plan (2018 – 2030): attainment of the WASH SDGs.

Five Components of the NAP

The NAP is comprised of five main components: (1) governance; (2) sustainability; (3) sanitation; (4) funding and financing; and (5) monitoring and evaluation.

Governance

Institutional Framework. The NAP establishes a renewed federal-state partnership to lead efforts to achieve the WASH SDGs and acknowledges and clarifies the role that federal, state and local governments play in achieving the SDGs, as well as communities. Table A1 below provides a summary of the institutional framework outlined in the NAP.

Regulation. The NAP promotes a number of mechanisms to carry out regulation including, establishment of autonomous regulators at the state and/or federal government level in addition to use of performance-based contracts. The plan also promotes actions that imply a key role for regulation including, improvement of creditworthiness of SWAs, promotion of private sector participation (PSP), regulation of the informal private sector (e.g. water vending, well-drilling, and fecal sludge management), and regulation of water quality and the setting of environmental standards.

Pro-poor Policy. The NAP refers to strategies for effective targeting of the poor and vulnerable to ensure they receive access to WASH. Strategies include data-driven methodologies such as geographic mapping. The plan also refers to subsidized household expenditures and access to financing through microfinance institutions and banks.

Table A1: Summary of Institutional Roles and Responsibilities in National Action Plan

Function	Institutional Entity Responsible	Description
Policymaking	Federal and State Governments	Federal government holds responsibility for formulation of national-level policy and strategy. State Ministries of Water Resources are responsible for policy, regulation, and monitoring, but not all states have an established state-level ministry of water resources.
Service Delivery	State and Local Governments	State Water Agencies (SWAs) deliver water supply services to urban communities. Reforms have been implemented to corporatize SWAs across many states. In some states, SWAs hold responsibility for WSS service delivery in rural communities as well. Many states have established Small Town WSS Agencies (STWSSAs) for service delivery in small towns. Local Government Associations (LGAs) are responsible for construction and O&M of WSS schemes in rural communities. In practice, however, different states have established different institutions: State-level RUWASSAs: support LGAs in provision of WSS services. Local Government WASH departments: oversight and technical assistance to communities. WASHCOMs: O&M at community level.
Investment Planning, Budgeting and Financing	Federal, State and Local Governments	Federal, state and local governments are responsible for investment planning, budgeting and financing (CAPEX and OPEX). Federal government can contribute funding for CAPEX to support state and local governments.

Technical Assistance	Federal Government (FMWR and NWRI)	Through the FMWR, the role of the federal government is to provide technical assistance (TA) to state governments in developing state action plans, infrastructure masterplans, investment feasibility studies, and utility reform plans. TA is available to implement state-SWA performance agreements, build capacity in financial management, carrying out tariff studies and poverty and social impact analyses, and other capacity building opportunities. Financing and trainings will be made available for staff training.

Sustainability

The NAP discusses major impediments to achieving sustainability of service delivery including, poor water quality, lack of water availability and reliability of service delivery, poor performance of service delivery organizations, poor technical codes and standards for construction and service delivery, limited capacity, lack of financial resources, poor planning, overloaded and ageing assets, and irregular power supply.

Sanitation

Access to improved sanitation has been on a decline since 1990 due to rapid increases in population and low investments to expand access. 25% of Nigeria's population practices open defecation. On-site sanitation solutions are implemented widely to help remedy this situation and the private sector fill the gap in FSM, however issues regarding final disposal have raised serious health and sustainability concerns.

Nigeria's sanitation challenges reflect its' long neglection in sector policy, institutions and regulation. The NAP cites lack of clarity of institutional roles and responsibilities and overlaps, low institutional support, low private sector investments, limited capacity, low investments, and a perception that sanitation is more of a personal matter. Accordingly, sanitation investments have not been prioritized in budget allocations and planning. The NAP explores opportunities for PPPs, Community-Led Total Sanitation (CLTS), and other Behavior Change Communication (BCC) interventions.

Funding and Financing

The NAP promotes co-financing arrangements between federal, state and local governments to increase the overall allocation of investment financing, however, specific co-financing mechanisms are yet to be

established. The plan promotes establishment of a National WASH Fund dedicated with the achievement of the SDGs by 2030. Resources from the WASH Fund are to be matched by resources from the State budgets. The NAP also makes mention of "rules or performance-based transfers" from federal government several times. The plan also accounts for household expenditures for household-level facilities and mentions the need to create an enabling environment for private financing through banks and microfinance institutions as well as targeted subsidies to poor households.

Monitoring and Evaluation

The NAP includes implementation of systematic data collection to carry out M&E, inform decision making, and performance management. The plan includes support from the federal government to states in building M&E capacity and establishment of an inter-agency M&E task group.

Table A2 provides a summary of key actions to be taken by national and state government under each component.

Partnership for Expanded Water Supply, Sanitation, Hygiene (PEWASH) (2016-2030)

Launched in 2016, PEWASH is focused on expanding access to WASH in rural areas. The partnership's main goal is expansion of water supply coverage from 57% to 100% by 2030 through water system rehabilitation and construction of low-cost rural water schemes. As mentioned in the NAP, the federal government envisions shared ownership of rural water points between LGAs and communities. As of 2020, 33 out of Nigeria's 36 states have signed the PEWASH protocol to indicate interest in participating in the partnership. The federal government has prioritized state governments that have demonstrated commitment, availability of resources, and completed baseline surveys in each local government.

Clean Nigeria Campaign (CNC) (2018-2025)

The CNC was launched by the Nigerian President as he declared a national state of emergency in the WASH sector in 2018. The objective of the CNC is to become open defecation free by 2025 by providing access to sanitation to 46 million Nigerians currently practicing open defecation.

Table A2. Summary of Key Actions53

Federal Government Actions	State Government Actions
Governance	
vision: The WASH sector is governed by policy, legislative, institutional and regulatory frameworks through which service providers (public and private) are accountable and provide efficient, sustainable and equitable services.	
Declare a State of Emergency with clear actions to be implemented to accelerate the sector's development.	Secure the highest political will to launch sector reform through the adoption of state-level action plans.
Design, adopt and implement the National WASH Fund.	Develop and adopt policies and laws that produce an enabling environment for the development of efficient, sustainable and equitable service delivery.
Provide technical assistance to States in developing guidelines for the commercialization of service providers.	Formalize the governance system for private sector participation in WASH service delivery.
Support states in the recovery of tariffs from federal institutions benefiting from water and/or sanitation service delivery.	Establish inter-ministerial steering committees on WASH, chaired by the Governor, to take decisive action during the emergency period.
Improve state capacity for WASH through scholarships to the National Water Resources Institute (NWRI). Once established, promote the adoption of state-level requirements for sector experts to have successfully completed relevant coursework at NWRI.	Begin the process of commercialization of SWAs, including promotion of autonomy through the retention of revenue and hold them accountable for performance.
	Develop the critical skills and manpower required to drive and sustain WASH Services at the LGA level through the establishment of WASH Departments at the LGA level.
Sustainability	

53 source: this table does not include all actions included in the NAP. Only key actions were selected and taken directly from the National Action Plan.

vision: Autonomous and functional service providers with capacity to provide efficient, sustainable and equitable service delivery.

Provide technical assistance to state governments and public service providers to improve operational and financial efficiency.

Ensure functionality of monitoring systems and link to an incentivized budget allocation scheme based on good performance.

Promote increased private sector participation in the sector.

Improve the operational and financial efficiency of service provision through dedicated technical assistance and capacity building, as well as budgeting for sustainability.

Review and operationalize sector reform laws and regulations towards ensuring autonomy of service providers and their accountability to stakeholders.

Create the required enabling environment and build sector capacity to support PPPs.

Promote increased private sector participation in the sector, especially through service contracts for the operations and management of small schemes and the development of necessary supply chains.

SWAs are made autonomous and accountable through a binding performance contract between the Agency and Government to accelerate planning and implementation.

Sanitation

vision: Universal access to safely managed sanitation and hygiene facilities in cities, small towns, and rural communities by 2030.

Identify and support States to demonstrate citywide approaches to sanitation.

Develop a sanitation value chain strategy to promote investment in wastewater and fecal sludge management, including promotion of innovative technologies that recycle treated fecal sludge and wastewater into economically viable byproducts.

Engage PPPs in a transparent manner to promote and regulate effective containment, emptying, transport, treatment and disposal and/or reuse of fecal sludge. This includes conversion of sewerage into profitable outputs, such as cooking gas and organic fertilizer.

Develop and implement specific strategies to address the promotion and regulation of effective containment, transport, treatment, and disposal and/or reuse of fecal sludge.

Support and roll out of sanitation marketing and financing initiatives.

Funding and Financing

vision: Service providers generate revenue to cover their operations and maintenance expenses, with the intention to partially, if not completely, fund their capital investments in the long run. Communities without access to networked services are supported with the education, training and financial mechanisms necessary to achieve sustainable access to safely managed water supply and sanitation facilities.

Establish a National WASH Fund to promote a renewed Federal-State partnership towards the credible pursuit of the SDGs. This Fund is envisioned to a) provide adequate funds to expand service coverage; b) ensure states maintain full responsibility for their WASH sector development; and c) guide support and incentivize state investment and reform efforts.

Interim funding resource, particularly grants and special funds, are immediately made available for technical assistance and capacity building to establish the momentum of reform and promote State and project readiness.

Develop a national policy on tariff design.

Tariff review and financial planning to lay the groundwork for autonomous funding and cost recovery of, at a minimum, the operations and maintenance expenses of the sector. The SWAs should be encouraged to hold stakeholder meetings to discuss tariff reform, and to publish tariffs regularly.

Monitoring and Evaluation

vision: availability of reliable data to inform decision making, manage performance and contribute towards greater public accountability.

The Draft National M&E Framework should be concluded and launched.

Conduct regular sector performance reviews for the purpose of benchmarking for rewards and to promote competition among states and WASH institutions.

Ensure establishment of a regulatory mechanism for the local monitoring of WASH activities and subsequent reporting to LGA and State levels.

Annex 2: Implications of Federal Government Structure in WSS Sector

Federal Institutions and Intergovernmental Systems

Front-line WSS providers are owned and constitutionally and legally operate under the control of their respective state and local governments. Nigeria's federal structure gives rise to a number of considerations that need to be taken into account as part of the program design:

Intergovernmental PIR incentives are critical to promoting state and local water and sanitation performance. Since the federal government lacks the (constitutional, political or administrative) power to instruct state and local officials to implement sectoral programs, the incentives created by policies, institutional arrangements (including fiscal arrangements) and regulations become a critical way to achieve cooperation of subnational entities in implementing shared sectoral policy objectives.

Structuring sustainable sectoral solutions requires addressing shortcomings in intergovernmental and subnational systems. It is important to understand—and when possible, fix—the intergovernmental obstacles that prevent effective decentralized water and sanitation service delivery solutions.

The policy and regulation roles of the federal government are often de-emphasized or misunderstood. In a dysfunctional or ineffective federal system, it is not unusual for federal sector ministries to structure interventions in a way that by-pass—rather than co-opt—state and local government actors. While this is an understandable response to a service delivery crisis, this frequently results in federal officials becoming caught up in an implementation role, rather than federal officials focusing on setting up appropriate federal / intergovernmental policies (such as the introduction of conditional or matching grants) or strengthen the federal regulatory and oversight role.

The sector ministry's incentives for successful project implementation are altered. Experiences in other countries suggest that when a federal sector ministry is institutionally no longer the direct beneficiary of the infrastructure support, the buy-in and willingness to address binding institutional constraints (especially those that are seen as disadvantageous to federal government institutions) may be limited.

State-Level Institutions and Systems

State governments—as owners of urban and rural water agencies and authorities—are best-positioned among the three government levels to spearhead the rapid and sustainable expansion of WSS in their respective states. As such, the primary focus of SURWASH is to strengthen state-level water and sanitation actors, and to support them in expanding access to—and ensuring the effective and sustainable operation and management of—water and sanitation infrastructure. The role of state governments in the WASH sector gives rise to a number of considerations that need to be taken into account as part of the program design:

State governments face many (governance and administration-related) institutional challenges. It is important flag the generally limited effectiveness of state governments as platforms for political decision-making, public administration, and responsive service delivery. Many state governments lack basic governance and public sector management systems—with many states failing to perform basic

public sector functions—including the management of state-level public finances—at a minimally satisfactory level.

State governments are not monolithic entities. It is important to recognize that each "state government" is not a single monolithic entity. Each state comprises a number of actors (including the Governor; the State House of Assembly (State Legislature); the state Water Department or Commission; and state water agencies and authorities), each of which are subject to different political, administrative and institutions pressures and constraints.

The leadership of state-level water departments, agencies and authorities are likely to be the strongest state-level champions for better water and sanitation services. These actors will have the strongest incentives to engage with SURWASH in order to expand (their funding of) water and sanitation infrastructure and services.

Political support at the state level is crucial; its absence would bring considerable risk. State-level engagement by SURWASH will fail unless full support is obtained from the Governor and State House of Assembly. While state politicians are at a minimum likely to pay lip service to improved water and sanitation achievement, rationale political actors will determine their support for SURWASH based on the political and electoral costs and benefits of supporting the program. As such, a variety of political economy pressures and incentives may cause them to commit to the program up-front, while causing them to run into institutional constraints during project implementation.54 This is particularly true if the state is expected to engage in on-lending (which will have to be re-paid from the state budget) rather than the state being the recipient of federal sector grants.

Local Government Institutions

Even though local government areas (LGAs) in Nigeria are constitutionally a separate government level, LGAs have traditionally been dominated—politically, administratively and fiscally—by the power of their respective state governments. While efforts are being made to strengthen the LGA level vis-à-vis the state level, this process is still in its early stages. The role of local governments in Nigeria's federal structure—and in the WASH sector in particular—gives rise to a number of PIR-related considerations that need to be taken into account as part of the program design:

LGAs are well-positioned to play an important supporting role in the operation and maintenance of (rural) WASH infrastructure. There has been a vertical institutional gap in the global approach to rural water and sanitation development: centralized (often donor-funded) project support community groups in rural areas in putting in place water and sanitation infrastructure. However, a common experience

54 For example, such pressures may include: state leaders may have a decreased desire/incentive to follow the program MOU regarding state institutional reforms once accepted into the program; state finance officials may have an incentive to redirect sectoral resources away to pay for unexpected state expenses; a change in political leadership, with the new Governor wanting to cancel the projects started by the previous governor; electoral/political pressure to re-direct WASH investments towards the central business district and wealthier neighborhoods, rather than pro-poor investments; and so on.

around the world is that these community groups generally lack the financial resources as well as the institutional capacity to properly operate and maintain the number infrastructure, resulting in a large percentage of new water infrastructure falling into disrepair within a few years of construction. This "build-neglect-rebuild" scenario is certainly in play in Nigeria. As the government level closest to the people, LGAs in Nigeria are theoretically well-positioned to play an important supporting role in the operation and maintenance of (rural) WASH infrastructure. Despite being well-positioned, the (political, administrative and fiscal) institutional weaknesses of LGAs have prevented them from playing a more proactive role in achieving better water and sanitation outcomes in their local jurisdictions.

The incentive dynamics at the LGA level provides for weaker incentives. At the state level, SURWASH should be able to provide a relatively substantial fiscal incentive, by offering WASH investments equal to 10% of the state's overall budget. While the benefits of this spending ultimately be felt in the state's Local Government Areas, these resources will largely be spent by (or through) state-level agencies and authorities. To the extent that infrastructure benefits reach the local level, these benefits will typically arrive as "in-kind" benefits, rather than being on-budget. As a result, the political "ask" of SURWASH from LGAs would be quite different: LGAs would be asked to establish or strengthen their local WASH sections and increase local recurrent spending on water and sanitation in order to maintain infrastructure that (politically and legally) does not belong to the LGA. with little or no additional resources flowing into their budgets.

Annex 3: SWOT Analysis of National and State Government WASH Policy

Table A3: SWOT Analysis of PIR

Strengths	Weaknesses
NAP broadly covers main aspects of institutional framework; funding and financing; monitoring and evaluation; and efficiency and sustainability of service provision. Developed in participatory manner with state governments and other relevant stakeholders. Emphasis on role of federal government in provision of TA to state governments. NAP clearly discusses and outlines WASH sector challenges. State Government WASH Policy generally aligned with NAP.	Policy Lack of clear target setting and timeline in state-level policy. Inadequate monitoring and evaluation mechanisms to aid in planning and monitoring of progress. Lack of budgetary allocations and identification of investment needs (development of investment plans mentioned in action plans). Lack of emphasis on pro-poor policy. Lack of clarity on communications campaign. Actions to achieve financial sustainability are unclear e.g. no national policy on tariffs, subsidies, and lack of guidance to states on investment needs and co-financing arrangements. Institutional Framework Although both the NAP and state government WASH policy documents recognize the role of federal, state, and local government in WASH service delivery, lack of clarity and overlaps in institutional roles for sanitation remain a challenge unaddressed. Lack of clarity on intergovernmental coordination mechanisms between three tiers of government. Regulatory Framework Regulatory functions are carried out by various institutions with lack of coordination. In addition, multiple regulatory forms are proposed for different functions e.g. state-SWA

	performance contracts and establishing independent regulators.
Opportunities	**Threats**
Demonstrated political leadership and commitment through Presidential declaration of state of emergency in WASH sector. Linkages between COVID-19 and the need for access to WASH creates a sense of urgency and renewed momentum to achieve sector policy. Low-cost technology solutions and innovations to achieve policy objectives. Mobilizing support from development partners to the WASH sector in the form of financial and technical assistance.	Economic slowdown due to impact of COVID-19 and available budget resources for WASH. Administrative inefficiencies in public financial management an and other potential intergovernmental challenges beyond the scope of WASH sector policy and institutions.

Table A4: SWOT Analysis of Government Regulatory Functions

Strengths	**Weaknesses**
State Government Water Sector Laws are enacted and stipulate establishment of Water Sector Regulatory Commissions and lay out functions broadly covering service standard setting and monitoring, tariff review and approval, performance management, and licensing. Ekiti State partnership with NWASCO to benefit from lessons learnt. De jure, mixed sources of funding for regulators. Regulators are required to submit an annual report to the Governor.	Some States are yet to fully establish State Water Regulatory Commissions as stipulated by Water Laws. De facto and de jure low level of autonomy of ministerial units/agencies as board is nominated by State Governor. In some cases, as in Imo State, for example, funding is solely determined by the House of Assembly, further impacting autonomy. Weak technical capacity to carry out functions as stipulated in Water Law. Therefore, de facto, functions are not carried out as stipulated by law. Gaps in Water Law identified in some states e.g. pro poor functions, licensing, regulation of informal service providers.

	In some states, regulatory commissions are not empowered to regulate urban and rural WSS. For example, in Plateau State, PEPSA is responsible for regulation of urban sanitation.

Opportunities	Threats
Demonstrated political leadership and commitment through Presidential declaration of state of emergency in WASH sector. Linkages between COVID-19 and the need for access to WASH creates a sense of urgency and renewed momentum to achieve sector policy. Low-cost technology solutions and innovations to achieve policy objectives. Mobilizing support from development partners to the WASH sector in the form of financial and technical assistance.	Economic slowdown due to impact of COVID-19 and available budget resources for WASH. Administrative inefficiencies in public financial management and other potential intergovernmental challenges beyond the scope of WASH sector policy and institutions.

Annex 4: Global Examples and Lessons Learnt

Global Examples of National WASH Campaigns

India's Swachh Bharat Mission (Clean India Campaign)

Challenge

Rural India was once responsible for 60% of the world's open defecators. In 2014, less than 4 out of 10 rural Indian households owned a toilet. However, by mid-2019, official Government figures reported coverage at over 95% due to the five-year Government-led Clean India Campaign (Swachh Bharat Mission (SBM)).

Key Success Factors of the SBM

Political and Technical Leadership

In 2014, Prime Minister Narendra Modi announced in his inaugural speech his plan for India to become Open Defecation Free (ODF) in 5 years, by 2 October 2019, honoring the 150th anniversary of the birth of Mahatma Gandhi. This bold setting and ambitious goal signaled serious political leadership and commitment to the goals of the SBM directly from the PM's office. The PM sought a technocrat to lead the Ministry of Drinking Water and Sanitation (MDWS) who was a sanitation specialist and held global experience.

Mobilizing Financial Resources

The MDWS led consultations across all states to garner lessons learnt within India on experiences in achieving ODF status and to understand the total costs of achieving this goal. The total bill was estimated at $20 billion over five years. This enabled the MDWS to build on its partnerships with development institutions and request financial and technical assistance to support the SBM.

Mobilizing Human Resources

SBM also introduced young and enthusiastic professionals to avoid the business-as-usual scenario in districts. Over 500 young professionals were hired to work on the program and support districts by taking on a variety of different roles. Young professionals from districts that successfully achieved ODF, were then assigned to new districts to share lessons learnt and benefit from the experience and newly developed skills. The young staff modelled new ethical norms such as commitment to progress, adaptive learning, and personal engagement.

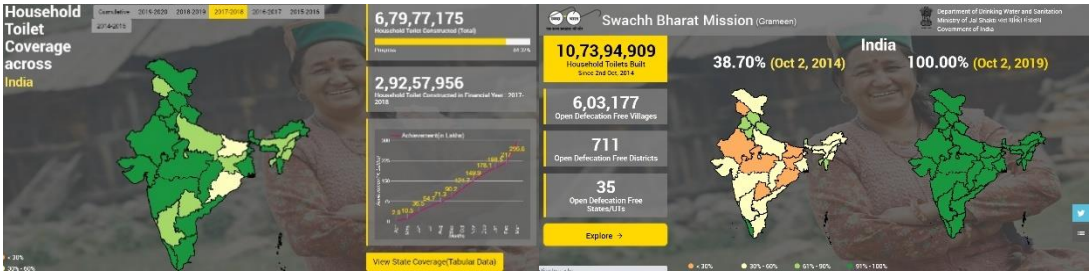
Intergovernmental Coordination

To overcome skepticism from experience of many previous less successful campaigns, 100 ‘early win’ districts were selected, from which government officials were selected and invited to national workshops and offered resources and access to leadership to resolve any challenges expeditiously. Most of the 100 districts declared ODF by 2016. Vertical coordination between various actors across different government levels was an explicit strategy adopted by the MDWS.

Monitoring and Evaluation

The MDWS created a dashboard displaying data on number of toilets built and household access to sanitation. Many states were able to upload data in real time through the use of mobile phone applications. The dashboard enhanced accountability to the national government as well as citizens as their progress was made available to view in real time by the public. The MDWS was able to monitor district-level data on a monthly basis to resolve bottlenecks. This also made their success more visible and those that performed well were shared as examples on social media and were invited to receive awards from senior level government officials, including the Prime Minister.

Figure A4-1. MDWS SBM Dashboard



In addition to the dashboard, another successful approach to incentivize information sharing is through an awards system.

Communication Strategy

A new strategy for communication was implemented with mass media playing a major role to appeal to SBM program actors, the population as a whole, and private sector and development partners. The program embraced use of modern communication tools including social media to short circuit official communication channels, which may be more cumbersome.

Challenge

While access to improved water resources grew substantially during the MDG-era from 76% to 91%, access to improved sanitation has lagged with an increase from 54% to 68% between 1990 and 2015. In terms of open defecation, Indonesia ranked third globally with over 25 million people not using sanitation facilities. To achieve universal access to WSS, the Government has committed to eliminating open defecation and ensuring 90% of households have access to improved sanitation by 2024, of which 15% will be safely managed. The Government's National Sanitation Program outlines five main interventions for community-based WASH: use of toilets; handwashing with soap; safe storage and handling of drinking water; and effective solid and liquid waste management.

However, a range of structural challenges have constrained implementation including the highly-decentralized nature of governance; institutional fragmentation vis a vis leadership for WASH-sector activities, with local capacity gaps at the provincial and district levels; underbudgeting and underspending in the sector; and the absence of high-quality costed operational research to inform planning and budgeting for models that work at scale. Learnings from a five-year acceleration WASH acceleration plan launched in 2012 with support from UNICEF are being used to inform implementation of the new National Development Plan 2020-2024.

Key Success Factors of the Acceleration Plan

The 5-year acceleration plan was launched in three eastern provinces: Nusa Tenggara Timur (NTT), South Sulawesi and Papua. Three different levels of support (high intensity, learning districts, and comparison districts) was provided to select districts within these provinces. The purpose of this support was to accelerate implementation of intervention areas outlined in the national sanitation program. The table below provides a summary of interventions according to the different levels of support.

Figure A4-2. Interventions by Level of Support55

55 source: table taken from https://doi.org/10.1016/j.ijheh.2020.113584

District typology	Intensity level and financial support	Description of interventions and support
High intensity districts (n = 6)	High	• Support to a WASH working group coordination platform • Training of Government frontline workers • Support to monitoring visits of frontline workers • Direct advocacy to local leaders (village heads, religious leaders, women's development groups) • Direct advocacy to District heads for strengthening policy and financing • Support to micro-planning initiatives • Direct strengthening of the monitoring and oversight mechanisms • Regular review and follow-visits with District Health and Planning Departments.
Learning districts (n = 16)	Medium to Low	• Inclusion of indirect Districts at Province level reviews and trainings • Advocacy for strengthened Enabling Environment interventions • Cross-learning events
Comparison districts (n = 58)	None	• Advocacy for acceleration of the national sanitation program at the Province level

Results

ODF and new toilet construction increased most in high-intensity districts (increase of 42.7% and 19.2% respectively).

High levels of sustainability were observed in villages of high intensity ODF districts.

100% of high intensity districts prioritized budgetary allocations for sanitation.

The program witnessed gains across a number of performance areas receiving intense support including demonstrated political commitment, the development of a roadmap and coordination mechanism, increased government financing, strategic partnerships and improved supervision, monitoring and feedback mechanisms.

Experience suggests that efforts to strengthen and support existing government systems and particularly those at subnational level in conjugation with strong political commitment can yield substantial benefits in a relatively short period of time even in challenging areas.

An important point to make here is that the policy target was accompanied by a government budget allocation and identification of complementary sources of finance. Central government ministries, through which the government budget will be channeled, are then motivated to develop programs that can turn the available funds into concrete improvements in the WSS sector.

Thailand's National Safe Sanitation Strategy

Challenge

In 1960, the Government initiated a village health and sanitation project to promote use of sanitary latrines. The project was subsequently scaled up nationwide and led to development of the Rural Environmental Sanitation Programme as part of the National Health Development Plan. Currently, household sanitation coverage is at 98.9% and almost all households have access to safe water supply.

Key Success Factors and Lessons Learnt

Strong political commitment and development of coherent national policy on sanitation.

Clear institutional roles and responsibilities assigned with focal ministry responsible for inter-ministerial coordination.

Adequate financial and human resources provided at all government levels. In Thailand's experience, training was delivered to build capacity of government and community leaders on project management, sanitation supervision and monitoring for sustainability.

Carrying out supervision and monitoring of latrine systems is essential to ensure sustainability.

Government created an award scheme for provinces achieving 100% access. This created competition between provinces to expand access to sanitation.

Revolving fund for sanitation was established at village level to loan money for household investments.

Intense social mobilization is needed to target all households and communities to promote behavior change and citizen engagement.

Emphasis on area-based rural development within national development planning helps to foster inter-ministerial collaboration, enhance PSP and NGOs, and enhances planning efforts.

Global Examples of Federal Government Systems and WSS Sector

Based on preliminary review and comparison of the experiences of three decentralized countries, Kenya, Nepal and Nigeria, the review suggests that in federal and other devolved countries, national sectoral challenges in water and sanitation require intergovernmental solutions: while it may be harder to operationally promote water and sanitation outcomes in a federal (or decentralized) context, doing so will be necessary to effectively engage stakeholders at all levels in order to achieve sustainable development outcomes. Preliminary lessons learnt from the experience of these three countries are outlined below:

Fundamental challenges same as elsewhere; solutions may be different, given the intergovernmental context

Strengthen urban and rural state and local water and sanitation providers [same problem as elsewhere; now state actors, not central ministry]

Can't just work through Ministry of Water; primary drivers for better outcomes are subnational entities (state or local).

Scope of national policy has to cover all levels; tendency for centralization has to be resisted

Strengthen regulation and monitoring role of federal (national) level

Strengthen subnational government prioritization and planning (get elected leaders on board and strengthen state/local WASH administration)

Federal / intergovernmental context may facilitate the vertical institutional gap in rural water provision to ensure sustainability

Global Examples of Regulatory Functions

Regulatory Forms in the Context of Decentralization

The Philippines

The Philippines has a complex, highly decentralized sector structure with more than 1500 entities of different types providing water services. In small cities and towns, local government units (LGUs) are responsible under the oversight of the National Water Resources Board (NWRB). The central government has sought to improve the regulation of this group of utilities by introducing a system of voluntary regulation but few LGUs have put themselves forward because they find it difficult to meet the administrative requirements. 56 The system is being reviewed since 2015 to fit better with the capacity of LGUs.57 The main constrains identified are (i) outdated legal and regulatory framework to empower local governments; for example, insufficient clarity on the legal mandate for inter-LGU cooperation limits LGUs' scope to cooperate for regional challenges (waste management, regional transport) to benefit from economies of scale; (ii) capacity constraints and fragmentation impeding efficient and effective service delivery; and (iii) investment barriers, for instance – mismatch between areas where business costs are incurred and areas where taxes are collected discouraging LGUs from mobilizing local own-source revenues. In the case of institutional misalignments, the sensitivity of

56 Jensen, O. et al, Fit for purpose regulation, Working Paper No.3, November 2015, 2nd International Water Regulators Forum, IWA

57 Guidelines on the Regulatory Reform for LGUs pursuant to the Ease of Doing Business and Efficient Government Service Delivery (EODB-EGSD) Act of 2018 https://www.dilg.gov.ph/issuances/jc/Guidelines-on-the-Regulatory-Reform-for-LGUs-pursuant-to-the-Ease-of-Doing-Business-and-Efficient-Government-Service-Delivery-EODB-EGSD-Act-of-2018/124

decentralization reforms and the wide range of stakeholders involved makes difficult to reach a consensus on amendments.58

Czech Republic

The market in Czech Republic is highly fragmented – 6 932 infrastructure owners and 2 941 service providers and operators of different sizes and different operating models serve approx. 10 million inhabitants. There are also a substantial number of state entities with a responsibility for regulating the water companies and municipalities supplying water services. As part of the obligations of the Czech Republic to the EU, the state was required to improve and strengthen its regulatory system. This was done in 2015 through the establishment of a coordinating entity under the auspices of the Ministry of Agriculture. The Ministry of Agriculture receives the necessary data from the sector, which is published in an annual yearbook. It serves as a central point for providing methodological assistance, as well as having a division which will deal with complaints and regulatory issues. A coordinating committee has been set up to strengthen the regulatory mechanisms in the water sector. This new system has ensured comparability of data from the numerous operators for benchmarking purposes, streamlined the scoring system and allowed a better understanding of the investment needs of the sector.59 However, municipalities under 2000 inhabitants remain as key areas where sanitation service improvements are needed – capacity increase of sewerage and WWTP reconstruction and technology improvement (third grade of sewerage water treatment). Likewise, market atomization that in turn reflect on challenges to achieve self-financing capacity of the infrastructure (renewal of water infrastructure and reinvesting funds received from consumers) and finding balance between the price of services and the costs of service provision (and makes the service accessible to all the consumers at a socially acceptable price).60

PURC, Ghana

In Ghana, the Public Utilities Regulatory Commission, PURC, was set up in 1997 to regulate utility service quality and tariffs for all cities and towns. Rural water supply is under the purview of another ministry. As urbanization has taken place in Ghana, this has left uncertainty about who is responsible for services in peri-urban areas, the densely populated areas outside current municipal boundaries. Pro-poor guidelines have been issued to extend PURC's role to cover these areas in 2018, referring to those where "areas where supply and collection by the utility would otherwise be difficult or uneconomic".61

58 Project Number: 52173-001 October 2019. Proposed Programmatic Approach and PolicyBased Loan for Subprogram 1, Republic of the Philippines: Local Governance Reform Program https://www.adb.org/sites/default/files/project-documents/52173/52173-001-rrp-en.pdf

59 Graham, C. et al, Beyond Compliance Monitoring and Reporting, Working Paper No.2 , November 2015, 2nd International Water Regulators Forum, IWA

60 http://eagri.cz/public/web/file/633087/Zprava_z_benchmarkingu_2017_web_EN_tab.pdf

61 http://www.purc.com.gh/purc/sites/default/files/guidelines_for_pro-poor_application_march_2018.pdf

SPAN, Malaysia

In 2006 two laws transferred responsibility for water services from the state to the federal level and set up a national water asset holding company, PAAB, and a national economic regulator, SPAN. The reforms were intended to address the financial sustainability of the sector and to stimulate efficiency. The planned transfer of assets from states to PAAB took longer than expected and was not complete as of mid-2018.62 The reforms appear to have been successful in boosting efficiency in the sector – non-revenue water rates have been reduced, for example – and in reducing the cost of capital for the sector. However, progress on two initial goals – to raise tariffs to cost recovery levels and to harmonise tariffs across the different states – has been slower. 63

Regulation Across Sanitation Value Chain

Zambia

The National Water Supply and Sanitation Council (NWASCO) regulates the whole value chain of sanitation including onsite sanitation in addition to the traditional sewered networks. With 42.9% of urban population served by sewered sanitation and about 57.1% onsite sanitation, and overall, 66% of sanitation managed safely across the entire service chain. The regulator oversees 11 commercial utilities (CUs) providing water and sanitation service in the urban and peri-urban areas (Utilities/operators are mandated to serve informal or unplanned settlements). Starting 2020, it is planned that CUs have also started to be mandated to cover rural WSS. The regulator is currently working on structures to support CU reach Rural WSS in collaboration with Local Authorities. Citywide Inclusive Sanitation (CWIS) is now an area of focus (onsite sanitation regulation frameworks)64. “Rural water supply and sanitation regulation frameworks”, have also been developed to create a platform within which CU can get involved in service provision in Rural areas and the regulator can get involved in regulating in the rural areas. Equally, a new strategic plan 2021 to 2025 has been developed by NWASCO with a strategic objective that focuses on the whole value chain of sanitation and rural water and sanitation regulation. In order to implement these frameworks, the regulator has used tools like Joint Implementation Teams (JITs) including Local Councils, the Local Ministry of Health and Ministry of Water and Sanitation officials with the sole objective of building consensus on structures and platforms that will be used to provide WSS in Rural areas. Also, staff have been trained on CWIS. Pitfalls refer to data specifically on onsite sanitation facilities, capacities in most of the institutions involved with sanitation and collaboration. The delegated regulation of operators through CUs is yet to fully better function. Data collection and tools need to be more robust. Pricing for onsite sanitation and information flow. Enforcement of Onsite

62 Local media, https://www.malaymail.com/news/malaysia/2018/04/02/youre-holding-up-water-asset-transfer-ministry-tells-selangor/1612839

63 Jensen, O. et al, Fit for purpose regulation, Working Paper No.3, November 2015, 2nd International Water Regulators Forum, IWA

64 NWASCO, Rural Water Supply and Sanitation: Framework for Provision and Regulation in Zambia. March 2018

Sanitation and Rural WSS regulation. Performance of private operators in the sanitation value chain and them being able to access capital.65

Azores in Portugal66

In the Autonomous Region of the Azores, the existing unfavorable topography along with other reasons makes collective systems technically and economically unfeasible for sanitary sewage. Instead, local treatment systems are used, individual or collective, both in urban and rural areas. ERSARA (the regulatory authority) regulates the use and management of septic tanks as solutions for the treatment of domestic sewage. These options are authorized only in places without public networks and provided that the legislation in force is respected. The operation of the infrastructure is only allowed after inspection by the management entity, which must map the existing systems, keeping an updated register. The maintenance of the systems is carried out periodically and the sludge is sent for complementary treatment, if necessary, in sewage treatment stations or in specific points of the collective sewage networks and final disposal. In the case of isolated communities, provision is made for the installation of drying beds. The dried sludge can be deposited in a landfill, in a composting station, for energy production or other suitable purpose. The ownership of the operation and maintenance of these systems is municipal, being the responsibility of the management entities of the sewage systems, which can also be delegated (subcontracts) – for example, transport and final disposal of the sludge from the systems. With regards to tariffs, a fixed rate for service provided is applicable and / or variable tariff for each m³ of collected sludge. The integrated strategy of centralized management of decentralized systems is considered an important lever for universalization.

Performance Management

England and Wales67

In the regulation of the water sector in England and Wales, the regulator (OFWAT) has designed a Service Incentive Mechanism (SIM) which provides direct financial rewards for water companies which perform well against output based measures of customer service quality which are common to all the companies. The measures are a combination of quantitative metrics and a qualitative one, based on a customer survey. Companies are rewarded or penalized depending on whether they are above or below the average score in a sector. The maximum reward for highly performing companies is capped at 0.5% of revenue of the company's integrated business; the maximum penalty is capped at 1% of revenue.

65 Kelvin Chitumbo Director, National Water Supply and Sanitation Council (NWASCO). Regulating the WASH sector from a human rights lens, Webinar IWA 2020.

66 PROGRAMA ÁGUA LIMPA Projeto de gestão dos sistemas locais de tratamento de esgoto sanitário. ASSOCIAÇÃO DOS MUNICÍPIOS DO MÉDIO VALE DO ITAJAÍ ASSESSORIA DE SANEAMENTO E MEIO AMBIENTE. BLUMENAU/SC

Agosto de 2020.

67 Graham, C. et al, Beyond Compliance Monitoring and Reporting, Working Paper No.2 , November 2015, 2nd International Water Regulators Forum, IWA.

This is an example of a system which used customer focused data and provides direct financial incentives to the companies.

Financial Sustainability

WICS Scotland UK68

The Scottish regulator's approach financial sustainability is to ensure that the service provider (only one) Scottish Water, faces a hard budget constraint to ensuring that a regulated company faces effective incentives. This means that the company can access only the resources that it ought to need in order to deliver the objectives of the Scottish Government. It can gain flexibility in the resources available to it only by performing better than required by the regulator's determination of charges. For this, transparency on annual financial performance is crucial. The Scottish regulator sets prices based on the overall cash requirements targeting a suite of financial indicators ('tramlines'), which represent a cap and a collar on Scottish Water's financial strength. Tramlines can be used to assess the level of cash surplus and make Scottish Water's financial performance more transparent to all stakeholders. The Scottish regulator encourages Scottish Water to adopt the lowest whole life cost solution to delivering the objectives specified by the Scottish Government. In the regulator's view, it is important to price performance and delivery risk in making this assessment. As such the regulator is prepared to allow Scottish Water differential rates of return on projects. It does not want there to be any regulatory barrier to Scottish Water choosing the most effective solution to the performance improvement required. The only requirement is that Scottish Water should be able to demonstrate that the total cost of the solution would be lower than that of the next best alternative. The regulator also supports long-term payback initiatives and encourages projects to be brought forward that may span regulatory control periods or which may only pay back over an extended period. The savings that arise from the initiative are ring-fenced until the accumulated savings have paid back the upfront cost of the initial investment on a NPV basis. Again, the only requirement is that the proposition is appropriately costed and clearly defined.

Regulation of Private Sector and Enabling PSP

Different contract models exist, including Management/O&M Contracts, Affermage Contracts, Lease Contracts, Design-Build-Operate and Design-Build-Lease contracts. The following are examples where the aim was scaling and standardizing service delivery and linking it to payments for results (extracts from the 2021 report).69

Senegal

Senegal has undertaken major reforms of the WSS sector in both rural and urban areas. Among these is the implementation of performance-based lease agreements (affermages) to private operators in rural

68 Salvetti, M. et al Regulatory tools for sustainable financing Working Paper No. 1, November 2015, 2nd International Water Regulators Forum, IWA.

69 https://assets.ctfassets.net/4cgqlwde6qy0/5ZyT4cP5Y67MV0WAGdb3MX/d1a7bccff69f6281d22a840fc253bf34/Outcome_Document_final.pdf

areas previously operated by local non-profit committees (called “ASUFOR”). Under the new affermages, ownership of water resources remains with the state, but operation and maintenance are handled by private operators. Revenue comes from tariffs and the operator’s fee is paid out of revenues. Contracts typically stretch over a ten-year period, during which the operators must maintain the infrastructure and are obliged to invest in the renewal of equipment and assets with a lifespan cycle shorter than the contract period. After a first successful ten-year project with Flexeau S.A., two follow-up projects in the urban and rural areas are currently being implemented, including the bidding for new affermage contracts.

UPTIME results-based funding mechanism

UPTIME, a consortium of five service providers and the University of Oxford, are designing a multi-country funding model for reliable water service delivery using results-based contracts. The model is designed to optimize the use of concessionary funding. The model builds on three performance metrics:

1. Reliable waterpoints – The number of waterpoints with operational rates satisfying the need for daily water access, measured by uptime as a metric of the % days a waterpoint is operating when needed.

2. Water volume – Independent, objective and verifiable measure of the volume of water provided using meters or sensors.

3. Local revenue – Payment from waterpoint users as a measure of financial performance and perceived user value.

These metrics can be used to calculate funding for service providers after they have delivered verifiable results. Modelling this approach against 2019 performance data suggests that a common contract design can work across different countries, contexts and service types. Initial pilot countries include Kenya, Uganda, Burkina Faso and the Central African Republic. The pilot will also test how potential transparent performance data might unlock new sources of funding at scale with a goal of funding services for 100 million rural people by 2030.

Turkana Water Outcomes Finance Facility (Kenya)

This framework incentivizes improved water access outcomes for vulnerable populations set up by Social Finance, Oxfam and the Turkana County Government. The Facility will repay Turkana County when – and only when – there are reliable and sustained water services that people are prepared to pay for. Performance metrics, to be measured over a two year period, are centered on infrastructure reliability: 1. Total uptime of a water point (measured as total time that infrastructure is functional, as a percentage of the total time possible) is greater than or equal to 95%; 2. Days required to repair a break down are less or equal to 3; and 3. Systems deliver at least a minimum quantity of water, measured as a proportion of the water system’s technical capacity (e.g. 80%+ of the system’s nameplate capacity at all times).

Outcome Based Regulation and Private Service Providers - South Australia

The territory of South Australia in the southern part of the country has a population density of 3.1 per square kilometer.70 It occupies one of the driest, most barren parts of the continent, but its southern fringe consists of well-watered and fertile lands and is where most of the population is located.71 The regulation of drinking water is State competency with high reference to the national policy- the Australian Drinking Water Guidelines (ADWG). In 2011 and 2012 the SA State introduced a new water Act and regulations,72 without water quality standards and incorporating risk management plans (like WHO water safety plans). After a decade of implementation, they are considered successful73 measured by a combination of audits and monitoring of general compliance with the ADWG. The success is explained by its flexibility, large scope and business sustainability. Regulations are flexible as they apply to large and small suppliers with requirements tailored to fit size, complexity and risk. They provide directions to operators of small supplies to improve their capacity, and support development of new drinking water supplies and innovative approaches by providing certainty to operators on requirements and responsibilities – for example, water carters. In SA, a registry was established for all drinking water providers. Persuasion (e.g. de-registration) and penalties can be applied if needed. All registered providers have implemented risk management plans and approved monitoring plans and incident protocols with a limited number of incidents registered to date. Several providers have upgraded treatment too.

Manila Case74

In 1995, the government enacted the National Water Crisis Act to provide a legal basis to reorganize the MWSS and pave the way for privatization. In 1997, a public bidding was conducted for the operation of the east and west service areas of the MWSS. Two concession agreements were eventually signed with the winning bidders: Manila Water for the east service area and Maynilad Water for the west service area. A key feature of the two identical Concession Agreements is the creation of a Regulatory Office, resulting in a “hybrid” regulatory regime that combines facets of regulation by contract and regulation by agency. A “hybrid” regulatory regime provides for an autonomous regulatory agency that is governed by a legal contract. The contract limits the opportunistic behavior, and the regulatory agency provides for the discretion necessary to deal with problems of contract incompleteness. The Regulatory Office ensures the proper delivery of the obligations of the parties to the Concession Agreements and

70 Cunliffe, D., The role of Australian drinking water regulations in expanding sustainable access to safe drinking water. Presentation at the 2nd Asia-Pacific Water Regulators Forum, IWA ASPIRE, 2019.

71 Britannica https://www.britannica.com/place/South-Australia

72https://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/public+health/water+quality/providing+safe+drinking+water/providing+safe+drinking+water

73 Cunliffe, D., The role of Australian drinking water regulations in expanding sustainable access to safe drinking water. Presentation at the 2nd Asia-Pacific Water Regulators Forum, IWA ASPIRE, 2019.

74 Yu, Joel. 2020. Prepared for the Working Group on Tariffs, Affordability, and Subsidies of the Task Force of the International Water Association (IWA) Regulating for Citywide Inclusive Sanitation (CWIS) Initiative. This discussion paper was prepared to provide inputs for the joint action in support of citywide inclusive sanitation to advance SDGs 6 and 11.

functions as a collegial body composed of five members headed by the Director or Chief Regulator who has over-all responsibility for the operation of the office. Any action or decision by the Regulatory Office on substantive matters affecting the Concession Agreement requires at least a majority vote of three members. The mandate of the Regulatory Office includes the review, monitoring and enforcement of water and sanitation tariffs based on the relevant provisions of the Concession Agreements. The Concession Agreements formed a regulatory regime based on the French Model: Regulation by Contract. Regulatory challenges remain: i) to steer the goal of private enterprises toward social development; ii) to continuously upgrade regulatory capability in view of asymmetric information; iii) to institutionalize regulatory determinations and acknowledge the limits of alternative dispute systems.75,76

Global Examples of Public-Public Performance Based Contracts

Key performance indicators (KPIs) can be used in public-public or public-private contracts to improve performance. Performance contracts are most effective when they include simple agreements, clear responsibilities, realistic targets, reporting requirements, and monitoring and auditing arrangements. Risks remain in relation to contract enforcement, risk management, and risk sharing. Relevant examples are listed below:

Burkina Faso Contract Plans

In Burkina Faso, the government implemented three-year contract plans with twenty to thirty KPIs for technical, financial, and commercial performance. ONEA works on the basis of triennial plan contracts signed with the government (Contract Plan), which clearly establish performance targets and indicators that are validated by an international technical auditor (see figure below). Implementation of the Contract Plan is managed by a Monitoring Committee. The Contract Plans clearly map out the roles and responsibilities for ONEA as well as the Government. The Government's role largely concerns minimizing or eliminating risk relating to government interference. For ONEA, this results in a number of benefits, such as exemption from taxes and customs duties, and enhanced credibility with the private sector and financiers.

75 YU, Joel. Regulation of the privatized water sector of the Philippines. Brief note prepared for the 2nd International Water Regulators Forum, IWA 2017.

76 Wu Xun and Leong Ching, 2013, The French Model and Water Challenges in Developing Countries: Evidence from Jakarta and Manila, Lee Kuan Yew School of Public Policy Accepted Paper Series, LKYSPP13-13 IWP. http://lkyspp2.nus.edu.sg/iwp/wp-content/uploads/sites/3/2014/03/The-French-Model.pdf

ONEA Commitments	Government Commitments
▪ Water resource development	▪ Water resource development
▪ Utilization of safe drinking water supply facilities	▪ Taxation
▪ Provision of water service	▪ The development policy for safe drinking water and sanitation sector
▪ Quality of water supply	▪ The ONEA recovery policy of consumption bills for the government and public institutions and offsetting irrecoverable debt obligations
▪ Sanitation	▪ Government debt obligations
▪ Investments	▪ Personnel management
▪ Finances	▪ Water resources
▪ Customer care management	▪ Evaluation
▪ Human resources management	
▪ Internal management and information management system	
▪ Dissemination of indicators	

Figure A4-3: Government of Burkina Faso and ONEA Contract Commitments

Public-Private Performance Based Contracts

Public-private performance-based contracts could be an effective tool for overcoming specific barriers commonly faced by utilities: (i) financing capacity; (ii) technical capacity; (iii) reduced transaction costs; and (iv) increased positive incentives for the private contracted party.

NRW PBCs

One of the main challenges of water utility companies in developing countries is reducing water losses. Global examples of PBCs for NRW can be found here. Outlined below are the stages for development of PBCs and some of the challenges to keep in mind.

There is an increasing use of NWR-reduction programs that can “pay for themselves”, allowing growing involvement of private-sector contractors. In PBCs “the private party takes some of the performance risk of achieving NRW reductions for a share of the upside”77. The payment structure in a PBC is composed (generally) of two parts – a performance-based fee depending on level of achievement against contract specifications, and a fixed component to reimburse costs. PBCs differentiate themselves from other

77 PPIAF/World Bank, 2016, Using Performance-Based Contracts to Reduce Non-Revenue Water https://ppiaf.org/documents/3531/download

ways of outsourcing services in that: payment is based on achieving results rather than costs; the contractor has discretion regarding the means to achieve the results; and the contractor has a stake in the upside in case of exceeding targets. PBCs are also simpler than other Public Private Partnership (PPP) contracts, with less transition costs and have advantages over utility implemented projects in regard to: achieving more rapid reductions of NRW; transferring knowledge and experience to the utility staff if there is work in partnership; and ability to addressing specific problems or locations. The figure below describes the suggested stages of an NRW PBC transition and activities.78 PBCs that focus on a specific location or component of NRW can be used to familiarize actors and are simple to design and faster to start. In all cases, for PBCs to work, it is important that there is specification of the contract objectives, performance outcomes (and indicators), and outputs, to reflect a realistic possibility of improvements within the timeframe and costs constraints of the contract.

	Stage	Objectives	Activities Typically Undertaken
Preparation	Early Assessment	• Gauge stakeholder commitments • Compile data and attempt a water balance • Identify value drivers and deal breakers • Develop broad scope and estimate costs	• Desk review and analysis of available data • Inspection of network • Discussions with stakeholders
	Baseline and Diagnostics	• Establish the level of leakage according to International Water Association Water Balance • Identify root causes, realistic reduction targets and key actions	• Night flow and pressure tests • Inspection of network and records • In certain cases, establishment of temporary district metering areas • Customer surveys • Assessment of metering accuracy • Assessment of administrative processes for recording and billing
	Non-Revenue Water Program Development & Investment Planning	• Expand key actions into specific plans: outputs and inputs required and timing • Develop the budget for the program	• Review of options for action • Definition of actions, outputs and required resources • Financial analysis of costs and benefit of plan and components
	Transaction Design & Tender	• Define target and scope within the broader NRW program and investment plan to assign the private contractor • Define risk allocation and payment structure • Develop design criteria and minimum standards • Develop cost estimation for bid reference • Develop bidding strategy • Develop contract documents	• Develop business case and assess value for money • Technical and legal due diligence • Conduct financial projections • Market sounding • Tender, evaluate, negotiate and award contract
Implementation	Reduction Phase	• Implement commercial loss-reduction program • Implement physical loss-reduction program: · Establish DMAs · Active leak detection & management · Pressure management • Establish control systems	• Customer surveys, regularization of illegal customers, collection of arrears • Meter replacement or installation • Establish DMA • Set up active leak-detection systems/protocols • Rehabilitation/refurbishment of network and additional works (e.g., reservoirs) • Develop GIS
	Maintenance/ Sustainability Phase	• Maintain reduced NRW or drive towards lower economic leakage levels	• Regularization of NRW effort into utility organization • Regularization of leak monitoring, leak-detection, and management practices • Regularization of commercial loss-reduction practices • Hands-on training specific functions • Asset management
	National Scale Up	• Strengthen regulation systems for NRW • Strengthen public sector-side incentives for NRW management	Potential activities could include: • Build capacity for regulators and utilities to establish economic levels of leakage • Develop national NRW program • Establish NRW performance incentive fund

Figure A4-4: Stages of NRW PBC Transaction Development and Implementation

The ‘performance’ element in PBC contracts offers advantages but also brings challenges:

The legal framework must be solid to mitigate risk and prevent poor contract design.79

78 PPIAF/World Bank, 2016, Using Performance-Based Contracts to Reduce Non-Revenue Water https://ppiaf.org/documents/3531/download

79 Khaled Nassereldin, Executive Manager of SES Consulting. Ramallah, Palestine during technical training IWA Blog 2018, Breaking down barriers in the PBC market https://iwa-network.org/what-does-it-take-to-break-down-barriers-in-the-pbc-market/

Performance contracting is a new and innovative approach. Unsuccessful NRW-reduction programs have encouraged utilities to evaluate new approaches. The relatively recent emergence of PBCs for addressing water loss involves growing pains in the project-design and procurement stages – e.g.

inexperience with tendering processes.80,81 Contractual agreements must be highly customized.82 For this reason and the above ones mentioned, capacity development at a local level is critical.83 84 85 86

80 Murang'a South Water and Sanitation Company (MUSWASCO) Case. Murang'a County is around 50km north-east of the Kenyan capital, Nairobi, and MUSWASCO is one of its five utilities, serving 26,000 households. Coverage, of around 65% of the area's 460,000 population, has increased from 30% since 2010 with support from the output-based aid program of the World Bank Group. Despite the progress in expanding coverage, MUSWASCO has struggled with high levels of NRW – close to 60% – for many years, significantly impacting financial performance (Ertel, J., et al, 2019). The implementation of PBCs by MUSWASCO identified the following main challenges (IWA Webinar https://iwa-network.org/learn/addressing-water-loss-with-performance-based-contracts-2/): i) lack of experienced contractors; ii) Need for capacity building and training to make contractual settings clear for contractors; iii) fear of risks regarding penalties kept investors away; iv) timelines for the preparation of proposals were not enough for bidders. To address these challenges technical assistance was provided with partners (SNV) to engage and build capacity in potential investors, and provide clarifications on the process; fear of risks were alleviated by consensus negotiations and consultation process in the design of the bidding; additional flexibility was incorporated to address the timeline issue.

81 Ertel, J. 2018 IWA, Breaking down barriers in the PBC market https://iwa-network.org/what-does-it-take-to-break-down-barriers-in-the-pbc-market/

82 https://www.iwapublishing.com/books/9781780405957/performance-based-contracts-pbc-improving-utilities-efficiency

83 IWA's market-place and technical training events were important steps in building this capacity, sensitizing key stakeholders and brokering partnerships around specific PBC for non-revenue water opportunities. IWA Blog 2018, Breaking down barriers in the PBC market https://iwa-network.org/what-does-it-take-to-break-down-barriers-in-the-pbc-market/

84 About the initiative: The World Bank Group (WB) and the International Water Association (IWA), in collaboration with the Public-Private Infrastructure Advisory Facility (PPIAF), established a global partnership in 2016 to help countries improve management of non-revenue water. The program aims to capture good practices, raise awareness on the issue of NRW, simplify and streamline the preparation of performance-based contracts and support their implementation in developing countries. The insights from these trainings are informing a new wave of NRW performance-based contracts being developed by the World Bank Group and partners. Lessons, tools and resources are also available through a new portal on "PBCs for NRW" in the PPP Knowledge Lab and IWA's PBC initiative page.

85 Ho Chi Minh Case. Background. Previous experience in Vietnam with traditional input-based contracts (TIBC) to address NRW brought non-satisfactory results (Janssens and Carron, 2018) which motivated use of PBCs. In 2005, Ho Chi Minh City (HCMC) did not have enough water supply for its 6 million inhabitants: with less than half the city connected to the network and more than 40% of water produced lost as leakage. Supply was intermittent. A contractor was competitively procured to enter a PBC for NRW reduction, with a focus on leakage reduction. By the end of the contract 122MLD (million

The quality of available data needs to be reliable and reflect the current baseline of the available assets and current performance.87 88 In general, in developing countries, data is limited and of low quality. This complicates the process of setting up and implementing successful projects and requires innovative approaches.89

The availability of competent contractors is an essential component. Therefore, the selection criteria for the contractors need careful definition. The lack of experienced PBC contractors signals a need for

liters per day) of water had been saved, improving reliability of supply and allowing new customers to be connected saving more than US$100 million of capital expenditures by reforming and restoring the water network. IWA Blog, 2019, Performance-Based Contracts for Non-Revenue Water reduction in Vietnam https://iwa-network.org/performance-based-contracts-for-non-revenue-water-in-vietnam/ also see https://pppknowledgelab.org/tools/case-studies

86 Supporting capacity development, the World Bank and the International Water Association (IWA) have established a global partnership to help countries reduce and improve the management of their Non-Revenue Water (NRW) through Performance-Based Contracts (PBC).

87 IWA Blog 2018, Breaking down barriers in the PBC market https://iwa-network.org/what-does-it-take-to-break-down-barriers-in-the-pbc-market/

88 Bahamas Case. The NRW-PBC between WSC and Miya was signed in 2012 and will end in 2022. In the first year of the contract, Miya conducted a baseline survey (to understand the volumes, values, and causes of each NRW component) and finalized its NRW reduction strategy. NRW targets are set for each year. The contract ends with a maintenance phase, during which the final target (9.1 MLD) should be achieved. Reducing Non Revenue Water by Half in New Providence, The Bahamas https://library.pppknowledgelab.org/documents/5482/download also see https://pppknowledgelab.org/tools/case-studies

89 Ertel, J., et al, 2019, African prospects for performance-based non-revenue water contracts, The Source https://www.thesourcemagazine.org/african-prospects-for-performance-based-non-revenue-water-contracts/

capacity building and speaks to the importance of ensuring efficiency gains are sustainable. 90 It is crucial that international specialist contractors engage local firms as partners, to build local expertise.91

Water systems are often plagued by intermittent supply. The PBC programs are designed to minimize the effect of this, ensuring continuous supply in project areas, but utilities can still expect difficulties in starting phases.92

Utilities are working with limited budgets. This reinforces the importance of delivering successful pilot projects that can attract new finance streams and increase scale-up in other areas (e.g. PBCs focused on location or component).93 94

90 Currently, there are many international contractors operating globally and specialized in executing those PBCs. On the other hand, the domestic expertise in Vietnam, but also many other countries, is still not sufficient to compete in this market for tenure contracts. Limited awareness and expertise on national level motivates capacity development as an essential component for introducing PBC for NRW reduction to both water utilities and potential contractors. Any international contractor needs to team up with local companies for implementation works on the ground. Capacity development with such local companies makes the formation of winning teams easier for the leading contractor, but also allows for more informed competition of companies entering this market. IWA Blog, 2019, Performance-Based Contracts for Non-Revenue Water reduction in Vietnam https://iwa-network.org/performance-based-contracts-for-non-revenue-water-in-vietnam/

91 One alternative way of taking advantage of international expertise is the co-management approach adopted in Jamaica. Since 2015, a co-management arrangement has been used for a PBC in Kingston, Jamaica. Activities are coordinated by a project committee and delivered by a project team that includes employees of the contractor and of the utility (the National Water Commission (NWC)). The contractor is fully responsible for meeting the contract objectives. The committee has five members appointed by the NWC and three by the contractor. The project team leader is nominated by the contractor, and the deputy team leader by the NWC. PPIAF/World Bank, 2016, Using Performance-Based Contracts to Reduce Non-Revenue Water https://ppiaf.org/documents/3531/download The reasons that inspired this approach were: need to achieve sustained results after departure of the contractor; inadequate involvement if the NWC staff; inadequate capacity in NWC; opportunity of contracting a firm with experience in a wider spectrum of water issues; exposure to international best practices" Mark Barnett, NWC, Jamaica, presentation at IWA Webinar https://iwa-network.org/learn/addressing-water-loss-with-performance-based-contracts-2/

92 Ertel, J., et al, 2019

93 PPIAF/World Bank, 2016, Using Performance-Based Contracts to Reduce Non-Revenue Water https://ppiaf.org/documents/3531/download

94 Ertel, J., et al, 2019

There are also concerns about how to sustain performance after a PBC, which highlights the importance of a capacity-building component to these programs.95 96

The following example from below from Benin, demonstrates some innovative solutions to some of the challenges associated with performance-based contracting.

Benin Performance-Based Affermage Contracts

The Benin Rural Water Supply Universal Access PforR supported establishment of regional performance-based affermage contracts, which delegated service delivery to private operators with the aim of improving quality and sustainability of newly expanded water supply systems. The performance-based affermage contracts sought to introduce strong incentives for the regional operators to deliver on expanding access and improving service quality and sustainability. This is due to the fact that the contracts covered larger service areas to allow for attraction of more professional and experienced operators that were able to provide the financing required to deliver good quality and sustainable services to avoid any reputational risk. In addition, signing a limited number of regional contracts would facilitate performance monitoring and data collection efforts in order to effectively monitor service performance and enforce accountability to citizens.

The project design also incorporated signature of framework partnership agreements as a pre-requisite for signing of the performance-based affermage contracts. This was accompanied by TA for preparation of bidding documents and bidding process for recruitment of regional operators; development of a planning contract between the government and service delivery agency defining their multi-year commitments; development of a tariff policy that will apply to the affermage contracts (remuneration includes incentives for reducing NRW and improving bill collection); and developing a communication campaign targeting the Program's stakeholders.

95 Ertel, J., et al, 2019

96 Mary Nyaga, Managing Director of MURAG'A South Water and Sanitation Company, MUSWASCO, presentation at IWA Webinar https://iwa-network.org/learn/addressing-water-loss-with-performance-based-contracts-2/

Annex 5: Summary Program Expenditure Framework

Table A5-1: Summary Program Expenditure Framework

Federal/State	Result Area	Budget Codes	Total Amount (US$)	Yearly projections of program expenditures (US$)						
				2021	2022	2023	2024	2025	2026	2027
Capital Expenditures (CapEx)										
FMWR	2	ERGP30115203 ERGP28110324 ERGP28128475 ERGP28128490 ERGP28110316 ERGP28111602 ERGP30110871 ERGP28111123	58,022,119.28	5,771,018.25	7,432,114.85	10,263,185.33	10,710,892.32	10,119,582.21	6,862,663.16	6,862,663.16
Delta	2	0238212005 0238212023 0238212027 0252020002 0252021001 0252121003	83,305,690.11	8,502,202.05	13,148,109.76	13,148,109.76	12,727,743.90	12,713,731.71	12,148,573.17	10,917,219.76
Ekiti	1, 2	25210200100 26100100101 / 001010000010117 25210300100 26100100100 / 00130000030143	70,304,134.28	10,545,620.14	14,060,826.86	14,060,826.86	14,060,826.86	7,030,413.43	7,030,413.43	3,515,206.71

Federal/State	Result Area	Budget Codes	Total Amount (US$)	Yearly projections of program expenditures (US$)						
				2021	2022	2023	2024	2025	2026	2027
Gombe	2	10000345 10000346 04000110 10000347 04000111 04000112 10000348 10000349 10000350 10000351 10000352 10000356 04000113 04000114 10000364 10000384 04000115 10000385 10000386 10000387 04000116 04000123 04000124 04000125 04000126 04000127 04000128	109,973,936.59	28,585,043.23	33,865,428.25	10,560,770.02	10,560,770.02	10,560,770.02	10,560,770.02	5,280,385.01
Imo	2	462	92,689,306.73	9,798,023.76	44,168,044.79	21,990,912.29	10,592,559.90	3,450,742.26	2,652,437.97	36,585.76
Kaduna	1, 2	23020105 23030127 23020103	74,989,405.99	3,810,897.54	12,389,962.12	13,464,648.27	20,881,016.96	14,144,682.81	6,629,827.56	3,668,370.73

Federal/State	Result Area	Budget Codes	Total Amount (US$)	Yearly projections of program expenditures (US$)						
				2021	2022	2023	2024	2025	2026	2027
Katsina	2	32030109/MWRP017 32010208/MWRP004 32010208/MWRP001 32010208/MWRP002 32010210/MWRP009 32010210/MWRP008 32010210/MWRP011 32010210/MWRP012 32010208/MWRP005 32010101/SEPAP003 32010101/SEPAP002 32010208/RUWP001 32010208/RSUWP001	142,460,968.49	14,755,996.55	29,366,136.25	32,403,143.56	28,039,851.26	29,896,638.71	7,010,105.31	989,096.86

Federal/State	Result Area	Budget Codes	Total Amount (US$)	Yearly projections of program expenditures (US$)						
				2021	2022	2023	2024	2025	2026	2027
Plateau	2	23030000 23030198 23020241 23030199 2302042 23020235 23010210 23030123 23030155 23030156 23030157 23030158 23030159 23030160 23030161 23020337 23020304 23020148 23020149 23020150 23020151 23020152 23040110 23020261 23020262 23040111 23040112 23040113 23050160 23040114 23040115 23050161 23050162	72,842,333.87	0.00	12,655,723.58	14,189,977.64	18,489,278.72	16,946,933.20	10,031,363.82	529,056.91
Total CapEx			704,587,895.34	81,768,801.52	167,086,346.44	130,081,573.74	126,062,939.94	104,863,494.34	62,926,154.45	31,798,584.91
Operational Expenditures (OpEx)										
FMWR	1	ERGP28101915 ERGP30110693	3,877,284.53	221,932.11	391,644.90	391,644.90	979,112.26	979,112.26	456,919.05	456,919.05

Federal/State	Result Area	Budget Codes	Total Amount (US$)	Yearly projections of program expenditures (US$)						
				2021	2022	2023	2024	2025	2026	2027
		ERGP30110892 ERGP28110316								
Delta	1, 2	0238212005 0238212027 0252020001 0252020006 0252021004 0252021007 0252021008 0252210005 0252221002	16,332,498.80	1,802,934.20	3,251,455.15	2,768,326.80	2,509,117.07	2,126,117.07	2,028,302.61	1,846,245.90
Ekiti	1, 2	26100100100 26100100101 25210200100 26100100101 / 001010000010117	7,673,790.36	1,151,068.55	1,534,758.07	1,534,758.07	1,534,758.07	767,379.04	767,379.04	383,689.52

Federal/State	Result Area	Budget Codes	Total Amount (US$)	Yearly projections of program expenditures (US$)						
				2021	2022	2023	2024	2025	2026	2027
Gombe	1	10000353 10000354 10000355 10000357 10000358 10000359 10000360 10000361 10000362 10000363 10000365 10000366 10000367 10000368 10000369 10000370 10000371 10000372 10000373 10000374 10000375 10000376 10000377 10000378 10000379 10000380 10000381 10000382 10000383 10000388 04000117 04000118 04000119 04000120 04000121 04000122 04000129 04000130	14,958,099.86	4,787,559.90	3,261,218.42	2,185,871.41	1,180,862.53	1,180,862.53	1,180,862.53	1,180,862.53
Imo	1, 2	419	7,007,317.07	801,926.83	2,972,097.56	1,224,158.54	676,963.41	565,987.82	421,304.87	344,878.04

Federal/State	Result Area	Budget Codes	Total Amount (US$)	Yearly projections of program expenditures (US$)						
				2021	2022	2023	2024	2025	2026	2027
		445-462								
Kaduna	1	22020114 22020505 22020711	3,059,268.29	465,114.10	819,303.12	561,788.78	602,138.49	435,003.51	148,904.20	27,016.10
Katsina	1	332030109/MWRP017 32030109/MWRP017 32010101/SEPAP003 32010905/SEPAP015 32030109/SEPAP016 32010510/SEPA009 32010208/RUWP001	6,701,038.56	1,788,714.63	1,229,257.65	925,108.87	1,027,916.18	895,421.06	556,082.04	278,538.13
Plateau	1	23040104 23050140 23040105 23040106	4,670,731.71	1,362,804.88	1,092,479.67	1,047,357.72	419,308.94	374,390.24	187,195.12	187,195.12
Total OpEx			64,280,029.18	12,382,055.19	14,552,214.54	10,639,015.09	8,930,176.96	7,324,273.54	5,746,949.46	4,705,344.40
Contingency (6%)			46,132,075.47	5,649,051.40	10,898,313.66	8,443,235.33	8,099,587.01	6,731,266.07	4,120,386.23	2,190,235.76
Total program financing			815,000,000.00	99,799,908.11	192,536,874.64	149,163,824.16	143,092,703.92	118,919,033.95	72,793,490.14	38,694,165.07

Annex 6: Budget Releases and Budget Execution

Table A6-1 – Budget Release

States and Implementing Entities	Approved Budget (OR revised budget as applicable) in Naira			Funds released to the agencies in Naira			Percentage of funds released		
	FY18	FY19	FY20	FY18	FY19	FY20	FY18	FY19	FY20
DELTA									
Urban Water Corporation	50,000,000	50,000,000	250,000,000	40,500,000	13,566,750	33,727,888	81.00	27.13	13.49
Rural Water Supply and Sanitation Agency	360,000,000	420,000,000	450,000,000	315,629,570	109,822,726	348,375,000	87.67	26.15	77.42
Small Towns Water Supply and Sanitation Agency	90,000,000	90,000,000	132,000,000	50,000,000	50,000,000	92,000,000	55.56	55.56	69.70
EKITI									
Ministry of Infrastructure and Public Utilities (MIPU)	175,359,695	181,355,805	94,959,695	67,631,983	74,235,469	75,686,864	38.57	40.93	79.70
Ekiti State Water Corporation (EKSWC) / Ekiti Water and Sewerage Company (EKWSC)	962,394,091	812,412,147	477,394,091	363,626,861	415,132,303	345,301,162	37.78	51.10	72.33
Ekiti State Rural Water Supply and Sanitation Agency (EKRUWASSA)	42,221,986	43,751,982	32,945,111	33,450,503	43,651,982	32,945,122	79.23	99.77	100.00

States and Implementing Entities	Approved Budget (OR revised budget as applicable) in Naira			Funds released to the agencies in Naira			Percentage of funds released		
	FY18	FY19	FY20	FY18	FY19	FY20	FY18	FY19	FY20
IMO									
Rural Water Supply and Sanitation Agency	55,678,562	70,278,538	408,293,201	21,368,697	23,975,577	23,907,577	38.38	34.12	5.86
KADUNA									
Kaduna State Water Corporation	3,773,837,779	2,273,837,779		3,773,837,779	2,273,837,779		100.00	100.00	-
Rural Water Supply and Sanitation Agency	1,166,761,013	1,134,581,813	2,047,503,791	887,606,709	902,392,506	1,540,950,064	76.07	79.54	75.26
Environment and Protection Agency	181,986,260	147,225,700	86,448,280	95,500,761	27,935,480	47,141,440	52.48	18.97	54.53
KATSINA									
Katsina State Water Board	774,441,387		498,183,500	610,333,892		494,190,276	78.81	-	99.20
Rural Water Supply and Sanitation Agency	2,376,000	1,643,900	2,418,000	803,000	765,561	415,088	33.80	46.57	17.17
Department of Semi Urban Water supply	1,900,000,000	800,000,000	975,000,000	115,408,459	310,877,607	202,000,000	6.07	38.86	20.72
Katsina State Environmental Protection Agency	847,604,665	673,290,167	490,959,766	150,008,329	116,228,710	224,950,202	17.70	17.26	45.82
PLATEAU									

States and Implementing Entities	Approved Budget (OR revised budget as applicable) in Naira			Funds released to the agencies in Naira			Percentage of funds released		
	FY18	FY19	FY20	FY18	FY19	FY20	FY18	FY19	FY20
Jos Water Services Corporation (Uraban)	1,480,751,979	1,071,000,000	12,528,500,000	296,150,395	453,433,000	125,285,000	20.00	42.34	1.00
Plateau Rural Water Supply and Sanitation Agency (RUWASSA)	616,979,991	488,568,000	595,600,000	108,588,478	188,930,416	5,956,000	17.60	38.67	1.00
Environment and Protection Agency (PEPSA)	68,500,000	27,100,000	27,100,000	20,550,000	8,130,000	8,130,000	30.00	30.00	30.00

Table A6-2 – Budget Execution

States and Implementing Entities	Approved Budget (or revised budget, if applicable) (in millions of Naira)					Budget execution for the year (in millions of Naira)					Budget execution in percentage				
	FY16	FY17	FY18	FY19	FY20	FY16	FY17	FY18	FY19	FY20	FY16	FY17	FY18	FY19	FY20
DELTA															
State Ministry of Water Resources (WASH sector)	1,394,421	1,181,500	1,600,000	1,668,278	0	77,709	213,634	509,835	752,145		5.57	18.08	31.86	45.09	-
Urban Water Corporation	130,000	130,000	50,000	50,000	227,000	98,430	50,000	40,500	13,567	67,176	75.72	38.46	81.00	27.13	29.59
Rural Water Supply and Sanitation Agency	70,000	204,000	360,000	420,000	450,000	40,000	154,000	315,630	109,823	348,375	57.14	75.49	87.67	26.15	77.42
Small Towns Water Supply	90,000	90,000	90,000	132,000	130,000	90,000	50,000	50,000	92,000	100,000	100.00	55.56	55.56	69.70	76.92

States and Implementing Entities	Approved Budget (or revised budget, if applicable) (in millions of Naira)					Budget execution for the year (in millions of Naira)					Budget execution in percentage				
	FY16	FY17	FY18	FY19	FY20	FY16	FY17	FY18	FY19	FY20	FY16	FY17	FY18	FY19	FY20
and Sanitation Agency															
EKITI															
Ministry of Infrastructure and Public Utilities (MIPU)	101,686	164,433	187,360	141,360	149,360	43,380	55,916	67,632	74,235	75,687	42.66	34.01	36.10	52.52	50.67
Ekiti State Water Corporation (EKSWC) / Ekiti Water and Sewerage Company (EKWSC)	280,074	0	972,690	823,654	449,626	0	0	363,627	415,132	345,301	0.00	-	37.38	50.40	76.80
Ekiti State Rural Water Supply and Sanitation Agency (EKRUWASSA)	24,577	33,807	42,222	43,752	32,945	21,323	30,539	33,451	43,652	32,895	86.76	90.33	79.23	99.77	99.85
GOMBE															
Gombe State Ministry of Water Resources (WASH sector)	208,276	174,339	697,910	465,910	348,530	132,366	99,403	150,619	126,850	132,400	63.55	57.02	21.58	27.23	37.99
Gombe State Water Board	0	2,752,706	2,804,945	2,777,950	2,258,600	0	1,077,801	1,372,123	2,037,811	1,629,589	-	39.15	48.92	73.36	72.15

States and Implementing Entities	Approved Budget (or revised budget, if applicable) (in millions of Naira)					Budget execution for the year (in millions of Naira)					Budget execution in percentage				
	FY16	FY17	FY18	FY19	FY20	FY16	FY17	FY18	FY19	FY20	FY16	FY17	FY18	FY19	FY20
Rural Water Supply and Sanitation Agency (RUWASSA)	394,895	292,700	1,341,875	1,277,355	1,372,595	52,999	87,423	16,185	516	3,625	13.42	29.87	1.21	0.04	0.26
Gombe State Environment and Protection Agency (GOSEPA)	1,522,580	1,458,190	1,535,200	1,756,000	2,628,200	1,179,008	1,134,296	1,157,350	1,411,495	2,110,332	77.43	77.79	75.39	80.38	80.30
IMO															
Urban Water Corporation	100,000	926,000	335,440	1,063,264	627,139	0	0	0	119,704	233,383	0.00	0.00	0.00	11.26	37.21
Rural Water Supply and Sanitation Agency	55,308	55,609	55,679	70,279	350,407	20,368	21,251	21,368	23,976	23,908	36.83	38.21	38.38	34.12	6.82
KADUNA															
Kaduna State Water Corporation	2,515,400	3,231,222	3,773,838	2,273,838	0	2,515,400	3,231,222	3,773,838	2,273,838	0	100.00	100.00	100.00	100.00	-
Rural Water Supply and Sanitation Agency	878,469	1,014,500	1,166,761	1,134,582	2,232,730	878,469	1,014,500	1,166,761	1,134,582	2,232,730	100.00	100.00	100.00	100.00	100.00
Environment and Protection Agency	37,423	307,268	181,986	147,226	86,448	0	25,900	95,501	27,935	47,141	0.00	8.43	52.48	18.97	54.53
KATSINA															

States and Implementing Entities	Approved Budget (or revised budget, if applicable) (in millions of Naira)					Budget execution for the year (in millions of Naira)					Budget execution in percentage				
	FY16	FY17	FY18	FY19	FY20	FY16	FY17	FY18	FY19	FY20	FY16	FY17	FY18	FY19	FY20
Katsina State Water Board	510,744	729,493	774,441	0	498,184	502,637	636,612	610,334	0	494,190	98.41	87.27	78.81	-	99.20
Rural Water Supply and Sanitation Agency	891,610	2,153	2,376	1,644	2,418	567	864	803	766	415	0.06	40.11	33.80	46.57	17.17
Department of Semi Urban Water Supply	454,000	1,650,000	1,900,000	800,000	975,000	0	104,807	115,408	310,878	202,000	0.00	6.35	6.07	38.86	20.72
Katsina State Environmental Protection Agency	141,952	680,005	847,605	673,290	490,960	126,047	83,316	150,008	116,229	224,950	88.80	12.25	17.70	17.26	45.82
PLATEAU															
State Ministry of Water Resources and Energy (WASH sector)	505,622	549,300	1,073,400	2,571,600	1,862,600	151,687	164,790	322,020	771,480	18,626	30.00	30.00	30.00	30.00	1.00
Jos Water Services Corporation (Uraban)	1,188,326	427,564	1,480,752	1,071,000	12,528,500	209,145	75,251	296,150	453,433	125,285	17.60	17.60	20.00	42.34	1.00
Plateau Rural Water Supply and Sanitation Agency (RUWASSA)	495,136	178,152	616,980	488,568	595,600	87,144	31,355	108,588	188,930	5,956	17.60	17.60	17.60	38.67	1.00
Environment and Protection Agency (PEPSA)	50,000	50,000	68,500	27,100	27,100	15,000	15,000	20,550	8,130	8,130	30.00	30.00	30.00	30.00	30.00

Annex 7: Background information on participating states97

Delta

Population: 4,112,445

Number of LGAs: 25

Water coverage: N/A

Sanitation coverage: N/A

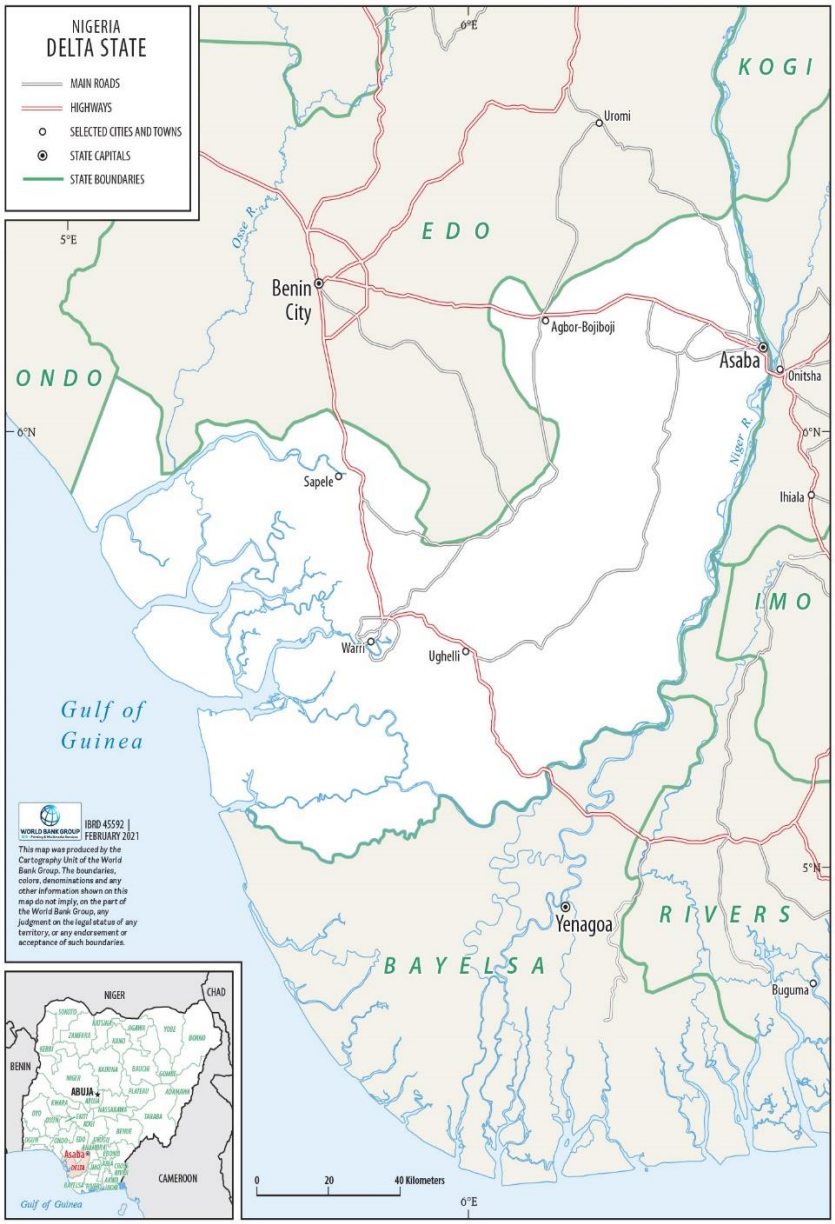
Practicing OD: 25.9%

Number of ODF LGAs: 0

School WASH coverage: N/A

WASH coverage in Healthcare facilities: N/A

Number of public toilet facilities (urban/small towns/rural): Urban - 0 Small Town - 0 Rural - 43



97 Data collected from meetings with state representatives. Further verification and cross-check would be required.

Ekiti

Population: 3,475,699

Number of LGAs: 16

Water coverage: 62%

Sanitation coverage: 33%

Practicing OD: 44.6%

Number of ODF LGAs: 0

School WASH coverage: N/A

WASH coverage in Healthcare facilities: N/A

Number of public toilet facilities (urban/small towns/rural): 34

Gombe

Population: 3,446,822

Number of LGAs: 11

Water coverage: 48.71%

Sanitation coverage: 28.75%

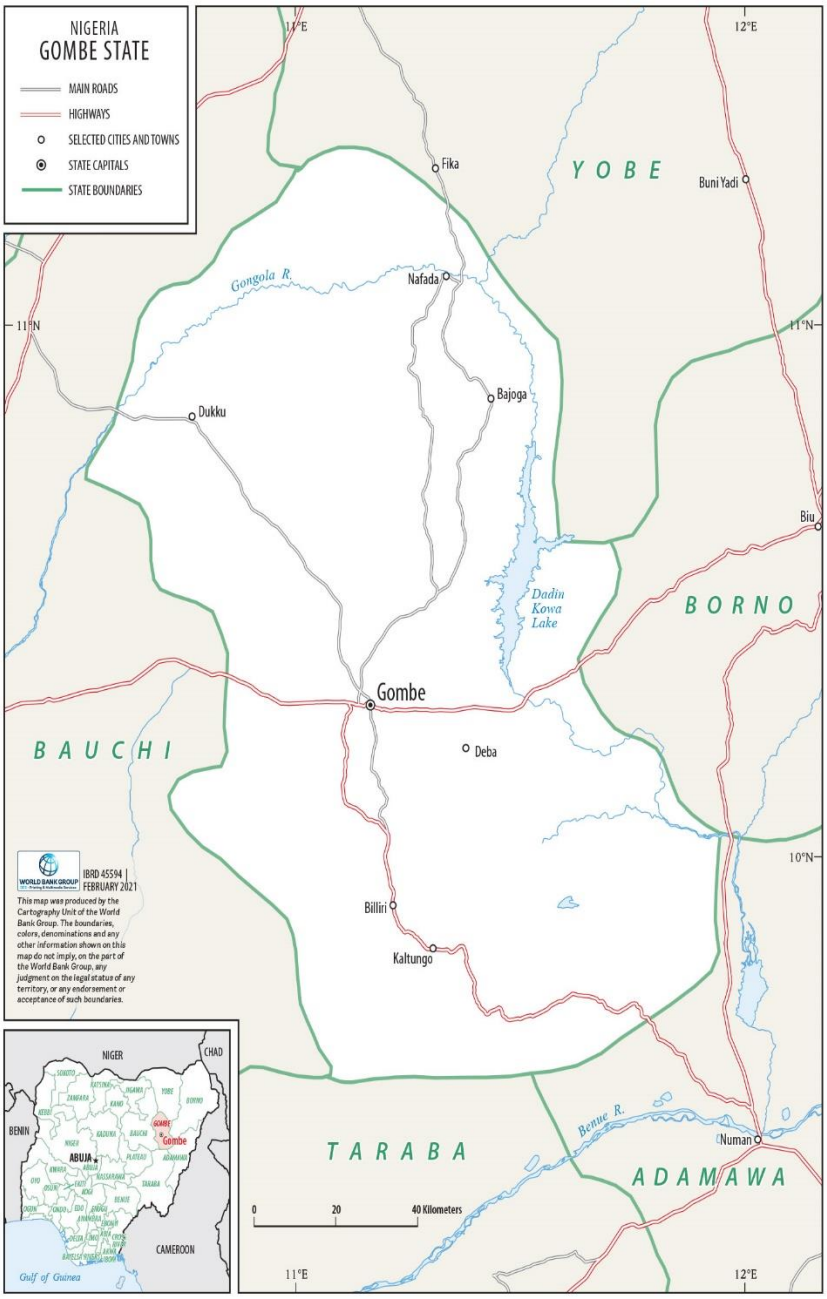
Practicing OD: 7.6%

Number of ODF LGAs: N/A

School WASH coverage: 57.17%

WASH coverage in Healthcare facilities: 7.83%

Number of public toilet facilities (urban/small towns/rural): 336



Imo

Population: 3,926,163

Number of LGAs: 27

Water coverage: 61%

Sanitation coverage: 78%

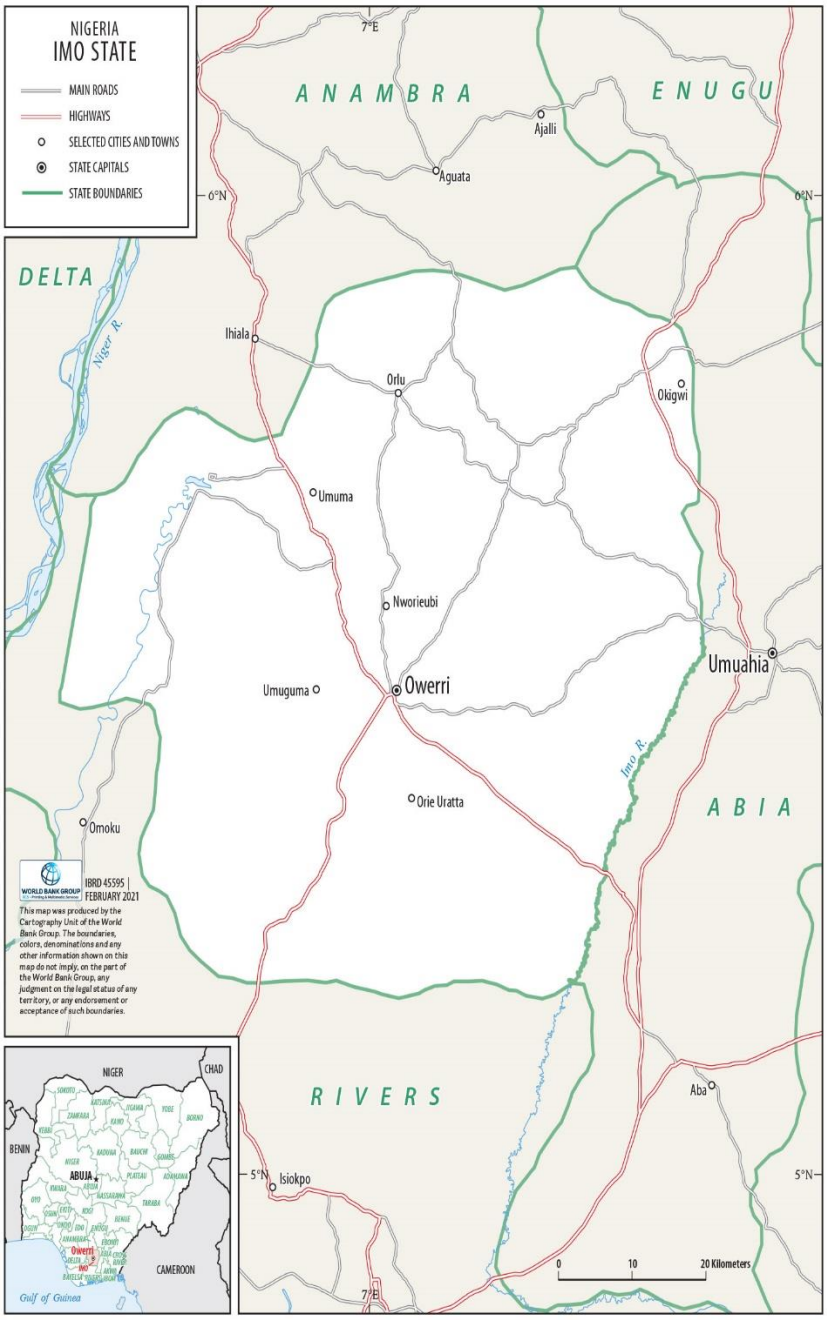
Practicing OD: 11.9%

Number of ODF LGAs: 0

School WASH coverage: N/A

WASH coverage in Healthcare facilities: N/A

Number of public toilet facilities (urban/small towns/rural): 1726



Kaduna

Population: 9.5 million

Number of LGAs: 23

Water coverage: 57.9%

Sanitation coverage: 75.3%

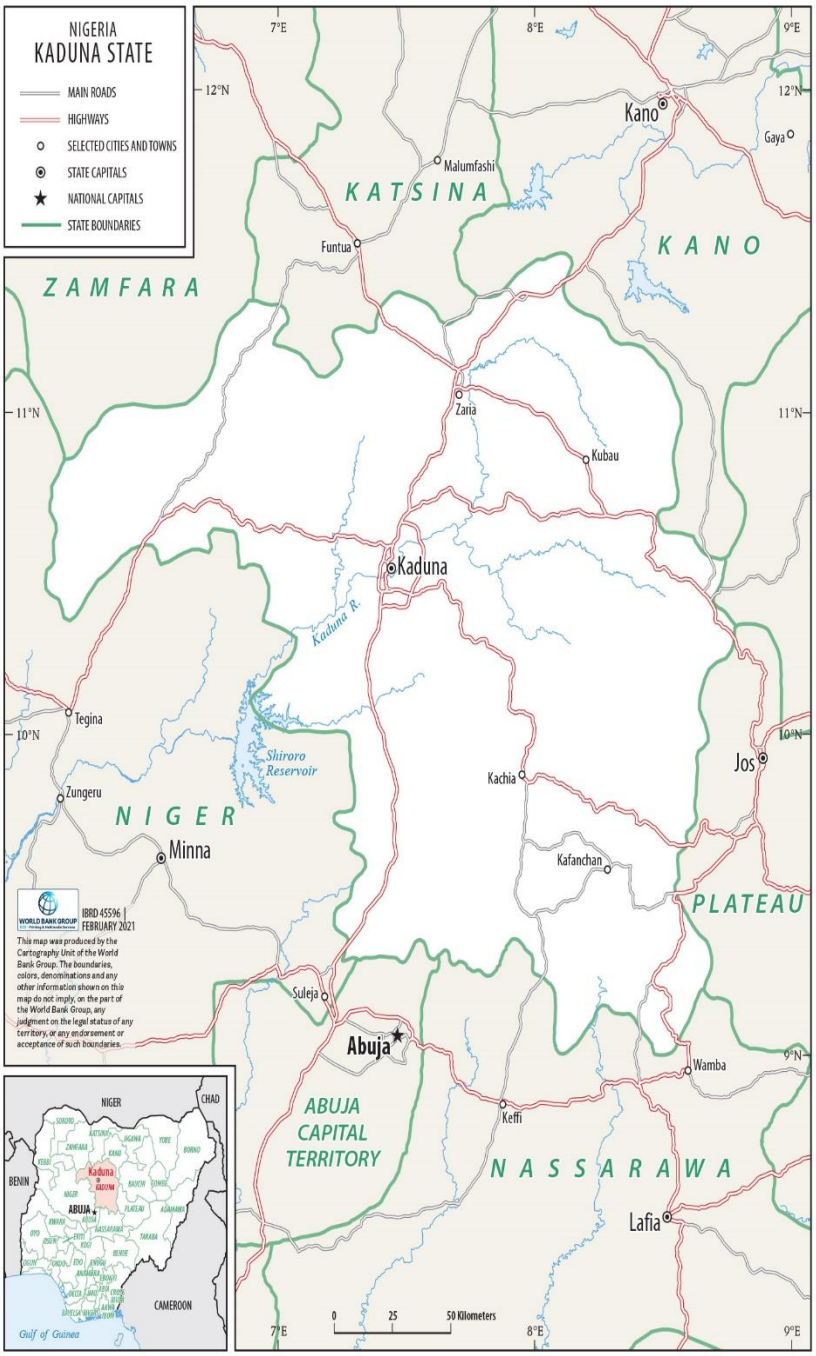
Practicing OD: 9.2%

Number of ODF LGAs: N/A

School WASH coverage: N/A

WASH coverage in Healthcare facilities: N/A

Number of public toilet facilities (urban/small towns/rural): N/A



Katsina

Population: 9,518,821

Number of LGAs: 34

Water coverage: 77%

Sanitation coverage: 50%

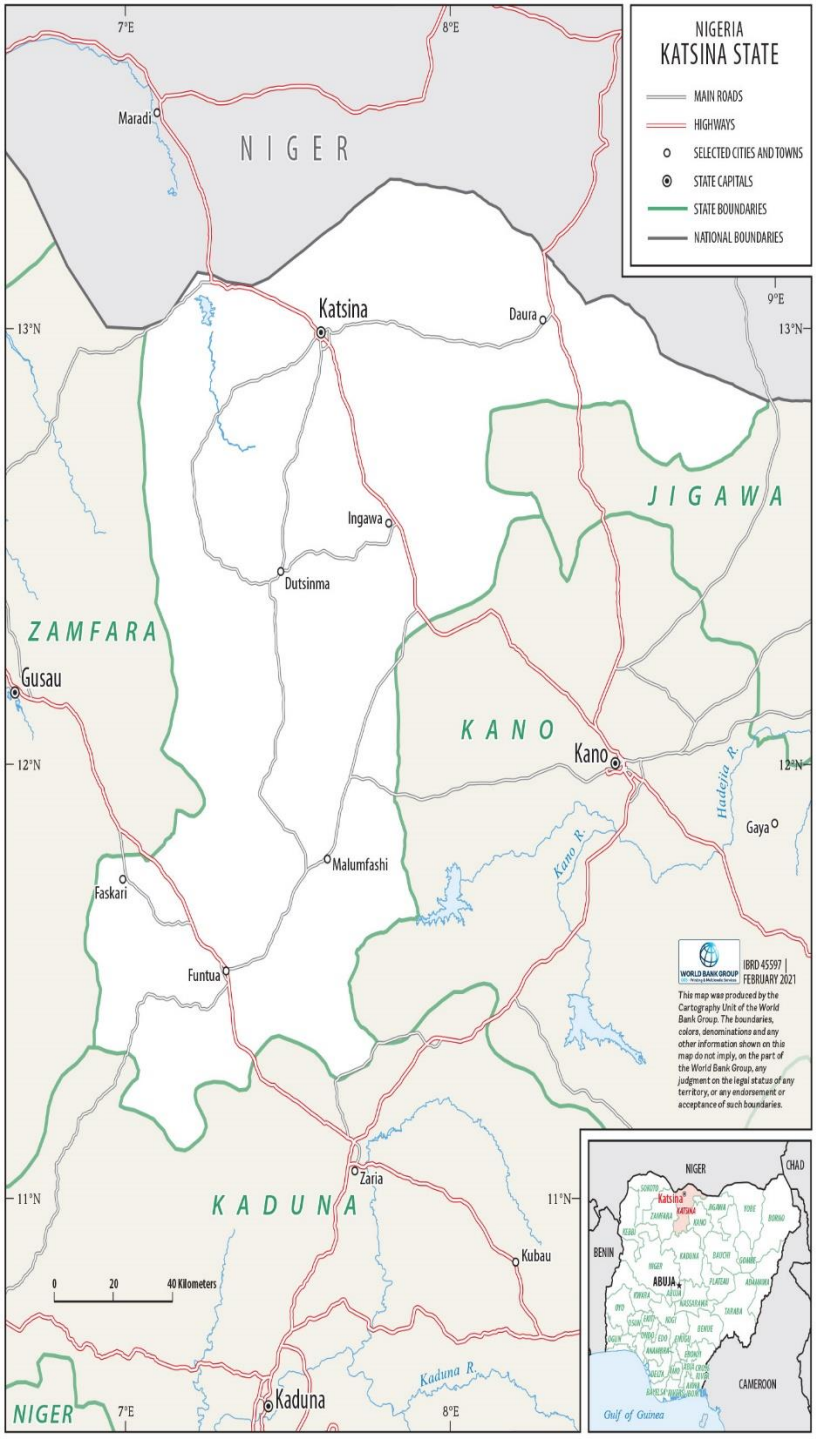
Practicing OD: 8.2%

Number of ODF LGAs: 10

School WASH coverage: 9.6%

WASH coverage in Healthcare facilities: 64.80%

Number of public toilet facilities (urban/small towns/rural): N/A



Plateau

Population: 3,206,531

Number of LGAs: 17

Water coverage: 42%

Sanitation coverage: 29%

Practicing OD: 60.6%

Number of ODF LGAs: 0

School WASH coverage: 40%

WASH coverage in Healthcare facilities: 46%

Number of public toilet facilities (urban/small towns/rural): Urban - 0 Small Town - 8 Rural - 3