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PROJECT PERFORMANCE ASSESSMENT REPORT

NIGERIA

**NATIONAL WATER REHABILITATION PROJECT (LOAN 3322-UNI)
FIRST MULTI-STATE WATER SUPPLY PROJECT (CREDIT 2372-UNI)
SMALL TOWNS WATER SUPPLY AND SANITATION PILOT PROJECT
(CREDIT 3350-UNI)**

June 13, 2006

*Thematic and Global Evaluation Division
Independent Evaluation Group (IEG) of the World Bank*

Currency Equivalents (annual average)

1991	US\$1.00	Naira 9.91	1998	US\$1.00	Naira 21.89
1992	US\$1.00	Naira 17.30	1999	US\$1.00	Naira 92.34
1993	US\$1.00	Naira 22.07	2000	US\$1.00	Naira 101.70
1994	US\$1.00	Naira 22.00	2001	US\$1.00	Naira 111.23
1995	US\$1.00	Naira 21.90	2002	US\$1.00	Naira 120.58
1996	US\$1.00	Naira 21.88	2003	US\$1.00	Naira 129.22
1997	US\$1.00	Naira 21.89	2004	US\$1.00	Naira 132.89

Abbreviations and Acronyms

CAS	Country Assistance Strategy
CDD	Community driven development
CPI	Consumer price index
EU	European Union
FGN	Federal Government of Nigeria
FMF	Federal Ministry of Finance
FMWR	Federal Ministry of Water Resources
FPCU	Federal project coordination unit
GDP	Gross domestic product
GNP	Gross national product
ICB	International competitive bidding
ICR	Implementation Completion Report
IFC	International Finance Corporation
KSWB	Kaduna State Water Board
MDG	Millennium Development Goals
MOF	Ministry of Finance
NCB	National competitive bidding
NEPA	Nigerian Electric Power Authority, now called NHPC
NRW	Non Revenue Water, previously called UFW
NSWB	Niger State Water Board
PIU	Project Implementation Unit
OED	Operations Evaluation Department of the World Bank, now IEG
UFW	Unaccounted for Water, replaced by Non Revenue Water
UNDP	United Nations Development Program

Fiscal Year

Government of Nigeria: January 1—December 31

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IEG Mission: Enhancing development effectiveness through excellence and independence in evaluation.

About this Report

The Independent Evaluation Group assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, IEG annually assesses about 25 percent of the Bank's lending operations. Assessments are conducted one to seven years after a project has closed. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons. The projects, topics, and analytical approaches selected for assessment support larger evaluation studies.

A Project Performance Assessment Report (PPAR) is based on a review of the Implementation Completion Report (a self-evaluation by the responsible Bank department) and fieldwork conducted by IEG. To prepare PPARs, IEG staff examine project files and other documents, interview operational staff, and in most cases visit the borrowing country for onsite discussions with project staff and beneficiaries. The PPAR thereby seeks to validate and augment the information provided in the ICR, as well as examine issues of special interest to broader IEG studies.

Each PPAR is subject to a peer review process and IEG management approval. Once cleared internally, the PPAR is reviewed by the responsible Bank department and amended as necessary. The completed PPAR is then sent to the borrower for review; the borrowers' comments are incorporated into the document that is sent to the Bank's Board. When an assessment report is released to the Board, it is also widely distributed within the Bank and to concerned authorities in member countries.

About the IEG Rating System

The time-tested evaluation methods used by IEG are suited to the broad range of the World Bank's work. The methods offer both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. IEG evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (complete definitions and descriptions of factors considered are available on the IEG website: <http://wbln1023.worldbank.org/oed/oeddoclib.nsf/232d43ae09e87ac985256966007cc257/acaeb95358e99e578525698c005190da?OpenDocument>).

Relevance of Objectives: The extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). *Possible ratings:* High, Substantial, Modest, Negligible.

Efficacy: The extent to which the project's objectives were achieved, or expected to be achieved, taking into account their relative importance. *Possible ratings:* High, Substantial, Modest, Negligible.

Efficiency: The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. *Possible ratings:* High, Substantial, Modest, Negligible.

Sustainability: The resilience to risk of net benefits flows over time. *Possible ratings:* Highly Likely, Likely, Unlikely, Highly Unlikely, Not Evaluable.

Institutional Development Impact: The extent to which a project improves the ability of a country or region to make more efficient, equitable and sustainable use of its human, financial, and natural resources through: (a) better definition, stability, transparency, enforceability, and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. Institutional Development Impact includes both intended and unintended effects of a project. *Possible ratings:* High, Substantial, Modest, Negligible.

Outcome: The extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently. *Possible ratings:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project). *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, toward the achievement of development objectives and sustainability. *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

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This report was prepared by Klas Ringskog (Consultant), who assessed the projects in February 2006 under direction from George T. Keith Pitman. Soon-Won Pak provided administrative support.

Principal Ratings

NATIONAL WATER REHABILITATION PROJECT (LOAN 33220-UNI)

	<i>ICR*</i>	<i>ICR Review*</i>	<i>PPAR</i>
Outcome	Unsatisfactory	Moderately Unsatisfactory	Highly Unsatisfactory
Sustainability	Unlikely	Unlikely	Highly Unlikely
Institutional Development Impact	Modest	Modest	Negligible
Bank Performance	Satisfactory	Satisfactory	Unsatisfactory
Borrower Performance	Unsatisfactory	Unsatisfactory	Unsatisfactory

FIRST MULTI-STATE WATER SUPPLY PROJECT (CREDIT 23720-UNI)

	<i>ICR*</i>	<i>ICR Review*</i>	<i>PPAR</i>
Outcome	Unsatisfactory	Unsatisfactory	Moderately Unsatisfactory
Sustainability	Unlikely	Unlikely	Unlikely
Institutional Development Impact	Modest	Modest	Modest
Bank Performance	Unsatisfactory	Unsatisfactory	Unsatisfactory
Borrower Performance	Unsatisfactory	Unsatisfactory	Unsatisfactory

SMALL TOWNS WATER SUPPLY AND SANITATION (CREDIT 33500-UNI)

	<i>ICR*</i>	<i>ICR Review*</i>	<i>PPAR</i>
Outcome	Unsatisfactory	Unsatisfactory	Satisfactory
Sustainability	Unlikely	Unlikely	Likely
Institutional Development Impact	Negligible	Negligible	Substantial
Bank Performance	Satisfactory	Unsatisfactory	Satisfactory
Borrower Performance	Unsatisfactory	Unsatisfactory	Satisfactory

* The Implementation Completion Report (ICR) is a self-evaluation by the responsible operational division of the Bank. The ICR Review is an intermediate Independent Evaluation Group (IEG) product that seeks to independently verify the findings of the ICR.

Key Staff Responsible

NATIONAL WATER REHABILITATION PROJECT (LOAN 3322-UNI)

<i>Project</i>	<i>Task Manager</i>	<i>Division Chief</i>	<i>Country Director</i>
Appraisal	Elaine Patterson	James Wright, Jr.	Edwin Lim
Completion	David Henley	Letitia Obeng	Mark Tomlinson

FIRST MULTI-STATE WATER SUPPLY PROJECT (CREDIT 2372-UNI)

<i>Project</i>	<i>Task Manager</i>	<i>Division Chief</i>	<i>Country Director</i>
Appraisal	David Henley	James Wright, Jr.	Edwin Lim
Completion	David Henley	Letitia Obeng	Mark Tomlinson

SMALL TOWNS WATER SUPPLY AND SANITATION (CREDIT 3350-UNI)

<i>Project</i>	<i>Task Manager</i>	<i>Division Chief</i>	<i>Country Director</i>
Appraisal	David Henley	Letitia Obeng	Yaw Ansu
Completion	Paul Kriss	Inger Andersen	Mark Tomlinson

Preface

This Project Performance Assessment Report (PPAR) evaluates three water supply projects. The National Water Rehabilitation Project (Loan 3322-UNI) for US\$256.0 million was approved on May 21, 1991, became effective on August 27, 1992, and closed on June 30, 2001, two years after the original closing date of June 30, 1999. The First Multi-State Water Supply Project (Credit 2372-UNI) for US\$101.0 million was approved on May 28, 1992, became effective on May 4, 1993, and closed on September 30, 2000, one year after the original closing date of September 30, 1999. The Small Towns Water Supply and Sanitation Pilot Project (Credit IDA 3350-UNI) for US\$5 million equivalent, was approved on May 18, 2000, became effective on August 1, 2000, and closed on June 30, 2004, one year after the original closing date of June 30, 2003.

The three assessed projects had quite different objectives and scope. The National Water Rehabilitation Project followed the first generation of water supply projects from the Bank that had been for investments and institutional strengthening in the states of Kaduna (1979), Anambra (1980), Borno (1985), and Lagos (1989). In contrast to these four state-specific projects the National Water Rehabilitation Project was nationwide and catered to all Nigerian states. Subsequent water supply projects resumed the state-specific strategy when the First Multi-State Water Supply was earmarked for Kaduna and Katsina states (that comprised the territory of the “old” Kaduna state from which Katsina was split off in 1987). Finally, the Small Towns Water Supply and Sanitation Project took aim at satisfying the needs of 16 individual towns.

The National Water Rehabilitation, the First Multi-State, and the Small Towns Water Supply projects were selected for this cluster assessment in order to evaluate the reasons for the failure of the Bank’s assistance to the Nigerian water supply sector in the 1979-2004 period in which seven out of seven projects had been rated as unsatisfactory, with unlikely sustainability and with negligible or modest institutional development impact.

This report is based on the Implementation Completion Reports (ICRs) prepared by the Africa Region, the Memoranda and Recommendations of the President, Staff Appraisal Reports, loan documents, project files, and discussions with Bank staff. An IEG mission visited Nigeria February 1-16, 2006 to assess the three water supply projects and met stakeholders to discuss the effectiveness of the Bank’s assistance with development partners, project implementing agencies and beneficiaries. The cooperation and assistance of central government and regional officials and staff, nongovernmental stakeholders, and other interested parties are gratefully acknowledged. Visited sub-projects included Doko, Izom and Kuta (Niger state) that were part of the Small Towns WSS Pilot Project, Bida and Agaie (Niger state) that were part of the National Water Rehabilitation Project, Kaduna City that was part of the National Rehabilitation Project, and Zonkwa and Kwoi (Kaduna state) that were part of the First-Multi-state Water Supply Project.

Following customary procedures, copies of the draft PPAR were sent to the relevant government officials and agencies for review and comments before being disclosed. Their comments are attached as Annex B.

Summary

The Nigeria National, Multi-State and Small Towns projects assessed in this PPAR comprised the World Bank assistance to the Nigerian water supply sector over the period 1992-2004, a time of great economic and political stress in the country. These projects represent a clear evolution in the scope of World Bank lending: the first project was nationwide and concentrated on procurement and installation of equipment in selected water systems in each of the 36 Nigerian states and the National Federal Territory; the second project was restricted to two states (Kaduna and Katsina); and the third project directly assisted 16 small towns.

The primary objectives of the National and Multi-State projects were to improve water supply services in selected urban and semi-urban areas of several states and bring about the efficient operation and maintenance of their respective water supply systems. In addition, the Multi-State project aimed to improve the health, productivity and living conditions of people residing in such areas; to strengthen and make their Water Boards financially self-sufficient; and to assist the Borrower in preparing water projects for non-project states of Nigeria. The objectives of the Small Towns Project was to pilot a new concept for identification, implementation and operation of water supplies in small towns; to facilitate sustainable access to safe water and adequate sanitation; and to determine the most efficient service-delivery mechanism for replication throughout the Borrower's territory.

IEG rates the outcome of the National project as **highly unsatisfactory**, its sustainability as **highly unlikely**, and its institutional development impact as **negligible**. The outcome of the Multi-State project is rated as **moderately unsatisfactory**, its sustainability as **unlikely** and its institutional development impact as **modest**. In contrast, the outcome of the Small Town project is rated as **satisfactory**, its sustainability as **likely** and its institutional development impact as **substantial**. While Bank and Borrower performance were rated as **unsatisfactory** for the National and Multi-State projects, the performance of the Bank and the Borrower for the Small Towns project is rated as **satisfactory**.

The improving trend in project outcomes can in large part be explained by a shift in responsibility for project implementation away from the Federal Ministry of Water Resources under the National project, to only two State Water Boards (Kaduna and Katsina) under the Multi-State project, and finally to a clear focus on a limited number of towns under the Small Towns project. This shift enabled an alignment of the incentives of the beneficiaries with the objective of designing and building simple systems that could be sustainably operated.

The steadily improved ratings for water supply lending in Nigeria vindicate the Bank's evolving lending strategy since the late 1990s, although deep-seated problems will remain for many years to come. Historically, Nigeria's water supply and sanitation sector has been caught in a vicious circle characterized by an absence of policies that could enable efficient, sustainable service for all. Specifically, this includes the dearth of tariffs that reflect costs of service; an absence of autonomous state water boards; perpetual operating deficits which deprive the state water boards of funds for maintenance, new investment and back-up power supplies; and grossly inadequate power supplies that cause intermittent water service and damage to electromechanical equipment. Thus, abysmal service quality jeopardizes the state

water boards' collection of tariffs that might produce operating surpluses, which has led them to become dependent on periodic external finance to rehabilitate deteriorating systems and on handouts from the state governments to fund operating deficits.

Because of these problems it is highly unlikely that Nigeria will meet its water supply and sanitation targets under the Millennium Development Goals (MDGs). It has long been thought that the service coverage in urban areas is 50 percent for water supply. Based on a sample of towns and cities included in the three projects it seems that water service is accessible to no more than a quarter of the urban population (in the case of Kaduna state) and often to as few as 10 percent. Thus there is a threat that service coverage seems to be dropping rather than rising as the country approaches the 2015 MDG target year.

There are three principal lessons:

First, the targets under the MDGs for water supply and sanitation, focusing only on service coverage and access, need to be expanded to include the reliability and quality of water supplies.

Second, effective coordination between central, state and local governments requires demand-driven approaches where the consumers have the initiative. The improved ratings over the last fifteen years also parallel a growing attention paid to the financial sustainability and improved governance of individual states and towns. The motivation of state water boards to invest and maintain equipment purchased under the National Project was low when funding was distributed over all Nigerian states and when purchases were controlled by the Federal Ministry of Water Resources. The Multi-State Project represented an improvement since funding was concentrated in two states, thus permitting more comprehensive and possibly sustainable interventions. The best result was obtained when the Small Towns project engaged the local communities early on and conditioned the financing of investments on their success in collecting funds to pay for a portion of the works.

Third, maintenance merits priority over new works. The three projects mark a rebalancing of the needs for maintenance of existing assets versus simply investing in new capacity. The National and Multi-State projects show that increasing system coverage and capacity is of little use if the rest of the existing system is dysfunctional due to inadequate maintenance. Conversely, the Small Towns project obliged the participating towns to contribute financially to the investments and to organize sustainable operation and maintenance of systems they now owned. Indeed, about half have employed small private entrepreneurs to operate the systems. And the likely sustainability of the Small Towns project (with 13 out of 16 towns operational) attest to the merits of the principle of demand-driven investments where the communities have the final decision on the type and cost of the system that will be built. Getting management of water services to the lowest appropriate level appears to be one of the key ingredients for sustainability.

Vinod Thomas
Director-General, Evaluation

1. Findings and Lessons

COUNTRY AND SECTOR BACKGROUND

1. Nigeria is the most populous state in Africa with an estimated population of 140 million in 2004 occupying an area of 926,000 square kilometers. The annual population growth rate is thought to have declined from 2.9 percent over the 1980-2001 period and is projected to be 1.9 percent over the 2001-15 period. About 45 percent of the population is considered urban and about 55 percent rural. The rural population includes communities with populations below 5,000; larger communities are considered urban. Per capita GNP reached close to US\$1,300 in 1980 but has since dropped sharply and was estimated at US\$290 in 2001. After independence in 1960 the Nigeria was mostly ruled by the military but since 1999 the country has been led by a democratically elected president. The northern half of the country is primarily Muslim and the southern half primarily Christians. Disputes over political power, access to the benefits from oil resources and inter-denominational strife flare up periodically.

2. It has long been thought that about half of the urban population is connected to potable water but current data now indicate that the urban coverage might be at most half that, or 25 percent. Rural coverage is lower. In both urban and rural areas water service is intermittent or absent and water is unsafe. With the exception of the capital Abuja, the country has no operative sanitary sewerage. Infant mortality, which was estimated at 117 per thousand live births in 1980, has declined to 101 per thousand live births by the year 2004. Over the same period, under-five child mortality declined marginally from 230 to 197 per thousand live births.¹ Poor water service and no sanitary excreta disposal can explain much of the high mortality.

3. Water supply is a state responsibility in Nigeria and each of the 36 states and the Federal Capital Territory has created a State Water Board to exercise its authority. The State Water Boards are vested with the duty to provide service in both urban and some semi-urban areas. State ministries of water are responsible for service delivery in small towns and rural areas. The Federal Ministry of Water Resources (FMWR) is responsible for national and international aspects of water resource allocation and for approving large water resource development projects. FMWR oversees the activities of 11 River Basin Development Authorities. The FMWR has a Department of Water Supply and Quality Control, but without any formal regulatory authority. In practice, the country lacks reliable consolidated assessments of access and quality of water supply and sanitation services. To remedy this gap the Department of Water Supply and Quality Control is planning a study to establish a country-wide baseline to track Nigeria's progress towards meeting the water access targets under the Millennium Development Goals (MDG). It is already clear that Nigeria is unlikely to meet the MDG targets.²

1. UNICEF. 2005. Globally the average infant mortality rate in 2004 was 54 per 1,000; ranging from 5 for industrialized countries to 59 for developing countries and 98 for the least developed countries. Source: <http://childinfo.org/areas/childmortality/infantdata.php>.

2. In its comments (see Annex B) the FMWR notes "that the Federal Government, through the FMWR, continued to invest over US100 million dollars, every year on water supply infrastructural development."

OUTCOMES

4. IEG rates the outcome of the National Water Rehabilitation Project as **highly unsatisfactory**³, the outcome of the First Multi-State Water Supply Project as **moderately unsatisfactory**. In contrast, the outcome of the Small Town Water Supply and Sanitation Project is rated as **satisfactory**.

5. The improving trend in project outcomes can in large part be explained by a shift in responsibility for project implementation away from the Federal Ministry of Water Resources under the National Project, to only two State Water Boards (Kaduna and Katsina) under the Multi-State project, and finally a clear focus on a limited number of towns under the Small Towns project. This shift enabled an alignment of the incentives of the beneficiaries with the objective of designing and building simple systems that can be sustainably operated.

6. The three projects also mark a rebalancing of the needs for maintenance of existing assets versus simply investing in new capacity. The National and Multi-State projects show that increasing system coverage and capacity is of little use if the rest of the existing system is dysfunctional due to inadequate maintenance. Conversely, the Small Towns project obliged the participating towns to contribute financially to the investments and organize sustainable operation and maintenance of systems they now owned. Indeed, about half have employed small private entrepreneurs to operate the systems. And the likely sustainability of the Small Towns project (with 13 out of 16 towns operational) attest to the merits of the principle of demand-driven investments where the communities have the final decision on the type and cost of the system that will be built.

LESSON LEARNT

Lesson One: The tracking of the targets under the Millennium Development Goals (MDG) must improve to account for the water supply service deficiencies of Nigeria.

7. **It is highly unlikely that the MDG water supply and sanitation targets will be met in Nigeria.** The reasons are twofold. First, the present PPAR has demonstrated that the present weighted access to water supply of 42 percent does not paint a true picture of access. The PPAR has estimated urban connection rates in Kaduna state at the most as 25 percent – and this after the state has benefited from three previous Bank loans and is benefiting from a fourth, the National Urban Water Sector Reform Project, approved in 2004. It stands to reason that Kaduna state is likely to have one of the highest, if not the highest, rates of access to water supply in Nigeria which makes it likely that the present actual access in Nigeria is at the most about half that conventionally assumed.

8. Second, the PPAR reports on the abysmal quality of water service in Nigeria with intermittent service being the rule and bacteriological quality of service unsafe. Therefore what the MDG define as access to water supply service cannot be taken as safe or as

3. In its comments (see Annex B) on the draft PPAR the FMWR notes that “Besides, only three out of the 188 rehabilitated schemes were visited and thereby wondered how the PRAR came to the conclusion that the project was highly unsatisfactory.”

representing a modicum of satisfactory service. In some cases – such as for the system in Zonkwa built under the First Multi-State Water Supply project in Kaduna state – water has not been available for four months. In Kaduna’s capital city only 28 percent of water samples test negative for pathogens; and in the mega-city of Lagos the actual average consumption of the population has been estimated at 12 liters per capita per day.⁴

9. Such glaring deficiencies in the quality of service demand that the simplistic MDG definitions of what constitutes access to water supply service must evolve to incorporate some form of quality considerations. These might comprise the continuity of service that is fundamental to safeguard the bacteriological safety of supplies. To track such an amended definitions of access, Nigeria must equip itself with a sound monitoring and evaluation system. Such a system will not require much external financing, but simply having the Federal Ministry of Water Resources, through its Directorate of Water Supply, annually monitor a dozen or so of the most central performance indicators of the water supply operations of the State Water Boards.

Lesson Two: Effective coordination between central, state and local governments requires demand-driven approaches where the consumers have the initiative.

10. The three assessed projects show a clear evolution from a supply-driven strategy where the Federal Ministry of Water Resources controlled the National Water Rehabilitation Project tightly, via the First Multi-State Water Supply project where two State Water Boards were responsible for project implementation, to the Small Towns Water Supply project where the local communities were the driving and deciding force for all major decisions. The results clearly show the relative benefits of the three approaches: the Small Towns project has been rated as satisfactory, the First Multi-State Water Supply as moderately unsatisfactory and the National Water Rehabilitation Project as unsatisfactory.

Lesson Three: Maintenance merits priority over new works.

11. The results of the National Water Rehabilitation Project are proof that new works in the absence of reliable maintenance will not increase supply. Effectively no attention was paid to ensuring a reliable system of maintenance of the power supply, or the effective and reliable production of replacement power through standby generators. Maintenance was mentioned as an objective but for maintenance to happen there must be policy declarations, policy instrumentation and policy implementation. None of this happened. The political powers at state levels were not asked to support maintenance through policy declarations or the adoptions of suitable legislation and regulation, nor were they asked to guarantee the financing to undertake maintenance and operate the systems reliably. In the absence of financial self-sufficiency the first victim of financial stress was preventive maintenance with serious long-term consequences.

4. Agenda 21, the Rio Declaration on Environment and Development, established a target of access to at least 40 litres per capita per day of safe water in urban areas by the year 2000. The full implementation of Agenda 21, the Programme for Further Implementation of Agenda 21 and the Commitments to the Rio principles, were strongly reaffirmed at the World Summit on Sustainable Development (WSSD) held in Johannesburg, South Africa in 2002.

Lesson Four: Demand-driven projects demand adequate community development.

12. The success of the demand-driven Small Towns Water Supply and Sanitation Project could not have happened without substantial resources expended on activating the small towns and stimulating them to setting up Water Consumer Associations. These WCAs quickly appreciated the fact that they were in the driver's seat and arranged for the collection of funds to pay the required 10 percent contribution of the project investments.⁵ Subsequently, they took on the responsibility of operating the works themselves or employing private operators for the purpose. The support from the Federal and State Project Coordination Units was mainly positive. However, in the case of the selection of the technical alternative there should have been better guidance under the Kuta sub-project to weed out the very expensive option that will – if it will ever be operational – be very costly and complicated to operate. Demand-driven approaches must therefore be combined with some kind of project selection criteria based on a cost-effective analysis of different options. Such criteria might simply be a ceiling for the capitalized value of the projected capital and current costs of a given sub-project over the useful life of the investment.

Lesson Five: Water Projects cannot succeed without the political will to reform

13. The failure of the National Water Rehabilitation and First Multi-State Water Supply projects show there was not effective attention paid to tracking meaningful operational performance indicators, and to creating viable commercial systems with appropriate tariffs and systems to bill and collect sufficient revenue to enable the State Water Board to become financially sufficient. The ultimate responsibility for this failure must be shared between the political and technical authorities in Nigeria and the Bank preparation and supervision teams.

14. A more reasonable lending strategy would have been to apply a step-wise analysis and acceptance of the investment programs of individual state water boards where the political will in each state would be tested at each successive step in project preparation and implementation. Accordingly and first, for a state to be considered for financing under the Bank loan it would have to agree to supply the minimum of performance indicators to allow the preparation teams to judge what mixture of reform and investment would be required. Second, the state would receive access to funding conditioned on implementing the reforms that would have been agreed on as a result of the initial diagnostic. Third, there must be a

5. The Bank's Africa Region staff note: "...it is important to recognize the tension that may arise with politicians who are often more interested in short-term impacts rather than this time-consuming approach associated with community participation. If community participation is considered to be critical for sustainability, then the question policy makers and project financiers should be struggling with is "what is the appropriate level of contribution that will ensure that communities have a enough ownership in facilities to make them sustainable over time?? In fact, in Nigeria, different projects have used different rules. Under the IDA STWSSP, the contribution from communities was 10% but under the EU Small Towns Project it was reduced to 5%. The common view that the higher the contribution, the higher the likelihood that facilities will be maintained and sustained does not take into account the transaction costs of convincing local governments and communities; too high a contribution may paralyze investments and also might appear unfair in comparison of what is required from urban customers, i.e. almost nothing up-front. There are examples elsewhere that have been positive without contributions being provided by the communities but other rules have been set up by the communities with regard to the management of the facilities and services. There is no magic number and each project should define the rules of the game based on the exact situation of the communities and their willingness to invest in facilities and services that will provide benefits that they are looking for."

willingness on the part of the financing agencies, including the Bank, to exclude those states from financing where the political will to reform, and therefore chances of a positive project outcome, are not at hand.

2. Project Outcomes

THE NATIONAL WATER REHABILITATION PROJECT

15. The Federal Ministry of Water Resources through its Department of Water Supply and Quality Control implemented the National Water Rehabilitation Project. As the Ministry had little experience in project execution, management consultants were employed to do the work for them. Thus project implementation (including procurement) was controlled from the capital Abuja on behalf of all State Water Boards, a questionable arrangement since the Ministry in Abuja had little knowledge of the problems at each State level. Equal funding for every state, despite widely varying needs and priorities for infrastructure rehabilitation and institutional reform - compounded by the problems caused by the unfortunate choice of project implementation arrangements - lowered the incentives for the State Water Boards to participate.

16. Project objectives, components and costs are summarized in Table 1. The funding of the components was generous. About US\$210 million was expended on equipment and civil works (under part A of the project), another US\$10 million for operational support, and US\$75 million for consultant services of which US\$20 million for project management and US\$55 million for engineering, studies and TA.

17. **The quality of entry is rated as highly unsatisfactory** since its objectives stood no chance of being achieved with the components and project implementation selected. The project design forgot the simple truth that in order to meet project objectives there must be incentives to invest, build water supply capacity and ensure effective water distribution to meet needs. State Water Boards felt disenfranchised since project implementation was controlled at the center. Investments were reserved for rehabilitation of the capacity to produce water. Distribution investments were not eligible for financing for nearly the entire duration of the project implementation period. And the physical scope of the project – covering 36 federated states in an area of close to one million square kilometers and with difficult communications – created serious problems for implementation.

18. **Quality of the design of the monitoring and evaluation.** The project was designed without a clear concept of how it would eventually improve service to consumers. It was somehow assumed that increased production capacity would translate into better service – a questionable assumption at best. The monitoring and evaluation system that was created at the onset of the project comprised some 22 performance indicators but does not seem to have become operative. The focus seems to have been more on tracking disbursements than on improving service quality and sustainability. The fact that neither historical nor projected values were assigned to any of the 22 performance indicators in the Staff Appraisal Report or in the Loan Agreement might have given the Borrower and the Beneficiary State Water Boards the impression that the monitoring and evaluation was not strictly necessary to

receive funding. In the event, the supervision reports did not track the evolution of the 22 performance indicators. The principle for a sound monitoring and evaluation system was thus violated since the level of sophistication did not match the ability and motivation of the SWBs to collect and analyze the indicators, nor were there any sanctions for failure to collect them.

Table 1. Project objectives, components and costs

Objective	Components	Planned Cost (US\$ millions)	Actual Cost (US\$ millions)
A. Improve water supply services in selected urban and semi-urban areas of the Project States	Rehabilitation of water supply systems through carrying out sub-projects for the repair or replacement of civil works including: <ul style="list-style-type: none"> • Providing plants and equipment including leakage detection and repair programs • Institutional strengthening of the operation and maintenance, financial management, staffing and stores management capabilities 	277.0	240.6
B. Assist the water supply agencies of the Project States in the efficient operation and maintenance of their respective water supply systems	Strengthening of the Federal Ministry of Water Resources through the strengthening the capabilities of the FMWR's Department of Water Supply and Quality Control to provide effective support for the water supply agencies of the Project States including: <ul style="list-style-type: none"> • Development of policy guidelines for the design and maintenance of water supply systems, and standards for water quality, equipment, water treatment chemicals • Improved tariff structures and costs recovery • Manpower development • Establish and maintain a data base to monitor key performance indicators of the water supply agencies of the Project States • Establish and maintain a water resources and water quality data base for both surface and groundwater sources • Identify the critical training needs in the water sector and assess the adequacy of the local training institutions to meet such needs • Carry out special studies of general interest to the water sector; e.g. pollution and water quality studies, review of tariff structures and fixed assets valuations. 	29.7	54.0
Total Cost		306.7	294.6

19. **The overall outcome of the National Project is rated highly unsatisfactory.** The rating of project outcome is computed as a composite rating of each of the individual ratings for the project's relevance, efficacy, and efficiency. Relevance is rated modest, efficacy is rated as negligible and efficiency is rated as negligible. The rationale for these ratings is discussed below.

Relevance

20. **The relevance of the project is rated as modest.** Although the objectives were consistent with the needs, the components stood little chance of making the objectives reachable. The project design was not aligned with the institutional incentive structure in which it is the State Water Boards that are responsible for the provision of water supply and not the FMWR. The project was aligned roughly with the recommendations of a Water Supply and Sanitation Sector Memorandum that had been prepared by the Bank in 1984 and which advocated a fairly centralized approach through the Federal Government to address the sector's problems. It is the view of this PPAR that these recommendations were misplaced and did not focus on the sector priorities: the most important being incentives to operate the existing systems efficiently and sustainably. The project chose not to try out private operators although this was in vogue within the Bank at the time of the approval of the loan. No reference was made in the SAR of any Country Assistance Strategy that might have existed at the time. It was simply assumed that rehabilitation and system expansion were the sector priorities and that "rehabilitation would logically be followed by programs of carefully planned expansion and improvement of existing systems, to provide acceptable levels of service to a rapidly increasing population." (SAR paragraph 2.17). This seems to have been largely wishful thinking. Belief in the orderly improvement of the sector's performance was also repeated in the section on the sector strategy under the subsequent First Multi-State Water Supply project. (SAR paragraph 1.23)

Efficacy

21. The Implementation Completion Report⁶ notes that the national "actual possible production" rose from 720,000 m³ per day to 1,420,000 m³ per day. However, IEG was informed that actual production in 1999 turned out to be only 800,000 m³ per day, a number that is difficult to verify. The disappointing result is not difficult to explain and could be exemplified with the utilization rate of a pump procured under the project:

- The pump was procured by FMWR and installed.
- The power supply from the Nigeria Electric Power Authority (NEPA) was so deficient that the pump could not be consistently operated, either because there was insufficient voltage to start it or else it became inoperative because of damage caused by currency surges.
- The Project allowed for the purchase of standby generators.
- But the generators could not be operated because the State Water Board did not have the free cash to buy fuel oil, or failed to maintain the pump.
- The absence of financial policies and the reluctance of state governors to allow higher tariffs have meant that the State Water Boards incur large cash operating deficits and rely on cash handouts from the State governors.

6. IBRD report No 23363, dated December 28, 2001.

- As a result, service quality has become intermittent and water quality has been so poor that consumers refuse to pay for service, even at the prevailing tariffs.⁷

22. Comprehensive nationwide data on system performance do not exist. However, site visits to different systems revealed the above pattern to be pervasive. In those systems visited that had received funding under the project none was producing water and maintenance standards were unacceptably poor. Data collected showed that even if the production capacity had been operative it would not have been possible to distribute the water because of failing distribution systems. Project funding to improve water distribution was meager and only at the very end of the project. Typical operating data for Niger state are summarized in Table 2.

Table 2. Efficacy of the National Water Rehabilitation Project as measured by performance indicators for the Niger State Water Board

<i>Project Objective and Indicator</i>	<i>1999</i>	<i>2004</i>
Improve the Level of Water Supply Service (Coverage/quality):		
Share of urban population connected	33%	28%
Share of population with continuous, 24-hour service	0%	0%
Share of water samples testing bacteriologically safe	Unknown	Unknown
Reduce Water Losses		
Percentage unaccounted water ⁸ (estimated production-estimated consumption)/ estimated production	83% (Estimated)	Unknown (Estimated)
Strengthen operational, commercial, and financial management of utility		
Utility staff productivity (no of staff per thousand households connected to piped water system)	39	38
Working ratio (cash operating expenditure/cash operating revenue)	273%	Unknown
A number of other performance indicators would have been desirable to obtain, but the there is no reliable management information system in the Niger SWB.	N.A.	N.A.

23. **Based on the performance indicators, the PPAR rates the efficacy of the project negligible.** Most state water boards simply do not have the clear governance, financial autonomy and incentives that enable them to serve their populations in an efficient and sustainable manner. None of the project objectives were met in the case of Niger state. Financing selected items of equipment in a dysfunctional utility without reforming the governance and incentives cannot be expected to result in better service. It should also be noted that many of the data in Table 2 are guesswork since the Niger State Water Board does not meter either production or consumption. Discussions with SWB officials in other states and with Bank staff affirm that the situation in other SWBs is analogous to the one in Niger State. Data for the Kaduna State Water Board are presented under the discussion of the Multi-State Project.

7. In its comments on the PPAR the FMWR also notes that Non-Payment for services was should also be attributed to the decline in per capita GNP.

8. In addition the FMWR states: "the percentage of un-accounted for water, quoted in table 2, on page 14 for the state (83%) has been confirmed by the state water agency to be exaggerated."

Efficiency

24. Project data are so scarce that rigorous cost-benefit analysis is impossible. For instance, without any metering data on production and consumption (as is the case for example in the Niger State Water Board), it is not possible to compute the economic returns on the investments that aim at encouraging efficient production and consumption patterns. It stands to reason, though, that the efficiency of the investments financed by the project has been low or nil in a situation where expenditures neither increased the quantity of water consumed nor improved water quality. Under the circumstances, the PPAR rates the efficiency of the investments as **negligible**.

THE FIRST MULTI-STATE WATER SUPPLY PROJECT

25. The Multi-State Project was implemented by the Kaduna and Katsina State Water Boards and provided much stronger incentives for the two State Water Boards to implement the projects speedily and efficiently. Table 3 summarizes objectives, components and costs.

26. The quality of entry is rated as **marginally unsatisfactory**. Project objectives stood a fair chance of being achieved with the components and project implementation selected. The focus on just two states (that had been the recipient of two earlier Bank-financed projects) also facilitated project implementation and enabled improved focus on institutional strengthening. The project was comprehensive since it comprised both water supply production and distribution works. And the ability to increase revenue from incremental water sales increased local ownership. However, the project attempted to do too many things. This was particularly so in Katsina state where the addition of a rural component to the urban components stretched implementation capacity and obscured the clear focus of the urban project.

27. The monitoring and evaluation under the First Multi-State Water Supply Project was much improved as compared to the National Water Rehabilitation Project. The First Multi-State project contained an annex with 16 performance indicators, including baseline values for the initial year 1992 and annual projected values through project completion. The fact that only two State Water Boards were obliged to collect and report on the performance indicators facilitated the tracking. However, with the exception of the financial indicators, the Loan Agreement did not oblige the Borrower State Water Boards to track the 16 performance indicators on an annual basis, nor were these regularly reported in the Bank supervision reports.

28. **Overall outcome of the First Multi-State Water Supply Project is rated as moderately unsatisfactory.** Project relevance is rated as substantial, efficacy is rated as modest and efficiency is rated as negligible.

Table 3. Project objectives, components and costs

Objective	Components	Planned (US\$ millions)	Actual (US\$ millions)
A. Improving the quantity and reliability of water supplied by the Water Boards to their urban areas, and the health, productivity, health and living standards and conditions of women and all other persons residing in such areas.	<p>Kaduna State</p> <ul style="list-style-type: none"> • Completion of the water treatment plant, and construction of transmission, system storage and distribution pipelines at Ikara. • Construction of new regional water supply systems at Kwoi and Zonkwa including: intake work, water treatment plants, transmission mains and distribution systems and a small dam for the Zonkwa system. • Provision of maintenance vehicles, tools, operational equipment, and water meters. • Limited rehabilitation of some rural water supply systems. <p>Katsina State</p> <ul style="list-style-type: none"> • Completion of 15 km of water transmission and 65 km of distribution pipelines and elevated storage • Construction of a new system to increase the existing water supply at Funtua including a new dam, a water treatment plant, transmission pipeline, system storage and an extended distribution system. • Limited expansion of the Daura water supply system including new boreholes • Remedial construction of the dam at Malumfashi. • Provision of maintenance vehicles, tools and operational equipment, water meters, and meter testing and repair facilities • Limited rehabilitation of some rural systems 	121.8	116.9
B. Strengthening, and making financially self-sufficient Kaduna and Katsina State Water Boards and assisting the Borrower in preparing water projects for States of Nigeria other than the Project States.	<p>Strengthening of Water Boards</p> <p>Provision of technical assistance for:</p> <ul style="list-style-type: none"> • Improvement of its operational and maintenance practices and procedures, and its management information systems • Conducting a tariff study including alternatives for revenue collection from public standpipe users • Carry out a public relations and hygiene education program to increase public awareness of the benefits and obligation of the water boards • Assist with the reorganization of rural water supply, prepare State-wide water resources master plans and design studies and develop plans for sullage disposal, drainage and improved sanitation. • Assist preparation by FMWR of future water projects for States of Nigeria other than the Project States 	4.4	9.1
Total Cost		126.2	126.0

Relevance

29. **The relevance of the project is rated as substantial.** The objectives were consistent with the needs and could be expected to have direct benefits on poverty alleviation. Being confined to only two state water boards the project design was closely aligned with the institutional incentive structure because both were responsible for the provision of water supply and also for project implementation.

Efficacy

30. **Efficacy is rated as modest.** The ICR notes that the Kaduna SWB production capacity rose from 200,000 m³ per day to 380,000 m³ per day, and the Katsina SWB production capacity from 36,000 m³ per day to 93,000 m³ per day. However, the utilization of capacity decreased from 68 percent to 49 percent in Kaduna and was similarly constrained in Katsina state by the customary inadequacy of power supply, lack of operating surplus to buy fuel oil and maintain the systems, and by a slower-than-forecast investment in water distribution systems. Adoption of commercial management by the two water boards was frustrated by the continued unstable economic and political situation.

31. Site visits to the Kwoi and Zonkwa systems revealed that none of the two systems were producing any water at the time. Although the systems might produce water when power of sufficient voltage returned Zonkwa customers had not received any water for the last four months prior to the site visit and the Kwoi system seemed to have been out of commission for some time. Both of these regional systems have a highly complex design, are poorly maintained, and are therefore vulnerable to breaking down. Data collected on the operations and service quality for one of the two participating states, Kaduna, are summarized in Table 4.

Table 4. Efficacy of the First Multi-State Water Supply Project as measured by performance indicators for the Kaduna State Water Board

<i>Project Objective and Indicator</i>	<i>2004</i>	<i>2005</i>
Improve the Level of Water Supply Service (Coverage/quality):		
Share of urban population connected	25%	24%
Share of population with continuous, 24-hour service	0%	0%
Share of water samples testing negative for pathogens	25%	28%
Reduce Water Losses		
Percentage unaccounted water	53%	50%
Strengthen operational, commercial, and financial management of utility		
Utility staff productivity	51	48
Working ratio	102%	100%

Percentage unaccounted water = (estimated production-estimated consumption) / estimated production

Staff productivity=Staff per thousand households served with water

Working ratio=Cash operating costs/cash collections

32. Most state water boards simply do not have the clear governance, financial autonomy and incentives that would enable them to serve their populations in an efficient and sustainable manner. None of the project objectives were fully met in the case of Kaduna state and their future achievement is unlikely. Financing selected items of equipment in a dysfunctional utility without reforming the governance and incentives did not result in better service.

Efficiency

33. The efficiency of the investments is rated as **negligible**. Project data are so scarce that rigorous cost-benefit analysis is impossible. For instance, even after three Bank projects the Kaduna State Water Board meters only 18 percent of consumers, the majority being the

commercial ones. Without any metering data on production and consumption, it is not possible to compute the economic returns on the investments. However, the fact that only about half of the Kaduna State Water Board connections are active and receiving intermittent water, indicates the underutilization of project investments.

THE SMALL TOWNS WATER SUPPLY AND SANITATION PROJECT

34. The objectives of the Small Towns Project was to pilot a new concept of identification, implementation and operation of water supplies in small towns. Objectives, components and costs are summarized in Table 5.

35. The funding of the components was small given that this was a pilot project. About US\$3.8 million was expended on equipment and civil works, and another US\$2.4 million for project management and extension services. US\$0.3 million was spent on training and promotion.

The Small Towns Project was implemented at three levels. At the federal level there was a Federal Project Coordinating Unit (FPCU) staffed with three key staff, one for each of the participating states of Ebonyi, Katsina, and Niger. These staff served as the link between the Ministry of Finance that received the Bank disbursements, and the participating states. At the state level, there was a State Project Coordinating Unit (SPCU) that in turn was the link between the FPCU and the Water Consumer Associations (WCA) that were established by each of the 16 participating towns. The WCAs drove the project through their clearly articulated demand for the kind of services they wanted, their ability to collect household contributions, their choice of operational arrangements – all facilitated through a private operator or by the WCA itself. The SPCU and the FPCU effectively guided and supported the WCAs.

36. **This evaluation rates the quality of entry as satisfactory.** For the first time in the Bank's lending to urban and semi-urban areas in Nigeria consumers were put in the driver's seat. First, the WCAs were put in charge of selecting their choice of technology, level of service and the level and mode of collecting their community contribution that was set at 10 percent of the selected investment cost. Second, the WCAs were the ones that decided on the operational arrangements, including the level and mode of tariff payments. This new approach effectively reversed the supply-driven strategies of the National Water Rehabilitation Project (with the Federal Ministry of Water Resources in Abuja firmly in control) and the Multi-State Project (with the respective State Water Boards in Kaduna and Katsina in control).

37. Monitoring and evaluation under the Small Towns Pilot project faced the challenge of a demand-based project where it was not certain which towns would finally opt to abide by the criteria for selection. It was therefore impossible to state beforehand how many additional households would be served etcetera. However, the Project Appraisal Document and the Development Credit Agreement paid considerably more attention to the Monitoring and Evaluation of the Project. Part C.2 of the Credit Agreement specified that "Collection and analysis of all pertinent data derived from the carrying out ...the Project, including the socio-economic surveys, dissemination of the results of such analysis and the incorporation of the

lessons learnt into the design of the Borrower's national small town water supply and sanitation program." This was in line with the pilot nature of the project. The truth of the matter is that the PPAR mission found up-to-date and pertinent data on the 16 sub-projects from the three state project coordinators, attesting to the better systems of M&E under this project.

Table 5. Project objectives, components and costs

Objective	Components	Planned (US\$ millions)	Actual (US\$ millions)
A. Facilitate sustainable access to safe water and adequate sanitation by residents of small towns through the design and implementation of pilot water supply and sanitation facilities in selected small towns	<ol style="list-style-type: none"> 1. Design and construct pilot water supply and sanitation facilities: <ul style="list-style-type: none"> • Carry out detailed engineering studies required for the construction of pilot water supply and sanitation facilities in the Project States. • Construct pilot water supply and sanitation facilities in selected small towns in the Project States. 	9.0	6.2
B. Determine the most efficient mechanism for delivery of sustainable facilities to be replicated as appropriate throughout Nigeria.	<ol style="list-style-type: none"> 1. Promote ownership and community participation in the provision of Water Supply and Sanitation Facilities through carrying out extension activities aimed at sensitizing water users in selected small towns in the Project States on the appropriate technical, financial, organizational and institutional arrangements required to foster the development of sustainable water supply and sanitation facilities. 2. Establish Water Consumer Associations (WCAs) by communities in small towns in the Project States to manage the operation of water and sanitation facilities efficiently, through the provision of technical advisory services and carrying out workshops and other training activities. 3. Support to the Federal Project Coordinating Unit (FPCU) and the State Project Coordination Units (SPCUs) to enable them to carry out their activities under the Project. 4. Collection and analysis of all pertinent data derived from the carrying out of the project, including socio-economic surveys, dissemination of the results of such analysis and the incorporation of the lessons learnt into the design of the Borrower's national small town water supply and sanitation program. 	0.5	0.3
	Total Cost	9.5	6.5

38. **The PPAR rates the composite outcome rating of the Small Towns Project as satisfactory.** Relevance is rated as high, efficacy is rated as substantial and efficiency is rated as substantial.

Relevance

39. **The relevance of the project is rated high.** The objectives were consistent with the needs in the participating small towns and through the demand-driven methodology. And the technology, implementation and operations were in line with what the users wanted. At the time of the preparation and approval of the project there was no Country Assistance Strategy for Nigeria. However, the project was consistent with the Region's support for the country's economic and governance renewal, and in particular its commitment to support the country's poverty reduction efforts.

Efficacy

47. The experience of the 16 participating towns in securing their water supply and sanitation systems is summarized in Table 6. Based on the performance indicators obtained, **the PPAR rates the efficacy of the project as substantial.** Organization of 16 communities and construction of 12 water systems was successfully achieved and these 12 systems are now operational. Another system in Kuta has had construction ongoing for about four years but difficulties forced a relocation of the intake with subsequent delays. It is now doubtful whether this system, in its original technical concept, will ever become operational.

Table 6. Efficacy of the Small Towns Water Supply and Sanitation Pilot Project

<i>Project State/Town</i>	<i>Water Supply Coverage</i>	<i>Sanitation Units in Use</i>	<i>Working ratio</i>	<i>Staff Productivity</i>	<i>Operational status</i>
EBONYI					
Amoffia	0	0	NA	NA	Not operational
Okposi	0	0	NA	NA	Not operational
Ndubia	100%	NA	NA	NA	Operational, WCA
KATSINA					
Danmusa	90%	7	92%	2.8	Operational, PO
Dandume	95%	7	94%	2.7	Operational, PO
Danja	90%	7	73%	3.1	Operational, PO
Wagini	75%	0	100%	2.1	Operational, WCA
Doro	85%	0	100%	1.5	Operational, WCA
Radda	0%	0	NA	NA	Not operational
NIGER					
Kuta	0%	7	NA	NA	Not operational
Doko	90%	3	170%	3.8	Operational, PO
Wawa	85%	40	51%	4.8	Operational, WCA
Rijau	75%	7	187%	8.8	Operational, WCA
Izom	95%	7	107%	4.6	Operational, PO
Gulu	75%	7	86%	1.8	Operational, WCA
Bangi	85%	7	70%	3.2	Operational, WCA

Legend: WCA=Water Consumer Association; PO=Private operator; Staff productivity=Staff per thousand households served with water; Working ratio=Cash operating costs/cash collections; Sanitation coverage=Number of latrines in use, constructed under the project

Efficiency

40. The project efficiency compares the benefits achieved under the project with the costs expended. Where such a comparison is difficult to make, project efficiency exists when it can be judged that the benefits were met more cheaply than any other alternative. Project data are so scarce that rigorous cost-benefit analysis is impossible. For instance, without any metering data on production and consumption (as is the case for example in the Niger State Water Board), it is not possible to compute the economic returns on the investments. However, statistics are available to calculate the cost efficiency of investments for most of the sub-projects in the project states of Katsina and Niger. The calculations are shown in Table 7.

41. The table shows a fairly uniform investment cost per beneficiary household in the order of Naira 26,000 or US\$200. This figure applies to 10 of the 12 towns for which investment costs are available and corresponds to a per capita investment of around US\$15 per member of the household. This is an economical investment cost and attests to the high efficiency of the project, particularly when the intangible benefits in the form of the creation of a Water Consumer Association are considered. (The households in these small towns that have a population of about 30,000 are often quite large.) Two small towns deviate from this reasonable estimate: Kuta and Rijau in Niger state. The Kuta sub-project is expensive and

Table 7. Cost-Effectiveness of the Small Towns Water Supply Sub-Projects

<i>Project State/Town</i>	<i>Water Supply Investment (Naira millions)</i>	<i>Water Supply Operating Costs/year (Naira '000)</i>	<i>Number of households</i>	<i>Investment per household (Naira '000)</i>	<i>Operational status</i>
EBONYI					
Amoffia	NA	NA	NA	NA	Not operational
Okposi	NA	NA	NA	NA	Not operational
Ndubia	NA	NA	NA	NA	Operational, WCA
KATSINA					
Danmusa	34.68	105	1,575	22	Operational, PO
Dandume	47.16	90	1,570	30	Operational, PO
Danja	44.96	107	1,770	25	Operational, PO
Wagini	32.10	65	1,250	26	Operational, WCA
Doro	36.87	75	1,550	24	Operational, WCA
Radda	NA	NA	NA	NA	Not operational
NIGER					
Kuta	87.40	NA	1,390	63	Not operational
Doko	33.21	100	1,170	28	Operational, PO
Wawa	32.63	35	980	33	Operational, WCA
Rijau	54.25	150	910	60	Operational, WCA
Izom	40.43	60	1,140	35	Operational, PO
Gulu	15.76	58	2,180	7	Operational, WCA
Bangi	34.87	45	1,120	31	Operational, WCA

Legend: WCA=Water Consumer Association; PO=Private operator

highly complex and may never become operational. On the basis of cost-efficiency, the PPAR rates the efficiency of the Small Towns Project as **high**.

3. Institutional Development Impact

42. The three projects clearly demonstrate that decentralization and stakeholder participation in project design and implementation is a successful strategy. Because the process gradually evolved through these three projects, the institutional development impact of the National Water Rehabilitation Project is rated as **negligible**, while that for the Multi-State Project improves to **modest** because it moved away from central top-down control. Finally, the institutional development facilitated by the Small Towns Project achieved a **substantial** rating for institutional development. The rationale for these ratings is elaborated below.

43. The lack of institutional development associated with the National Project can be gauged from Table 8 that compares selected administrative and financial indicators of the Niger State Water Board with international benchmarks.

Table 8. Niger State Water Board performance versus benchmark indicators

<i>Performance measure</i>	<i>NSWB</i>	<i>Benchmark</i>
Utility staff productivity (no of staff per thousand households connected to piped water system (proxy for computerization and specialization through outsourcing))	39	2
Percentage of billings collected (proxy for commercial efficiency)	43%	98%
Number of pipe-breaks per km distribution per year (proxy for maintenance)	1.6	0.1
Non-revenue water (proxy for commercial and operating efficiency)	83%	15%
Percentage of connections metered (proxy for commercial and operating efficiency)	0%	100%

44. It is clear that the Niger State is far away from the international benchmarks for administrative and financial efficiency. The problem is not only organizational efficiency but with the whole system of governance. Lack of sector policies, laws and regulations, and even hardware and software, provide few incentives for utility managers and staff to perform. Although the National Water Rehabilitation Project expended substantial sums on consultancies, these were for Federal Ministry of Water Resources and were not tailored to the will of individual states.

45. Similarly evidence from the Kaduna State Water Board shows that it has not yet approached the international benchmarks for administrative and financial efficiency (Table 9.)

46. Kaduna's institutional performance is better in many respects than other state water boards in Nigeria because of the cumulative effect of the utility's exposure to international managerial experience enabled by the three Bank loans. Even so, this positive impact is muted by the antiquated system of utility governance and the politicization of the tariff setting process. In consequence institutional development impact is rated **modest**.

Table 9. Kaduna State Water Board performance versus benchmark indicators

<i>Performance measure</i>	<i>NSWB</i>	<i>Benchmark</i>
Utility staff productivity (no of staff per thousand households connected to piped water system (proxy for computerization and specialization through outsourcing)	48	2
Percentage of billings collected (proxy for commercial efficiency)	82%	98%
Level of accounts receivable in days of average billings	350	60
Non-revenue water (proxy for commercial and operating efficiency)	50%	15%
Percentage of connections metered (proxy for commercial and operating efficiency)	18%	100%

47. Finally, the successful focus on local ownership and stakeholder participation led to a rating of **substantial** institutional development under the Small Towns Project. First, the project managed to create Water Consumer Associations in 16 small towns that each contributed towards the investment cost over a number of months. Second, the project established Project Coordination Units both at the Federal and State levels. The PCUs were small and effective and can now be redeployed for similar projects in other states. Third, the Small Towns project created a monitoring and evaluation system that is far superior to anything managed under the National Water Rehabilitation and First Multi-State Water Supply projects. Those two projects, and particularly the National Rehabilitation Project, tracked mainly contracts and not the desired final result: operational water supply systems.

4. Sustainability

48. **The sustainability of the National Water Rehabilitation and the Multi-State Water Supply projects investments is rated as unlikely.** Experience has shown that the most essential conditions for sustainability refer to the technical, financial, institutional, incentive, and political aspects of the operations of the assets financed under the project. All five are doubtful for the following reasons:

- The technical sustainability is in question because of the insufficient maintenance of assets in the State Water Boards because cash operational revenue is typically considerably below cash operating costs, leaving nothing for maintenance. Furthermore, the unreliable and low-quality power supply regularly damages the electro-mechanical equipment as demonstrated during the PPAR field visits.
- The financial feasibility does not exist since State Water Boards typically have working ratios (cash operating costs/cash operating revenue) much above 100 percent. As a consequence, the State Water Boards depend on the State governments for unreliable cash subsidies to purchase fuel oil to operate the standby generators that could supplement for the unreliable power supply.
- The institutional feasibility hardly exists in the SWBs that lack autonomy because of their utter dependence on State governments for tariff approvals and, in their absence, on cash handouts. Many SWBs are forced to have their staff salaries supplemented from the State government budgets which cements their dependence;
- Incentives for improvement hardly exist where the General Manager and staff do not reap any benefits for trying to improve the financial situation, for instance by going after public clients who may be powerful politically.

- Finally, but most importantly, political feasibility is notable by its absence. State governments have neither approved nor implemented legislation and regulation that would introduce predictability in the provision of water supply services, nor provided strong and sustained political support to the SWBs to enable them improve the quality of services.

49. The resilience to risk of net benefits flowing from the technical, financial, institutional, incentive, and political aspects of the Small Towns Project is rated as **likely** for the following reasons:

- The *technical* sustainability is ensured for the 12 systems that are now operational. Twelve of the systems rely on groundwater, some with motorized pumps with standby generators to replace the faltering NEPA power supply, and one system relies on surface water. Achieving 12 out of 16 operational systems must be rated satisfactory and with likely sustainability, particularly since only one out of 16 systems was operational at the time of the closing of the credit in 2004.
- The financial feasibility exists for 8 out of 11 systems for which financial data were available at the time of the PPAR. These systems had working ratios equal or below 100 percent, showing that the collections from the consumers were enough to pay for cash operating costs. There is no debt service since the works were given as grants to the participating small towns. The remaining five small towns with working ratios above 100 percent or without data are presumably using other forms of subsidies and transfers to pay for the costs of operations, particularly since the private operators would otherwise simply abandon the systems.
- The institutional sustainability exists since Water Consumer Associations have been set up in all 16 small towns and have assumed the onus of arranging for satisfactory operational arrangements in the 12 systems that were completed.
- Incentives for improvement do exist as proved by the fact that only one system was operational at the time of the credit closing in 2004 whereas now 12 out of 16 systems are operational. Work is continuing on the remaining four systems. The contractor for the Kuta system continues his activities, and the contracts on the Amoffia and Okposi sub-projects in Ebonyi state will likely be tendered again to finish these two sub-projects for which the contractors were terminated due to unsatisfactory performance. However, much of the investment on these systems has been made and it stands to reason that the Water Consumer Associations have a strong incentive to complete the works into which they put so much of their savings.
- Finally but most importantly, the political feasibility does exist since there is positive alignment between the interests of the benefiting small towns and their power to act through their respective Water Consumer Associations.

5. Bank and Borrower Performance

BANK PERFORMANCE

50. Bank performance is measured by the quality at entry of the project and by the quality of supervision during project implementation. Bank performance on the National Water

Rehabilitation Project is rated **unsatisfactory** for both. With the hindsight of four failed water supply projects at the time of the preparation and processing of the project, it should have been obvious that the National Project stood no chance of succeeding without radical reform of the framework for the operation. It should not have come as a surprise that the mere purchase and installation of selected pieces of equipment stood little or no chance of improving service without reforms that could guarantee the sustainability. The design of the project was unbalanced and unviable since funding was only allowed for production increases, and since financing for distribution works that might have sold the additional water was left undefined. The quality of supervision was unsatisfactory because of the difficulties of influencing 36 SWBs via the Federal Ministry of Water Resources in Abuja. Hence, both quality at entry and supervision quality are rated unsatisfactory.

51. The Multi-State Project represented a considerable improvement over the National Project but neglected to push for reforms in the way in which the Kaduna and Katsina State Water Boards were governed and with regard to the autonomy and predictable policies needed to promote sustainability, not the least in the area of tariff setting. The quality of supervision was marginally unsatisfactory because of the greater ease of supervising two rather than 36 SWBs as under the National Water Rehabilitation Project. Given that quality at entry was unsatisfactory and supervision quality is rated marginally unsatisfactory, overall Bank performance for the Multi-State project is rated **unsatisfactory**.

52. The quality at entry of the Small Towns Project was satisfactory. Its demand-driven concept was innovative in the Nigerian context and broke the pattern of the previous six supply-driven projects. Bank supervision was energetic and effective with the Bank missions traveling extensively with the Nigerian counterparts to each of the 16 participating small towns. Thus the Bank performance of the Small Towns Project is rated **satisfactory**.

BORROWER PERFORMANCE

53. Borrower performance is rated on the borrower's contributions to the original project design and on project implementation. Both were unsatisfactory for the National and Multi-State projects and overall Borrower performance is rated as **unsatisfactory**. The Borrower should have been aware of the flawed quality at entry that offered little if any chance of meeting the project's development objectives. The Borrower could have been expected to be more aware than the Bank of the factors that justified rating the Bank performance as unsatisfactory. Subsequently a number of additional risks to orderly project implementation were not properly mitigated although these were under Government control. These negative factors included the unreliable NEPA power supply, the scarcity of petroleum products which caused spikes in the prices of fuel oil and negatively affected the State Water Boards, the governance problems associated with frequent changes of SWB management and with undue political interference in their running, changes in import procedures, and instability in management at the state government levels. Although many of these problems were outside the control of the National and Multi-State projects, these nevertheless deeply affected project implementation and operations.

54. By the time of the Small Town Project the Borrower had internalized the reasons for design failings of the earlier projects and adopted a new and successful approach. This leads to a **satisfactory** rating for Borrower performance. The reasons for improved performance

are the economical and effective project coordination at the federal and state levels and the active role that the Water Consumer Associations played. One gratifying aspect with the Small Towns Water Supply project was the **improved monitoring and evaluation system** that was set up and effectively applied. All 16 the sub-projects were regularly visited and there was good collaboration with each of the Water Consumer Associations. The overview reports published by the FPCU provided the necessary project data and evaluation of the status of each project that enabled most implementation problems to be mitigated effectively and quickly. There was one case of misprocurement at the federal level in the early years of the Small Town Project but the canceled funds were reinstated from the Nigerian Ministry of Finance.

Annex A. Basic Data Sheet

NATIONAL WATER REHABILITATION PROJECT (LOAN 3322-UNI)

Key Project Data *(Amounts in US\$ million)*

	<i>Appraisal estimate</i>	<i>Actual or current estimate</i>	<i>Actual as percent of appraisal estimate</i>
Total project costs	306.7	294.6	96%
Of which			
• physical investments	277.0	240.6	87%
• technical assistance	29.7	54.0	182%
Loan amount	256.0	250.1	98%

Cumulative Estimate and Actual Disbursements

	<i>FY93</i>	<i>FY94</i>	<i>FY95</i>	<i>FY96</i>	<i>FY97</i>	<i>FY98</i>	<i>FY99</i>	<i>FY00</i>	<i>FY01</i>
Appraisal estimate	32,8	77,8	134,3	185,2	223,5	246.8	250.4	253.2	256.0
Actual (US\$M)	17.8	24.6	40.0	77.9	138.0	174.2	189.9	231.3	250.4
Actual as percent of estimate	54%	32%	30%	42%	62%	70%	76%	91%	98%
Date of Final disbursement:	June 30, 2001								

Project Dates

	<i>Original</i>	<i>Actual</i>
Identification (PCD)	3/87	3/87
Appraisal	05/90	05/90
Board Approval	05/91	05/91
Effectiveness	08/92	08/92
Mid-term Review	06/96	06/96
Loan Closing	06/99	06/01

Mission Data

	<i>Date (month/year)</i>	<i>No. of persons</i>	<i>Specialization represented**</i>	<i>Performance rating*</i>	
				<i>Implementation status</i>	<i>Development objectives</i>
Identification/ Preparation	06/90	5	FA,E,2 EGR,TRAINEE		
Appraisal/ Negotiation	03/92	2	EGR, FA		
	06/92	2	2 EGR		
	12/92	4	2 EGR, FA, Resident		
Supervision 1	03/93	2	EGR, FA	S	S
Supervision 2	03/93	2	EGR, FA	S	S
Supervision 3	12/93	4	3 EGR, TRAINING C.	S	S
Supervision 4	06/94	3	2 EGR, TRAINING C.	S	S
Supervision 5	12/94	3	2 EGR, TRAINING C.	S	S
Supervision 6	12/94	4	2 EGR, FA, CONS	S	S
Supervision 7	07/95	4	2 EGR, FA, CONS	S	S
Supervision 8	12/95	2	2 EGR	S	S
Supervision 9	06/96	7	2 EGR, ME, FA, 3 CONS	S	S
Supervision 10	11/96	3	2 EGR, FA	S	S
Supervision 11	06/97	5	2 EGR, FA, E, ADM.SEC	S	S
Supervision 12	12/97	2	2 EGR	S	S
Supervision 13	09/98	2	2 EGR	S	S
Supervision 14	12/98	3	TM, EGR, FA	S	S
Supervision 15	07/99	4	TM, 2 EGR, FA	S	S
Supervision 16	11/99	5	TM, EGR, FA, CONS, TA	S	S
ICR Preparation	07/00	5	TM, EGR, FA, E, CONS	S	S

* S = Satisfactory

** TM=Task Manager; EGR=Engineer; FA = Financial Analyst; E = Economist; CONS = Consultant

FIRST MULTI-STATE WATER SUPPLY PROJECT (CREDIT 2372-UNI)

Key Project Data *(Amounts in US\$ million)*

	<i>Appraisal estimate</i>	<i>Actual or current estimate</i>	<i>Actual as percent of appraisal estimate</i>
Total project costs	126.2	126.0	100%
Of which			
• physical investments	121.8	116.9	96%
• technical assistance	4.4	9.1	207%
Loan amount	101.0	99.6	99%

Cumulative Estimate and Actual Disbursements

	<i>FY93</i>	<i>FY94</i>	<i>FY95</i>	<i>FY96</i>	<i>FY97</i>	<i>FY98</i>	<i>FY99</i>	<i>FY00</i>	<i>FY01</i>	<i>FY02</i>
Appraisal estimate	3.2	10.0	26.9	54.1	79.4	93.2	99.2	100.1	100.1	100.1
Actual (US\$M)	2.4	6.4	12.2	33.3	52.4	69.8	86.5	93.2	99.6	99.6
Actual as percent of estimate	75	64	45	62	66	75	87	93	93	93

Date of Final disbursement: April 18, 2006

Project Dates

	<i>Original</i>	<i>Actual</i>
Identification (PCD)	3/87	3/87
Appraisal	04/92	04/92
Board Approval	05/92	05/92
Effectiveness	05/93	05/93
Mid-term Review	12/94	02/96
Loan Closing	09/99	09/00

Mission Data

	<i>Date (month/year)</i>	<i>No. of persons</i>	<i>Specialization represented**</i>	<i>Performance rating*</i>	
				<i>Implementation status</i>	<i>Development objectives</i>
Identification/ Preparation	09/87	1	EGR		
	11/87	1	FA		
	06/90	1	EGR		
	07/90	1	EGR		
	02/91	1	EGR		
Appraisal/ Negotiation	07/92	2	2 EGR		
	11/92	1	EGR		
	12/92	1	EGR		
	03/93	4	2 EGR, FA, Resettle.		
Supervision 1	06/93	2	EGR, Rural water	S	HS
Supervision 2	11/93	4	3 EGR, ENV	S	HS
Supervision 3	04/94	4	2 EGR, TRAINING C.	S	HS
Supervision 4	06/94	1	EGR	S	S
Supervision 5	12/94	6	3 EGR, RW, FA, Train.	S	S
Supervision 6	07/95	4	2 EGR, FA, CONS	S	S
Supervision 7	09/95	1	EGR	S	S
Supervision 8	02/96	4	3 EGR, FA	S	S
Supervision 9	06/96	1	EGR	S	U
Supervision 10	07/97	4	EGR,FA, E, RW	S	U
Supervision 11	12/97	5	2 EGR, FA, RW, Resettl.	S	U
Supervision 12	03/98	1	EGR	S	U
Supervision 13	08/98	4	TM, EGR, Resettl., RW	S	U
Supervision 14	02/99	6	TM, EGR, FA, RW, TA, R.	S	S
Supervision 15	07/99	4	3 EGR, CONS	S	S
Supervision 16	11/99	4	TM, CL, TA, RM	S	S
ICR Preparation	09/00	11	TM, ML, FA, EGR, E, FMS, PO, SOC, PARTTA, CONS.	S	S

* S = Satisfactory

** TM=Task Manager; EGR=Engineer; FA = Financial Analyst; E = Economist; CONS = Consultant,

SMALL TOWNS WATER SUPPLY AND SANITATION PILOT (CREDIT 3350-UNI)

Key Project Data *(Amounts in US\$ million)*

	<i>Appraisal estimate</i>	<i>Actual or current estimate</i>	<i>Actual as percent of appraisal estimate</i>
Total project costs	9.0	6.5	72%
Of which			
• physical investments	9.0	6.2	69%
• technical assistance	0.5	0.3	60%
Loan amount	5.0	3.7	75%

Cumulative Estimate and Actual Disbursements

	<i>FY00</i>	<i>FY01</i>	<i>FY02</i>	<i>FY03</i>	<i>FY04</i>	<i>FY05</i>
Appraisal estimate	0.7	2.2	4.0	4.5	4.5	4.5
Actual (US\$M)	0.0	0.7	0.9	1.2	2.7	3.7
Actual as percent of estimate	0	32	23	27	60	82

Date of final disbursement: April 18, 2006

Project Dates

	<i>Original</i>	<i>Actual</i>
Identification (PCD)	11/98	11/98
Appraisal	01/99	01/99
Board Approval	05/00	05/00
Effectiveness	05/00	08/00
Mid-term Review	03/03	02/03
Loan Closing	06/03	06/04

Mission Data

	<i>Date (month/year)</i>	<i>No. of persons</i>	<i>Specialization represented**</i>	<i>Performance rating*</i>	
				<i>Implementation status</i>	<i>Development objectives</i>
Identification/ Preparation	09/99	4	CL, TL, EGR, FMS		
Appraisal/ Negotiation	10/99	3	Country Dir., LEG, EGR		
Supervision 1	12/00	6	CL, TL, 2 EGR, FMA, CONS	S	S
Supervision 2	08/01	2	TL, EGR	S	S
Supervision 3	12/01	6	CL, TL, 2 EGR, FMA, COMMUNITY DEV.	S	S
Supervision 4	02/02	3	TL, EGR, SOC	S	S
Supervision 5	12/02	5	TL, 2 EGR, PO, 2 FMS	S	S
Supervision 6	02/03	3	TL, EGR, CONS	U	S
Supervision 7	09/03	4	TL, PO, EGR, FMS	S	S
Supervision 8	10/03	4	TL, EGR, FMS, CONS	S	S
Supervision 9	03/04	3	EGR, 2 CONS	U	U
ICR Preparation	06/04	2	TL, WATER RES. SPEC	U	U

* S = Satisfactory

** TM=Task Manager; EGR=Engineer; FA = Financial Analyst; E = Economist; CONS = Consultant,
FMS=Financial Management Systems, CL=Cluster Leader, LEG=Legal Counsel, SOC=Sociologist

Annex B. Borrower Comments

June 8, 2006

Mr. Alain Barbu
Manager
Thematic and Global Evaluation Division
Independent Evaluation Group (IEG) of the World Bank

Dear Mr Barbu,

I am directed to refer to your letter dated 10th May, 2006 and to forward the comments of the Federal Government of Nigeria on the Draft Project Performance Assessment Report on National Water Rehabilitation Project (LN 3322-UNI), First Multi-State Water Supply Project (CR 2732-UNI) and Small Towns Water Supply and Sanitation Project (CR 3350-UNI) for your information and further necessary action. The comments are attached to this mail. Kindly acknowledge the receipt, please.

Regards,

Engr. Ajisegiri, Benson
Federal Ministry of Water Resources
Government of Nigeria

BORROWER'S COMMENTS ON
DRAFT PROJECT PERFORMANCE ASSESSMENT REPORT ON
NATIONAL WATER REHABILITATION PROJECT (LN 3322-UNI), FIRST
MULTI-STATE WATER SUPPLY PROJECT (CR 2372-UNI) & SMALL TOWNS
WATER SUPPLY AND SANITATION PILOT PROJECT (CR 3350-UNI)

Introduction

1. We have carefully studied the report, including its objective, the methodology of field survey, the tools used, the adequacy of statistical sampling employed, the key indicators of each project and conclusions regarding their performance.
2. We accepted the rationale behind the study and found the exercise useful. We also agreed that effective M & E system is central to the success of any project delivery, as demonstrated under Small Town Water Supply and Sanitation Project.
3. However, we found the statistical sampling to be inadequate (2 states were visited out of 36 states and 3 schemes were inspected on National Water Rehabilitation Project (NWRP) as against 188 schemes rehabilitated) and noted that most of the conclusions were based on floating data that were neither anchored to the established baseline values nor referenced to the agreed target figures. In particular, the report, in our opinion, under rated the achievements of NWRP and to some extent, the first Multi-State Water Supply Project. To state that, institutional development impact is negligible for the former and modest for the later, is an erroneous and misleading conclusion. What appears to be generally lacking in this report, is inadequate appreciation of historical contexts, within which each project was identified, designed and implemented.

Historical Perspective

4. It may be noted that the NWRP (1992-1999 extended to 2001) was implemented at the time the country was passing through numerous policy and political changes and these influenced its design in a substantial manner. The project development was during the structural adjustment programme of 1986-1993. It came into effect in 1992 when slippages in fiscal discipline and public resource management led to withdrawal of Bank and IMF adjustment supports, during the time, large fiscal deficits were recorded and economic growth stagnated. GNP per capita declined from US\$, 1,180 in 1980 to US\$260 in 1995. Income inequality increased and according to CBN statistics, 34% of the population was classified as poor with basic social indicators then placing Nigeria among the 20 poorest countries worldwide.
5. Real wages of public employees, including employees of the States Water Agencies, decreased approximately by a factor of 10 (1986-1997). Inflation, which peaked at 72.9% in 1995, averaged 38% annually (1987-97). The ratio of wages of the State Water Agencies' employees to those of comparable positions in the private sector is about 1:25.

State Water Agencies

6. At the commencement of NWRP, most state water agencies were still regarded as mere extension of civil services with the same systems of budgeting, accounting, billing and collection, stores procedures and general procurement, whereas it was known that these systems were not designed to be flexible and fit for a commercialized enterprise. In most SWAs, water revenues were paid direct into the consolidated revenue head of the State Government. Hence, expenditures in the SWAs had to await release of funds allocation on quarterly basis from the State Governments. These were the issues that were faced at the inception of the project.

Other specific issues raised in the report and our response to each of them are as follows:-

Findings and Lessons

Country and Sector Background.

Paragraph 3:

7. The precarious situation of water supply in Nigeria is such that has made it compulsory for the various levels of government to collaborate for meaning solutions. Hence water supply cannot be left as the sole responsibility of State Governments without the intervention of the Federal Government. It should be noted that the Federal Government, through the FMWR, continued to invest over US100 million dollars, every year on water supply infrastructural development. This considerable effort should be acknowledged.

8. Besides, the department of water supply and quality control has database of federal assisted water supply infrastructural asset, and this is readily available. What is being done now under the current MDG tracking system is to build among others, a consolidated database, where the facilities constructed by all diverse stakeholders are captured and geo-referenced.

Paragraph 4:

9. The objectives of NWRP are captured in table 1 of the report on page 12, whilst the IEG defines the project outcome in the preparatory page as the extent to which the project major objectives was achieved.

10. Arising from above, we examined the key indicators of table 2 on page 14 and identified them as (i) the service coverage/quality; (ii) reduction of un-accounted for water and (iii) operational performance of the state water agencies. We noted that neither the baseline figures nor the target values were given for comparative analysis. Besides, only three out of the 188 rehabilitated schemes were visited and thereby wondered how the PRAR came to the conclusion that the project was highly unsatisfactory.

11. The same error was repeated in Table 4, page 17 for Kaduna State, as floating data were given without anchorage to baseline values nor tied to the target figures. The biggest

lesson for all is that due diligence in project preparation (including M&E framework) is the most important contributing factor in the success of any project.

12. On coverage indicator, the PRAR apparently used the total number of house connections, the average number of persons per household, estimated population in the service, but appeared to have ignored the standpipes and the significant roles they play in facilitating access and expanding coverage. This was not considered in Niger State. In addition the percentage of un-accounted for water, quoted in table 2, on page 14 for the state (83%) has been confirmed by the state water agency to be exaggerated.

Paragraph 5:

13. The reasons adduced for improving trend in the project outcome, in our opinion, has nothing to do with the gradual shift in the implementation role from the central government to the local communities; but rather on the gradual simplicity of the successive projects, the gradual re-building of capacity in the sector and the increasing ease of supervision arrangements (two states for instance, in case of multi- state and extremely simple technological mix in case of small town; compared to NWRP covering 36 states with FCT and about 188 water supply systems of diverse technological mix, having combined capacity of 1,800,000m³/ day, located in diverse service zones for consumers with varied socio – economic and demographic profile). At the time the NWRP was conceived, (Ref: historical perspective above), local implementation in the mould of the small town mechanism, would have been unworkable.

Paragraph 6:

14. The NWRP was basically a maintenance project as it was only meant to restore the capacity of existing water supply systems to their initial design capacities. Hence, there was no investment in new capacities, contrary to the impression given in the paragraph. Further details of maintenance efforts under the NWRP are discussed in paragraph 11.

Lessons learnt

Paragraph 7: Lesson One: The tracking of the targets under the Millennium Development Goals (MDG) must improve to account for the water supply service deficiencies of Nigeria.

15. The lesson is noted and accepted. But it is rather surprising that PRAR jumped to declare that “Nigeria is highly unlikely to meet the MDG Water Supply and Sanitation targets”, without adequate review of the current efforts of the government.

16. It may be noted that the government has designed necessary road maps for various classes of settlements- urban, semi-urban, small towns and rural. Furthermore, the whole sector is being reformed by; (i) revising the existing water supply and sanitation policy, (ii) encouraging public-private partnership, (iii) empowering local communities and water consumer associations, (iv) developing water and sanitation regulatory guidelines, (v) developing low-income household service strategies, (vi) designing MDG-tracking system and (vii) streamlining donors intervention. The investment in the sector has also increased

and the collaborative arrangements amongst the three tiers of government are being strengthened for the purpose of mobilizing and applying investment towards quantifiable results.

Paragraph 10: Lesson Two: Effective coordination between central, state and local governments requires demand-driven approaches where the consumers have the initiative.

17. It is erroneous to state that FMWR controlled the NWRP tightly. Each of the State Water Agencies had project decision making machinery for (i) reviewing and approving the procurement plans, (ii) clearing the contract evaluation reports; and (iii) making other key decisions regarding the direction of subproject and sub-loan covenants. In addition, there was project steering committee, headed by state project liaison officer, to oversee activities of the consultants and their contractors. Although the project accounts were kept in Abuja, not a single cent was disbursed without due authorization of SWAs Chief Executive Officers.

18. Every month, project management took place in the state, where relevant operational issues were treated and realistic time bound solutions were effected. Through this approach, capacities were built within a very short time and majority of them today can now confidently review technical reports, procure and administer goods, works and services contract and also prepare acceptable financial management reports. It is on this solid foundation that Bank's support to the sector is being built.

Paragraph 11. Lesson Three: Maintenance merits priority new works.

19. As it was stated in paragraph above, NWRP is not about new works, but indeed, an intensive maintenance project. On the issue of public power supply, it is too simplistic for PRAR to assume that NWRP did not pay attention to ensuring reliable power from the state owned power holding company. The poor state of electricity sector in Nigeria during the time of NWRP is well documented and any solution about it was outside the scope of NWRP.

20. The alternative was the massive importation of diesel engine generators to run (not just as standby) the rehabilitated water supply schemes. Some of these generators were physically inspected during the evaluation mission, (though some found idle, but in stable state) because they are normally put into use for limited period of time, based on the available cash, depending on the ability and willingness of people to pay for the service.

21. As for the policy measure, it may be added NWRP produced comprehensive policy instruments that cut across the whole gamut of water supply services, starting from source works (dam, boreholes etc) to treatment plants, pumping stations, power stations and distribution network. The document not only covered equipment coding and invention, but also included such subjects as, maintenance scheduling, budgeting, work method, etc. In additions, the operatives were given OJT to operationalise them.

22. Towards the tail end of the project two sets of TA consulting services were procured by the SWAs. The first was on technical aspects of their operation (which includes plant operation and maintenance, laboratory practice, distribution network mapping, customer enumeration and socio-economic survey, water audit and tariff modeling; and preparation of

water supply master plan), whilst the second was on financial aspects of their operation (which includes improved budgeting and accounting, billing and collection, purchasing and supply, asset re-valuation and deployment of management information system – MIS).

It is regrettable that these instruments were neglected as soon as the NWRP came to an end.

23. On a final note, our experience has shown that preventive maintenance programme is not only about finance. In most cases, it has to do more with corporate culture, the quality of first line supervision and general management over sight.

Paragraph 12: Lesson Four: Demand – driven projects demand adequate community development.

24. The comments are noted. The only concern however is that once a community is presented with a menu of technological choices and same is supported with financial implications (initial and running costs) and on that basis, an option is adopted by them, it may be very difficult for any one to influence their position, especially if they believed that they have made an informed choice. This is the dilemma of demand driven approach, even when a ceiling on the capitalized value is set

The National Water Rehabilitation Project

Paragraph 15:

25. Substantial part of the foregoing section has been devoted to correction of inaccuracies observed in the PRAR. Additional observations are stated here under:

26. It is vital to state that the FMWR is not as “inexperienced” in the delivery of Water Supply Project as the report had portrayed in this section. The fact that the project was centrally co-coordinated in Abuja did not mean that it was tightly controlled as discussed in the report. Given the conditions of the State Water Agencies at the commencement of the project, it will certainly be risky to entrust the whole implementation solely into their hands.

27. Now with the hindsight of history and the benefit of modern thinking on public expenditure management, it is still believed that the arrangement of NWRP was the best in view of prevailing circumstance of that time.

28. On the issue of admixture of investment and reform, it is noted that, with the exception of one or two States, the level of reform needed for others was basically similar. On the issue of funding, same amount was given, as the investment required in the state with the least need, was far in excess of US\$10.0 Million given.

29. It is also not correct to state that SWAs were less enthusiastic about participation on the project. This can be confirmed from the quality of attendance at site meetings, project review workshops and the quality of reception given each time they were visited. There are several volumes of correspondences in our achieves to buttress this clear position.

Paragraph 16:

30. On the adequacy of project components and the implementation arrangement, we do not agree that the project component was inadequate and project implementation arrangement improper. On the project component, what may appear to be missing is the distribution network in the service zones. (Including densification and extension). Here the greatest challenge was the non-availability of water to pressurize the pipelines with a view to establishing their structural integrity. It is therefore logical that, production plants have to be restored first, full services restored, and then comprehensive leakage detection be carried out with a view to packaging bid document to address the distribution problem. Network problems can only be properly addressed when the water pressure is adequate.

Paragraph 18: Efficacy

31. The point that production value rose from 720,000n³/day to 1,420,000n³/day was a fact at the time the measurement was carried out, and the report produced. In case of variance between ICR and IEG, the pertinent questions that the report ought to raise include:

- (i) When were the measurements carried out; and
- (ii) What tools did each group use?

Until the two questions are answered, it may be difficult to conclude that efficacy objective was not achieved.

32. As a follow-up to above, several explanations were given as reasons for failure to achieve the desired results, which in our opinion, are not fully correct. The most surprising is the position by PRAR that the capacity was not recovered because the pumps were procured by FMWR and installed. This statement is in conflict with engineering principles.

33. Specification were drafted by the best available international consulting firm (from Europe, Canada, and Asia), with active participation of SWAs officials as no design was completed without their inputs.

The First Multi-State Water Supply Project**Paragraph 8:****Lack of Pumping for four months**

34. The town being referred to was Zonkwa. At the time of the visit, the Water Treatment Works at Manchok was in operation. The pumps were running and there was water in the Clear Water Tank. The service area of the scheme included Manchok, Kaura, Kagoro, Zonkwa, Samaru Kataf, and Zango. It was a wrong conclusion that water has not been available for four months from the scheme. What could have been reported was for Zonkwa town only and not the entire service area.

Paragraph 20:**Sector Priorities**

35. The sector priority advocated by the PRAR was concentrated on the concept of Private Operator. The FMWR focused on capacity building to strengthen the SWAs. This concept should not have been condemned completely. It is also a feasible option. Another feasible option too could be Performance Contract. It is a wrong conclusion that that the only incentive was that of Private Operator.

Paragraph 21:**Non-Payment for Services**

36. Non-Payment for services was attributed completely on intermittent service delivery and poor quality. The decline in Per Ca. GNP was also a strong factor.

Paragraph 22:**System Performance**

37. The PPAR mentioned that none of the systems visited was producing water. This is not entirely correct as only Kwoi was not producing water at the time of the visit. That is not to say that it was not operational. The Water Works is being operated at night when the voltage was usually high enough to run the pumps. The other schemes of Kaduna South and Zonkwa were in operation at the time of the visit. This conclusion should be corrected.

Paragraph 23:**Non-Production from the tree systems of Ikara, Kwoi and Zonkwa**

38. Ikara was not visited to conclude as such. For comments on Kwoi and Zonkwa refer to 44 above.

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