



1. Project Data

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| Project ID P095003 | Project Name NG-RAMP PHASE 2 | |
| Country Nigeria | Practice Area(Lead) Transport | |
| L/C/TF Number(s) IDA-51540 | Closing Date (Original) 31-Dec-2018 | Total Project Cost (USD) 160,023,609.42 |
| Bank Approval Date 25-Sep-2012 | Closing Date (Actual) 31-Dec-2020 | |
| | IBRD/IDA (USD) | Grants (USD) |
| Original Commitment | 170,000,000.00 | 0.00 |
| Revised Commitment | 170,000,000.00 | 0.00 |
| Actual | 160,023,609.42 | 0.00 |

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2. Project Objectives and Components

a. Objectives

According to the International Development Association (IDA) Financing Agreement (p.5) dated September 9, 2013, the project objective is “to improve transport conditions and bring sustained access to rural population, through rehabilitating and maintaining key rural transport infrastructure in a sustainable manner in the participating states.” The project objective statement in the project appraisal document (p.10) is similar, except for a minor difference that reads as “selected Nigerian states” instead of “the participating states.”



The project was implemented in four states—Adamawa, Enugu, Niger, and Osun—between 2013 and 2020. These four states constituted the tier-1 states, the project was to be scaled up to additional states that would be the tier-2 states (which did not happen).

In this review, the project objective will be parsed as follows:

1. To improve transport conditions in the participating states; and
2. To bring sustained access to the rural population in the participating states.

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

No

c. Will a split evaluation be undertaken?

No

d. Components

According to the Financing Agreement (p.5), the project consisted of three components:

A. Upgrading and Rehabilitation of Rural Transport Infrastructure. (*Appraisal cost: US\$162.70 million; actual cost: US\$193.69 million*)

This component included the following activities to be implemented in the states of Adamawa, Enugu, Niger, and Osun: (i) Upgrading and rehabilitation of 1,450 kilometers (km) of rural and state roads and carrying out related design studies and supervision activities; and (ii) upgrading and rehabilitation of 65 river crossings and carrying out related design studies and supervision activities. An approximate 800 km of rural roads were already identified during project preparation that were to be implemented in the first stage. The remaining 650 km were to be identified during project implementation and implemented as the second stage.

B. Community-based Road Maintenance and Annual Mechanized Maintenance. (*Appraisal cost: US\$38.40 million; actual cost: US\$27.04 million*)

This component was to support the maintenance of the roads upgraded or rehabilitated under Component 1 and other pilot roads to build up the maintenance system while the project roads are being improved. Communities living alongside the roads were to perform routine maintenance, and contractors to be hired were to perform annual mechanized maintenance at the end of the rainy season. The latter could also be performed through force account but had to be covered by counterpart funds only.

C. Project Management and Strengthening of State and Federal Road Sector Institutional, Policy and Regulatory Framework. (*Appraisal cost: US\$11.60 million; actual cost: US\$17.00 million*)

This component consisted of two sub-components. Under the first sub-component, the project was to support activities at the state level, and under the second sub-component at the national level.

- a. This component was to support the strengthening of institutional capacity for project implementation and roads management and maintenance at the state level through the following activities: (i)



- preparation of road prioritization studies and geographic information system-based (GIS-based) road inventories; (ii) strengthening of road assets management; (iii) development of road transport regulations, establishment of road data management systems, and preparation of road transport strategies; (iv) reform of state road sector institutions; (v) technical assistance on safeguards enforcement, fiduciary management, governance and accountability, and infrastructure planning; (vi) promotion of stakeholders and civil society participation; and (vii) project implementation support at the state level.
- b. Specific activities were to be supported under this component at the national level to assist the Federal Ministry of Agriculture and Rural Development (FMARD) and other relevant federal institutions in project management and federal road policy development, such as the following: (i) day-to-day project administration, financial management, procurement, and monitoring and evaluation of project activities at the federal level; (ii) monitoring the performance of non-participating states on governance indicators and designing project scale-up activities; (iii) dissemination of lessons learnt and best practices; (iv) carrying out of project baselines and impact evaluation surveys; and (v) development of federal policies for the improvement of rural road transport and its articulation within existing federal transport policies and broader agendas. FMARD was responsible for this project at the national level.

Revised Components

There were no changes to the components during project implementation.

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

Project Cost: The total project cost was originally estimated at US\$242.71 million, including US\$3.00 million for refinancing of project preparation advance and US\$27.00 million for price and physical contingencies. In December 2020, the project closed with a total cost of US\$237.73 million. The cost, financing, and co-financing data reported in this section come from ICR, annex 3. There are discrepancies between this data and the data in the ICR datasheet and not all amounts do fully add up.

Financing: At appraisal, the IDA credit was estimated at US\$170.00 million. The project disbursed US\$160.02 million. Because of the fluctuation of the exchange rate between the Special Drawing Rights (SDR), the currency used in the financing agreement, and the US dollar, around US\$1.34 million was recorded as a loss.

As co-financier, the French Agency for Development (FAD) was to provide US\$60.00 million. The ICR does not report the actual disbursement of the FAD funds.

Borrower's contribution: At appraisal, the borrower's contribution was estimated at US\$12.70 million.

Restructurings: There were two project restructurings:

- **First Restructuring (Level 2 – December 28, 2018):** The project closing date was extended by 22 months from December 31, 2018 to October 30, 2020 to allow time for the completion of project activities. The project implementation was delayed because of a 14-month delay in project effectiveness due to lengthy approval process of the Borrowing Plan by the national assembly, worsening security situation in Adamawa State, and governance issues with the state project



implementation unit (SPIU) in Enugu State (Restructuring Paper, Report No: RES24852, p.7). Because of these delays, the implementation schedule of the financing of maintenance activities by IDA funds was revised as follows: 100 percent expenditures incurred until June 30, 2019 (originally June 30, 2015); 50 percent for expenditures incurred until June 2020 (originally June 2017); and no IDA financing thereafter. In the results framework, the intermediate indicator of “kilometer of roads in tier-2 states with design studies completed” was dropped because the concept of different tier states was no longer valid; a new indicator, i.e., “number of tier-1 states that adopted the Low Volume Manual for management of its rural roads,” was added to monitor the achievement of the sustainability of the project outcomes; and the target value of the indicator “kilometer of roads receiving efficient annual mechanized maintenance” was revised down from 1,650 km to 900 km to reflect the actual length of roads completed where annual mechanized maintenance could be implemented before the new project closing date (Restructuring Paper, Report No.: RES24852, p.7). Lastly, the credit amount set aside for physical and price contingencies was reallocated to other expenditure categories.

- **Second Restructuring (Level 2 – September 30, 2020):** The project closing date was extended by two months from October 30, 2020 to December 31, 2020 because of the impact of COVID-19 pandemic on project implementation. In 2020, construction sites were closed, contractors could not move materials because of interstate movement restrictions, and foreign personnel of contractors could not return to Nigeria because of flight restrictions (Restructuring Paper, Report No: RES42835, p.10). Eight out of the ongoing 25 contracts were expected to be completed by the new project closing date. All contracts not completed before the new closing date were to be funded by the respective state governments. At this restructuring, it was also decided to reallocate funds among expenditure categories to increase funds for safety measures due to the worsening security situation in the project states and to compensate for the loss caused by the depreciation of the US dollar against the SDR.

Dates: The project was approved on September 25, 2012 and the financing agreement was signed on September 9, 2013, almost one year after the approval of the project. The project became effective on November 22, 2013. The Mid-Term Review was conducted in October 2016. The original closing date was December 31, 2018. It was extended by two years, and the project closed on December 31, 2020. The reasons for closing date extensions have been outlined in the project restructuring entries above.

3. Relevance of Objectives

Rationale

The key terms of the project objectives were not defined in the project appraisal document; hence, the project objectives were not clearly specified. It is only after reading the project activities that the objective of the project could be understood as the improvement of the conditions of rural roads through upgrading or rehabilitation and the rural population’s lasting year-around access to project roads through the initial road improvement and sustained and timely routine and periodic maintenance. However, there was a mismatch between the real intention of the project and how the project objective was formulated. The real intention of the project was to support the agricultural sector because the lack of accessibility due to poor road conditions was identified as one of the major barriers for the development of the sector that is the backbone of Nigeria’s rural economy (PAD, p.4). Roads in bad conditions increase transport costs, restrict access to markets and services and decrease productivity. Therefore, the improvement of road conditions is a



necessary condition for the transportation of more agricultural products to markets but may not be sufficient unless supported by additional interventions, such as availability of transportation vehicles, and storage and marketing of agricultural products.

The project objectives were relevant to the country context. Inadequate and poor road infrastructure is still a major barrier for the development of service and agricultural sectors and economic development in Nigeria. The percentage of rural population with access to road worsened during the course of project implementation. According to the World Bank's report titled "Measuring Rural Access: Update 2017/18" that was published in February 2019, Nigeria's rural access index is estimated at 25.5 per cent indicating that only one quarter of the rural population have access to an all-season road within an approximate walking distance of 2 km compared to rural access index of 47 percent at the time of appraisal. While over 90 percent of passengers and freight are transported by roads, only 30 percent of the country's road network is paved and majority of the federal, state, and rural roads are in poor condition (Project Appraisal Document of Nigeria Rural Access and Agricultural Marketing Project, p.2). The country has insufficient funds to invest in roads. The annual allocation of funds in the national budget in 2019 was only five percent (US\$1.25 billion) of the amount (US\$25 billion per year) recommended in the infrastructure master plan published in 2015. On the other hand, poor road maintenance has been a major and recurring issue in the country, as seen in the significant drop in the rural access index. The project was to address this issue through technical assistance and provision of funds for road maintenance to be gradually covered by local governments, but the capacity in the country was insufficient to achieve this objective. Therefore, while the project objectives were relevant to Nigeria's development status, they were not appropriately pitched for the capacity in the country.

The project objectives were fully aligned with the World Bank's strategy as defined in the Country Partnership Framework (CPF) for Nigeria, FY2021-25. The project sought to address the development problem of insufficient road access to economic opportunities, i.e., transporting agricultural products to markets, and social services, such as health and education. The project was to address this problem through the improvement of conditions of rural roads and their sustainability through regular and annual maintenance activities. These objectives correspond to the CPF's (p.50) Complementary Priority 5, "Enhance connectivity and support development of economic corridors and cities as livable growth poles" under the third pillar of "Promoting jobs and economic transformation and diversification," which covers rural businesses that are disadvantaged by spatial remoteness and poor transport conditions along with low access to power grid and telecommunications. The project objectives also support the achievement of the CPF's core objectives to increase access to quality basic education and improve primary healthcare, and complementary priority to modernize agriculture (CPF, p.30).

The World Bank had sufficient country and sector experience in Nigeria. The project was designed based on the experience gained and lessons learned during the implementation of the Rural Access and Mobility Project, Phase 1 in Kaduna State between 2008 and 2016. The project's approach was innovative for Nigeria in the sense that it introduced a community-based approach to address the routine road maintenance issue in Nigeria. Although this model was successfully implemented in other regions of the world, such as Latin America, given the rural capacity constraint in the country, this was overly ambitious for Nigeria.

Lastly, while the project objectives remained relevant throughout the project cycle and was a necessary response to a development gap in Nigeria, a significant shortcoming was the lack of clarity in the objective's



formulation around what outcomes would be achieved through improving road conditions and bringing sustained road access to rural population.

Overall, the relevance of the objectives is rated Substantial, but only marginally because the objectives were not clearly formulated, were closer to the output level rather than the outcome level and did not fully capture the real intention of the project to support the agricultural sector.

Rating

Substantial

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To improve transport conditions in the participating states.

Rationale

Theory of Change for Objective 1

The project's theory of change indicates that the project's inputs, i.e., IDA credit, were to be used to finance the civil works for the rehabilitation of rural earth roads and construction of river crossings. Technical assistance was to be provided to improve the technical and institutional capacity of the project-supported states in road management through the creation of GIS-based road inventories and road asset management systems. These activities would be expected to directly lead to the achievement of project outputs of roads rehabilitated and river crossings constructed with sufficient capacity to manage these roads. In turn, these outputs would be expected to result in the outcome of improved road conditions. In the long-run, these results would be expected to increase the productivity and commercialization of agriculture—the main economic activity in the four project-supported states—and household income of the rural population. Overall, the causal pathways from inputs to expected results were valid and direct, and the results achieved could be attributed to the project's intervention. However, the expected results were closer to output level in the results chain rather than outcome level.

Outputs

The project's results framework captured the following outputs:

- **Roads rehabilitated:** This indicator is defined as “Kilometers of rural or state roads rehabilitated by the project according to agreed standards” (PAD, p.32). The project financed the rehabilitation of 1,929 km of rural roads. The target was 1,450 km. However, the ICR (p.25) notes that “the technical quality of road and infrastructure works of the first stage [the first 800 km of roads identified at appraisal] was in general, unsatisfactory” because of insufficient technical capacity at the SPIUs to review road and bridge designs and supervise the quality of civil works. (The project team commented



to IEG that the quality of works was subsequently corrected and improved before the rehabilitation was completed.) Furthermore, the roads were rehabilitated to earth road standard that was not appropriate in areas subject to heavy rains (ICR, p.30).

- **Number of river crossings built:** The project financed the construction of 98 river crossings. The target was 65.

The ICR reports the following outputs, the achievements of which were not captured by the results framework, and for which no target values were established:

- **Spot improvements and rehabilitation of culvert of access roads:** The project financed the spot improvement of 310.74 km of roads.
- **Technical audits of civil works:** These audits were completed in the Adamawa and Niger states but not in the Enugu and Osun states.

Outcomes

In the results framework, the indicator given below was defined to measure the outcome of the road rehabilitation activities. However, this indicator was at the output level rather than outcome level and did not capture the development impact of the project activities.

- **Roads in good and fair condition as a share of total classified roads:** This indicator was defined as “percentage of rural roads in good or fair condition as a share of total registered rural road network in targeted [four] states” (PAD, p.32). The baseline was estimated between zero and one percent. The target was 10 percent. According to the borrower’s project implementation completion report, the achievement was 15 percent (ICR, p.54). However, evidence in the ICR is not fully sufficient to validate this achievement given that the technical quality of 800 km of roads rehabilitated under the first stage was generally unsatisfactory. And even if the project team stated that the quality of these roads was corrected and improved before the completion of rehabilitation works, the level of improvement is unknown. The ICR does not provide information if and how technical assistance and technical audits contributed to the improvement of road infrastructure in the project areas. The project team subsequently commented to IEG that the technical assistance supported project implementation, built capacity in project staff, and improved quality of works over-time through third party monitoring.

The project was successful in achieving the output targets, but the technical quality of the roads rehabilitated in the first stage was initially low even if it was later corrected , and the earth road standard was not appropriate for some sections of the road. Overall, the project’s efficacy in achieving the project objective to improve transport conditions is rated Substantial, with moderate shortcomings.

Rating

Substantial

OBJECTIVE 2

Objective

To bring sustained access to the rural population in the participating states.



Rationale

Theory of Change for Objective 2

The project's theory of change for Objective 2 indicates that the project's inputs, i.e., IDA credit, were to finance the routine maintenance for the roads improved under Objective 1, while technical assistance were to support activities, such as the preparation of low volume roads manuals, road asset management systems, reform of the state road sector institutions, development of road transport regulations, and preparation of road transport strategies. These activities would be expected to directly lead to the achievement of project outputs of improved roads maintained under the project and establishment of the regulations and policies for road management and maintenance. In turn, these outputs would be expected to result in the outcome of road maintenance sustained beyond project closure that would ensure the sustained access of the rural population. Although Objective 2 does not spell it out, based on information in the PAD, such sustained road access of rural population was to improve access to social services and decrease agricultural transport costs, and eventually increase household income, the last being a higher objective. These development impacts of sustained access were not captured by the project's results framework, but by beneficiary surveys to be conducted before and after the project, which assessed aspects such as improved access to social services, reduction in time required to access such activities, improved transportation of agricultural goods, and reduced time to fetch water. Overall, the causal pathways from inputs to outcomes were valid and direct, and the outcomes achieved could be attributed to the project's intervention. However, the expected outcomes were overly ambitious given the weak institutional capacity of the state institutions and the project's limited intervention to reform the road sector institutions at the state level. Additionally, the success of the project's intervention depended on the availability of sufficient funds to cover maintenance expenditures, the absence of which has been a major barrier to the maintenance of federal, state, and rural roads in Nigeria.

Outputs

The project's results framework captured the following outputs:

- **Rural roads receiving efficient, permanent routine maintenance:** The target was 1,650 km of rural roads rehabilitated under the project to be maintained by rural communities. The project rehabilitated 2,239.74 km of roads, including 310.74 km of spot improvements and rehabilitation of culverts of access roads. Out of this total amount, the project financed the maintenance of 2,165 km of rural roads.
- **Rural roads, receiving efficient, annual mechanized maintenance:** The target was annual mechanized maintenance of 1,650 km of roads rehabilitated under the project by contractors. This target was decreased to 900 km at the first restructuring to reflect the actual length of roads completed where annual mechanized maintenance could be implemented before the project closing date. The project financed annual mechanized maintenance of 599.18 km of roads rehabilitated under the project.
- **Number of states with GIS-based road inventories:** GIS-based road inventories and state road maps were completed in all four states as planned.
- **Number of states that adopted the Low Volume Manual for management of rural roads:** The target was two states. At project completion, three states had adopted the Low Volume Manual, except Niger. This manual consists of three sub-manuals for roads with low volume traffic: Low Volume Road Design Manual, Low Volume Maintenance Manual, and Low Volume Road Technical Specifications.



- The following technical assistance outputs were not achieved at the time of project closing (ICR, pp.36-37): (i) rural transport regulations; (ii) sustainable road data management systems (the ICR is not clear on what these systems included because it also mentions that the GIS-based road inventory and Road Asset Management Systems were prepared (ICR, para 43)); (iii) intermediary means of transport strategies; (iv) reform of state road sector institutions, including the institutionalization of the state project implementation units as rural roads management units (The project team stated that new laws were promulgated in two states for the establishment of new rural roads agencies); and (v) policy study on road maintenance management and financing. According to the borrower's project implementation completion report, the absence of a road sector specialist for almost five years after project's effectiveness with the requisite knowledge to implement the technical assistance activities was the main reason why these outputs could not be delivered (ICR, p.53).

Outcomes

In the results framework, two indicators were defined to measure the outcome of the road rehabilitation activities.

- **Increase of share of rural population with access to an all-season road (Rural Access Indicator):** This indicator was defined as “percentage of the rural population in targeted [four] states living less than 2 km away from an all-weather road” (PAD, p.32). The target was to increase this ratio by six percent. The achievement was 8 percent. However, according to the borrower's project implementation completion report (ICR, p.54), the number of people with access to all season rural roads increased from a baseline value of 3.7 million to around 5.92 million, which is an increase of 60 percent. The target was 5.28 million, an increase of around 43 percent. Therefore, the achievements reported as “increase of share of rural population with access to an all-season road” and “number of rural people with access to all season roads” could not be validated.
- **Roads receiving adequate levels of maintenance:** This indicator was defined as “kilometers of rural roads (either pilot roads or roads rehabilitated by the project) with both efficient, permanent routine maintenance and annual mechanized maintenance” (PAD, p. 32). In other words, this indicator merges the two output indicators given in the above Output section; therefore, it is at the output level, too. The ICR reports the lower of the two maintenance figures, i.e., 599.18 km as achievement for roads that received both routine and annual maintenance. The target was 1,650 km.

Based on the beneficiary surveys conducted during project implementation, the ICR reports the following results that were not captured by the results framework:

- **Means of access to social services (ICR, pp.64-65):** According to the baseline survey, walking was the primary means of access to education, work, healthcare, and worship in all four states, while public buses and vans were the primary means of access to clothing in Adamawa, Enugu, and Osun. Walking was a primary means of access to clothing in Niger. The follow-on survey found that this general trend has not changed after the project's intervention. However, in **Adamawa** there was a notable decrease in the ratio of people walking to education (from baseline of 91.5 percent to 76.6 percent) indicating that people use motorized vehicles more. In Adamawa, the ratio of people using more than one means of access, too, increased from 3.9 per cent to 12.3 percent. In **Enugu**, the impact of the project was similar (the ICR does not report any values for Enugu and the other two states): a decrease in the number of people walking to education, work, healthcare, clothing, and worship, and an increase in the those using more than one means of transport. The project's impact in



Niger was not notable; there was only an incremental decrease in the proportion of people who walk to access education, clothing, worship, work, and healthcare. In **Osun**, the project's impact was negligible; there was a slight decrease in the proportion of people who walk to access education, but on the contrary, an increase in the proportion of those who walk to access work, healthcare, clothing, and worship. The survey also found that there was a decrease in the usage of public buses and vans to access clothing, but evidence is insufficient to conclude whether this outcome would mean that usage of private motorized vehicles has increased in Osun or not.

- **Time to access social services (ICR, pp.65-66):** According to the baseline survey, bad road conditions were the main reason for people to walk to access social services rather than using other modes of transportation. In **Adamawa**, after project completion, most of the population in the project area were able to access healthcare and food in less than 10 minutes compared to 43 minutes before the project. There was no change in the time required to access work and clothing (more than 41 minutes) and school and worship (less than 10 minutes). In **Enugu**, the time required to access work substantially decreased from more than 41 minutes to less than 10 minutes for the majority of the survey respondents. This high achievement is in accordance with the finding that fewer people walked to work in Enugu after the project. There was a substantial improvement in the time required to access food; before the project it was more than 41 minutes, but after the project 24 percent of the population were able to access food within ten minutes and another 26 percent between 21 and 30 minutes. The time required to access healthcare, education and worship facilities remained the same at around 10 minutes for the majority of the respondents. The project did not have any impact in decreasing the time required to access clothing which remained above 21 minutes for more than half of the respondents. In **Niger** and **Osun**, the project did not have a significant impact on the time required to access social services. Although the ICR states that the time required to access clothing in Niger and healthcare in Osun decreased, the evidence is insufficient to support these assertions (ICR, p.66).
- **Access to water:** The project did not have any significant impact on reducing the time required to fetch water, as all four states "appeared to have fair access to varied water sources, such as piped water, surface water, and wells, in the dry and wet (rainy) seasons" that did not require fetching water from long distances (ICR, p.65).
- **Transportation cost of agricultural goods:** In **Adamawa** and **Niger**, there was a decrease in the transportation costs, while a substantial increase took place in **Enugu** and **Osun**. The ICR (p.67) claims that the increases in the latter two states suggest that "there was an increase in agricultural production and increased transportation of goods to market." The evidence is insufficient to support this assertion.

The evidence shows that the ratio of the rural population with access to all-season roads has increased, but there are concerns about the reliability of the data. The beneficiary surveys conducted before and after the project show that there were some improvements in the variety of transportation means and time required to access social services at different levels in all four states, but the project did not have a major impact on the general trends in accessing social services. The project did not have any impact on access to water, and the evidence is inconclusive about the impact of the project on the transportation of agricultural goods. The ICR points out that the impact evaluation, which is being currently conducted and of which the beneficiary surveys are part, will be published in December 2021. It is expected provide more in-depth findings about the impact of the project (ICR, pp.22-23).

The project successfully implemented a community-based road maintenance approach with the participation of 2,445 people, of which 726 were women. However, for the sustainability of maintenance services, the main outcome expected from the project's intervention was that the cost of maintenance activities would eventually



be covered by the states. According to the revised implementation schedule of the financing of maintenance activities, the project was to finance 100 per cent of maintenance expenditures incurred until June 30, 2019, 50 per cent for expenditures incurred until June 2020 and none thereafter. The project did not achieve this outcome and financed 100 percent of the maintenance expenditures through to project closure. According to the project team, external factors, such as economic downturn and security issues, adversely affected the implementation of the maintenance schedule. State Road Maintenance Funds in each state were not established, nor were sufficient funds allocated for road maintenance (ICR, p.45). The ICR (p.23) notes that “the funding and management of maintenance have not been sustainably addressed in the four participating states.” Therefore, it is uncertain how the roads rehabilitated under the project will be maintained, if ever. Additionally, the evidence is insufficient to show that the project was successful in strengthening institutional capacity of local authorities in road management and maintenance, although GIS-based road inventory and road asset management systems were available. Despite the successful demonstration of the community-based maintenance mechanism, its sustainability is uncertain because of lack of institutional arrangements at the state level for managing rural roads, insufficient institutional capacity, and insufficient funds (ICR, p.30). The Environmental and Social Safeguards Audit conducted in March 2021 notes that “some roads in certain states have deteriorated and been in bad conditions because road maintenance has not been properly carried out. In some states, contractors have been procured to ensure annual maintenance of these roads, but efforts need to be accentuated in order that the roads are maintained promptly and routinely” (ICR, p.73).

Overall, because of the significant shortcomings in ensuring the sustainability of road maintenance, the project’s efficacy in achieving the project objective to bring sustained access to the rural population through maintaining key rural transport infrastructure in a sustainable manner in the participating states is rated Modest.

Rating
 Modest

OVERALL EFFICACY

Rationale

While there were shortcomings in the technical quality of the rural roads rehabilitated in the first stage, the project was successful in rehabilitating more rural roads than the target value. Therefore, the project’s efficacy in achieving the objective to improve transport conditions is rated Substantial, but with moderate shortcomings. On the other hand, because of significant shortcomings in ensuring the sustainability of maintenance of rural roads rehabilitated under the project, the project’s efficacy in achieving the objective to bring sustained road access to the rural population is rated Modest. Overall, the project’s efficacy in achieving the project objectives is rated Modest.

Overall Efficacy Rating

Primary Reason



Modest

Low achievement

5. Efficiency

Economic Analysis

At appraisal, an economic evaluation study based on the Road Economic Decision Model (RED) developed by the World Bank for low volume roads was conducted using data gathered through traffic surveys for the first tier of 800 km of rural roads to be rehabilitated under the project. The RED model uses the consumer surplus approach to estimate road user costs savings, such as vehicle operating costs savings, passenger time costs savings, and accident cost savings (PAD, p.25). For the economic evaluation, costs were taken as rehabilitation costs and maintenance costs. The assumptions used at appraisal were appropriate: 12 percent discount rate, six percent traffic growth rate, and 20 year evaluation period. The calculation resulted in an economic rate of return (ERR) of 39 percent and a net present value (NPV) of US\$155.57 million.

At project closing, a similar economic evaluation based on the RED model could not be conducted because of COVID-19, which resulted in restricted movement of people and goods distorting traffic data. Alternatively, actual average costs of road rehabilitation were compared to the average costs estimated at appraisal. In Adamawa, the average cost of 1 km road rehabilitation was US\$70,032, which was lower than the average cost of US\$97,406 estimated at appraisal. Similarly, in Niger the actual cost of road rehabilitation was lower than the average cost estimated at appraisal; US\$70,870 and US\$96,936, respectively. But both in Enugu and Osun actual average costs of road rehabilitation were higher than average costs estimated at appraisal: Enugu, US\$123,098 and US\$95,642; and in Osun, US\$68,103 and US\$62,320, respectively.

Operational and Administrative Efficiency

Project effectiveness was delayed by 14 months because of the lengthy approval process of the Borrowing Plan by the national assembly. This delay, together with other delays caused by external factors, such as worsening security situation or governance issues in some states, resulted in slow project implementation. The counterpart funds at the state level, except in Osun, were insufficient to cover supervision and implementation costs and process the payment of compensations to project-affected persons under resettlement action plans. These caused further project implementation delays. The SPIUs' supervision of civil works was inadequate because of weak technical capacity that resulted in low quality road and infrastructure works in the first phase. Although, as pointed out by the project team to IEG, the civil works quality was subsequently corrected and improved, this is not an efficient way to proceed. Important technical assistance activities to reform the sector could not be completed because of the absence of a road sector specialist and the focus of the SPIUs on the civil works that had greater visibility and direct benefits for the population. The phased approach to road rehabilitation works was implemented with the expectation that the first stage of works would provide experience to SPIUs and lessons for the second stage. However, this approach created very complex procurement processes for both phases resulting in each state to implement around 100 contracts with limited institutional capacity.

Overall, while the average costs of road rehabilitation were comparable to estimated average costs at appraisal, there were significant shortcomings in the operational and administrative efficiency as explained in the previous paragraph. Hence, the project's efficiency in achieving the project objectives is rated Modest.



Efficiency Rating

Modest

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

| | Rate Available? | Point value (%) | *Coverage/Scope (%) |
|--------------|-----------------|-----------------|---|
| Appraisal | ✓ | 39.00 | 100.00 <input type="checkbox"/> Not Applicable |
| ICR Estimate | | 0 | 0 <input type="checkbox"/> Not Applicable |

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

6. Outcome

While the project objectives were not clearly formulated, were closer to the output level rather than the outcome level and did not fully capture the real intention of the project, they remained relevant throughout the project cycle. Therefore, the relevance of objectives is rated Substantial, but only marginally. The overall efficacy in achieving the project objectives is rated Modest because of low achievement in sustaining all-weather road access to rural population. The project's efficiency in achieving the project objectives is also rated Modest because of significant shortcomings in project's operational and administrative efficiency. Overall, the outcome is rated Moderately Unsatisfactory.

a. Outcome Rating

Moderately Unsatisfactory

7. Risk to Development Outcome

Financial and governance: Insufficient funds for the maintenance of roads is a major risk for the sustainability of rural population's access to roads rehabilitated under the project. State Road Maintenance Funds were not established in the states, a major setback in adequately maintaining the roads. Some states procured contractors to have the roads annually maintained, but more funds are needed to finance timely routine and periodic maintenance of roads. The road asset management reform is not complete. The newly created institution for management of rural roads does not have sufficient funds, nor institutional capacity, to support the maintenance of rural roads.

Exposure to natural disasters: According to the environmental and social safeguards audit conducted in March 2021, some roads rehabilitated under the project are located in flood plains and prone to flooding. In the event of a major flood, the road quality can deteriorate and adversely affect the transportation conditions. Heavy rains can easily damage earth roads and worsen their conditions.



8. Assessment of Bank Performance

a. Quality-at-Entry

At project entry, the goal to improve rural population's sustained access to economic opportunities and social services through rural roads in accordance with national strategies was of high strategic importance (PAD, pp.1-4). The project appraisal document was thoroughly prepared and provides detailed information about the sector and the project's interventions. The project's approach to investment activities was straightforward; however, given that the project's real intention was to support the agricultural sector, it could have included interventions to address additional barriers to agricultural marketing, such as storage, transportation services, and marketing. The project was to finance civil works for the rehabilitation of rural earth roads, construction of river crossings, and maintenance activities. However, the expectation that the project's financing of maintenance activities would decrease gradually on a yearly basis, and that local states would cover the cost of maintenance beyond project closure was overly optimistic because of lack of local funds, insufficient institutional capacity, and governance issues at the state level. These issues were well known to the Bank team considering that this was the second operation on rural access (the first was Rural Access and Mobility Project – P072644) and that the Bank had a longstanding engagement in the road sector in Nigeria. Similarly, it was not realistic to expect that the project's technical assistance support would be sufficient to reform the state road sector institutions and strengthen road sector policy and regulatory framework, which require the involvement of relevant parties at the federal, state, and local levels. Hence, most of the technical assistance activities could not be completed. While the economic aspects of the project were sound and economic analysis was based on appropriate assumptions, in hindsight, the earth road standard was not appropriate for areas subject to heavy rains on the technical side. The technical capacities of the SPIUs, which were not sufficient to supervise the quality of civil works, were not adequately assessed; hence, the technical quality of civil works implemented in the first stage was low. Procurement arrangements were complex. Because of the two-stage approach of the project, the SPIUs, which did not have sufficient procurement capacity, had to manage over 100 contracts. The monitoring and evaluation design was sufficient to measure the project's outputs. However, the development impact of the project's intervention to be assessed through the surveys were not monitored in the results framework (see section 9. M&E Design, Implementation and Utilization below). Most of the major risks were adequately assessed, and overall, the project risk was rated high. Mitigation measures were identified, but some were not effective, such as the design risk related to the sustainability of maintenance activities beyond project closure. The risk related to the availability of local funding was not adequately identified at appraisal.

Because of significant shortcomings in identification, preparation, and appraisal of the project, the quality-at-entry is rated Moderately Unsatisfactory.

Quality-at-Entry Rating
Moderately Unsatisfactory

b. Quality of supervision



Supervision missions were regularly held every six months until the onset of COVID-19 in March 2020 after which the project team virtually supervised project implementation. According to the borrower's project implementation completion report, the Bank's supervision teams did not include a monitoring and evaluation (M&E) specialist and an institutional development specialist (ICR, p.59). After the worsening of the security situation in the Adamawa state, a third party was hired for the supervision of project activities and verification of project outputs. The project team's focus on the implementation of technical assistance activities was insufficient; most of such activities that would have contributed to the sustainability of project's outcomes could not be implemented. The project team's supervision of fiduciary and safeguard aspects of the project was mostly adequate except for ensuring that bidding documents sufficiently included environmental and social safeguards requirements. The performance reporting in the Implementation Status and Result Reports and Aide Memoires was candid and adequate.

The quality of supervision is rated Moderately Satisfactory.

Quality of Supervision Rating

Moderately Satisfactory

Overall Bank Performance Rating

Moderately Unsatisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The project objectives were not clearly specified, and the stated and implied goals of the operations did not fully coincide (see section 3. Relevance of Objectives). The results framework did not include any indicator measuring the sustainability of rural population's access to roads, except for capturing the kilometers of roads receiving regular maintenance. Given that the project outcomes were pitched closer to the output level in the results framework, the project objective level indicators captured the project outputs rather than outcomes, such as share of roads rehabilitated under the project in total classified roads, increase in share of rural population with access to all-season road, and roads receiving adequate levels of maintenance. The intermediate results indicators were sufficient to capture the outputs of civil works, but the results framework did not include indicators to capture the outputs or outcomes of technical assistance activities, except the indicator measuring the establishment of GIS-based road inventories. The intermediate indicators were specific, measurable, achievable, relevant, and time-bound. The data were to be collected from work progress reports of supervision firms or consolidated progress reports of state project implementation units, which lacked sufficient technical capacity to supervise civil works. The development impacts of sustained access were not reflected in the results framework, such as reduction in time required to access social services, increase in the use of mechanized vehicles, and increase in economic activities because of improved road access, even if the project had impact assessments to measure them.



b. M&E Implementation

Because of the delayed start of project activities—four years into project implementation—the M&E staff was demobilized, and their remobilization when needed was challenging. The indicators included in the results framework were measured based on the supervision firms and SPIUs' reports, but the ICR does not provide sufficient information to assess the SPIUs' attention to effective M&E implementation. Similarly, the evidence is insufficient for assessing the reliability and quality of the data. The weaknesses in the M&E design were not adequately corrected during implementation, except the inclusion of a new intermediate indicator related to adoption of "low volume road manuals" by the project-supported states. The surveys provided additional information about the impact of the project, but the reliability and quality of the surveys could not be adequately assessed because of insufficient information about the methodology used and quality control. An Impact Evaluation is being conducted to assess the project's impact on welfare and well-being of the rural population (see section 4. Efficacy, Objective 2, Outcomes), which is planned to be published in December 2021.

c. M&E Utilization

The ICR does not provide information whether the M&E findings were communicated to stakeholders. There was no clear evidence to assess the impact of the M&E findings on decision-making or shifts in the implementation direction of the project (ICR, p.26). However, the M&E findings and experience gained in this project informed the scaling up of this project in the state of Imo funded by the French Development Agency and the follow-on Rural Access and Agricultural Marketing Project (P163353) covering 13 states by incorporating rural agricultural marketing mechanisms to increase the projects' development impact. The M&E findings were used to provide evidence of achievement of the project outputs. Findings of surveys were also partly used to provide evidence for the project's impact on human development.

Overall, the M&E quality is rated Modest because of significant shortcomings in the design and implementation of the M&E system that consequently restricted the utilization of M&E findings in decision-making.

M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

The project was classified as Category A under Environmental Assessment (OP/BP 4.01) and triggered the Natural Habitats (OP/BP 4.04), the Physical Cultural Resources (OP/BP 4.11) and the Involuntary Settlement (OP/BP 4.12) safeguard policies.

Environmental Assessment (OP/BP 4.01): The environmental impact of project activities was expected to be limited because the project activities did not include the construction of new roads and the project



activities were to remain within the existing rights-of-way. An environmental and social management framework (ESMF) was prepared and disclosed for Enugu and Osun states in May 2008. After the inclusion of Niger and Adamawa states to the project scope, the ESMF was updated and re-disclosed both in country and the Bank's InfoShop. Four Environmental and Social Impact Assessments (ESIAs), one for each state, and corresponding Environmental Management Plans (EMPs) for the 800 km of roads identified as the first stage at appraisal were also disclosed in country and the Bank's InfoShop.

During implementation, the early bidding documents did not adequately include environmental safeguards requirements. The ICR (p.27) notes that "contractors and supervising consultant teams did not include environmental social health and safety officers." However, the ICR does not provide information if this was because of the lack of requirements in the bidding documents or the contractors' failure to mobilize these officers, nor does it report whether this affected a few contracts, and it was eventually addressed or if it was a problem throughout project implementation. The waste management in project sites were not compliant with the provisions of ESMPs. Increased generation of dust, especially during dry seasons, from roads was an issue that was partly addressed by asphaltting certain roads around schools, rural settlements, markets, and clinics in the second stage of the project. Gender based violence clauses were added to the contracts during project implementation. The SPIUs did not initially have sufficient capacity to implement the safeguard policies. Compliance with the environmental safeguard policy improved in the second stage of project implementation (ICR, pp.73-74). A grievance mechanism was in place in all four states.

Involuntary Settlement (OP/BP 4.12): The project triggered this policy because of the possibility that project activities might affect some persons. A resettlement policy framework (RFP) and abbreviated resettlement action plans (ARAPs) for each state were prepared and disclosed in Nigeria and the Bank's InfoShop. A total of 2,423 persons were affected by the project activities. Compensations to these project-affected persons were delayed because of late release of counterpart funds by state governments in Adamawa, Enugu, and Osun. This slowed down project implementation and was one of the reasons for the project closing date extension.

The ICR does not provide information about the implementation of the Natural Habitats (OP/BP 4.04) and the Physical Cultural Resources (OP/BP 4.11) safeguard policies. The project team subsequently informed IEG that "all Implementation Status and Results Reports rated the implementation of OP/BP 4.04 Satisfactory with no further details. Implementation of OP/BP4.11 was Satisfactory until June 2016 when shrines were encountered along some priority roads (Phase 1) in Enugu State and identified during the preparation of the Abbreviated Resettlement Action Plan (ARAP). The issue was solved with the revision of the ARAP (not archived in WB docs)."

b. Fiduciary Compliance

Financial Management

SPIUs submitted interim financial reports with occasional delays. These reports were acceptable to the World Bank. The Office of the Auditor General carried out annual project audits. The ICR does not report whether these audit reports were qualified or not. The project team informed IEG that audit reports were unqualified and submitted within the six-month window of submission on the reporting year. There were



significant delays in the flow of counterpart funds from state governments to project implementation units because of fiscal constraints. The funds were insufficient to cover supervision and implementation costs and process the payment of compensations to project-affected persons under resettlement action plans. No issues of corruption or misuse of funds associated with the project are reported in the ICR.

Procurement

SPIUs had limited procurement capacity. Therefore, three of the states, i.e., Adamawa, Niger, and Osun, appointed a procurement consultant after a competitive selection. These consultants supported the project implementation units in procurement and also in developing capacity. The procurement was very complex with each state implementing around 100 contracts. As mentioned in the Safeguards section above, early contracts did not include adequate clauses related to environmental social safeguard requirements. Enugu did not initially hire a procurement consultant and was slow in reviewing and evaluating bids. Procurement was conducted according to the relevant World Bank procurement guidelines.

c. Unintended impacts (Positive or Negative)

None.

d. Other

None.

11. Ratings

| Ratings | ICR | IEG | Reason for Disagreements/Comment |
|------------------|-------------------------|---------------------------|--|
| Outcome | Moderately Satisfactory | Moderately Unsatisfactory | Because of significant shortcomings in ensuring the sustainability of road maintenance and the rural population’s sustained access, and significant operational and administrative inefficiencies. |
| Bank Performance | Moderately Satisfactory | Moderately Unsatisfactory | Among others, because of (i) overly ambitious expectations that road sector reform could be achieved under the project and that local authorities would cover those costs; (ii) adoption of earth road standard that was not appropriate for areas subject to heavy rains, and (iii) ineffective |



mitigation measures for the design and sustainability risks related to maintenance services.

| | | |
|----------------|--------|--------|
| Quality of M&E | Modest | Modest |
| Quality of ICR | --- | Modest |

12. Lessons

This review has drawn three lessons based on information in the ICR.

Lack of sufficient funds and institutional arrangements for maintaining rural roads can adversely affect the rural population’s sustained access to improved roads beyond project closure. While the quality of civil works to rehabilitate the first stage roads was low, the project activities resulted in the improvement of the road conditions in the four states. However, local state authorities do not have sufficient funds nor are institutional arrangements in place to adequately maintain the roads. The State Road Maintenance Funds could not be established. At the time of the Environmental and Social Safeguards Audit in March 2021, it was observed that some roads rehabilitated under the project had already started deteriorating and been in bad conditions because of lack of maintenance.

The community-based road maintenance approach can be a viable solution for routine maintenance of rural earth roads while positively impacting the social and economic well-being of women. Communities in the project areas demonstrated interest in participating in routine maintenance of earth roads after their rehabilitation. This increased the local communities’ ownership of the road infrastructure and also provided an opportunity to women to contribute to the community while economically benefitting from these activities in the form of direct and indirect income. A total of 2,445 people from the communities participated in road maintenance of which 726 were women (30 percent of the participants). However, the sustained success of this approach depends on the availability of local funds to maintain roads under this approach.

A heavy procurement load for investment activities can force the project implementation units with low capacity to focus more on civil works and neglect technical activities for sector and institution reforms. The procurement processes of road rehabilitation works that were to be implemented in two phases were complex for the SPIUs that did not have sufficient procurement capacity. First, approximately 800 km of roads that were identified during project preparation as the first phase of roads were to be rehabilitated, and lessons learned during the implementation of the first phase were expected to be used to improve the efficiency of the intervention in the second phase. Each SPIU had to procure and manage more than 100 contracts for road rehabilitation during project implementation. Therefore, the SPIUs focused mostly on the implementation of road rehabilitation and river crossings works, which had greater visibility and direct benefits to the population. This resulted in SPIUs paying less attention to the technical assistance activities to reform the rural road sector, and most of these activities could not be implemented.



13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR provides a detailed overview of the project. Although the quality of evidence could not be assessed adequately, the evidence from supervision and SPIUs' reports are presented in a parsimonious way. The ICR, including its annexes, presents an appropriate base to support the achievements reported, which are at the output level; the M&E data are used to provide evidence of application of inputs or achievement of outputs, rather the achievement of the outcomes. On the other hand, there is also a genuine effort to use the findings of the beneficiary surveys to provide evidence for the project's development impact. The interrogation of evidence from different sources related to the sustainability of maintenance services and the rural population's sustained access to roads is insufficient. The ICR is mostly internally consistent; the logical linking and integration of the various parts of the report is adequate. The lessons are based on evidence and analysis and mostly respond to the specific experiences and findings of the project. However, there are some shortcomings in following the guidelines; M&E Quality, Quality of Supervision and Fiduciary sections could have benefited from a more detailed discussion in accordance with the guidelines. The ICR does not report the implementation of the Natural Habitats and Physical Cultural Resources safeguard policies. The ICR's ratings are not in line with the guidelines. The overall efficacy rating is substantial while the project's efficacy in achieving both objectives is rated high, and the outcome of the project is rated moderately satisfactory, although the relevance of objectives is rated high and efficacy and efficiency are rated substantial, which would result in a satisfactory rating. Some aspects of the discussion of the theory change on page 11, i.e., "[i]t is expected that the project will reduce transport times and costs," are not reflected in the theory of change figure.

a. Quality of ICR Rating

Modest