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The World Bank

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INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 203 MILLION
(US\$280 MILLION EQUIVALENT)

TO THE

FEDERAL REPUBLIC OF NIGERIA

FOR A

NIGERIA RURAL ACCESS AND AGRICULTURAL MARKETING PROJECT

January 15, 2020

Transport Global Practice
Africa Region

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CURRENCY EQUIVALENTS

Exchange Rate Effective October 1, 2019

Currency Unit = Nigerian Naira (NGN)

NGN 306 = US\$1

SDR 0.72495813 = US\$1

GOVERNMENT OF NIGERIA FISCAL YEAR

January 1–December 31

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ABBREVIATIONS AND ACRONYMS

AFD	<i>L'Agence Française de Développement</i> (French Development Agency)
AFS	Annual Financial Statement
CoSMoS	Construction Site Monitoring System
ERGP	Economic Recovery and Growth Plan
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FM	Financial Management
FMARD	Federal Ministry of Agriculture and Rural Development
FMoF	Federal Ministry of Finance
FMWH	Federal Ministry of Works and Housing
PPFMD	Federal Project Financial Management Department
FPMU	Federal Project Management Unit
FY	Fiscal Year
GBV	Gender-based Violence
GDP	Gross Domestic Product
GoN	Government of Nigeria
IDA or Association	International Development Association
IFAD	International Fund for Agricultural Development
IFR	Interim Financial Report
IILD	International Institute for Local Development
ILO	International Labor Organization
IPF	Investment Project Financing
Km	Kilometer
LVRM	Low Volume Roads Manual
M&E	Monitoring and Evaluation
MDA	Ministry, Department and Agency
NGN	Nigerian Naira
NGO	Non-governmental Organization
NIRTIMS	Nigeria Rural Transport Infrastructure Management System
NTSC	National Technical Steering Committee
O&M	Operations and Maintenance
OAGF	Office of the Accountant General of the Federation
OAGS	Office of the Accountant-General of the State
OHS	Occupational Health and Safety
OP/BP	Operations Policy/Bank Procedure
PDO	Project Development Objective
PFMU	Project Financial Management Unit
PforR	Program for Results
PIM	Project Implementation Manual
RAAMP	Rural Access and Agricultural Marketing Project
RAI	Rural Access Index
RAMP-1	Rural Access and Mobility Project Phase 1
RAMP-2	Second Rural Access and Mobility Project
RAP	Resettlement Action Plan

RARA	Rural Access Roads Agency
RPF	Resettlement Policy Framework
SDR	Special Drawing Rights
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
SME	Small and Medium-sized Enterprise
SNRTP	Strengthening National Rural Transport Program
SORT	Systematic Operations risk Rating Tool
SPIU	State Project Implementation Unit
SPMC	State Project Monitoring Committee
SRF	State Road Fund
TA	Technical Assistance
THEMP	Trade Health Education and Microfinance Programme
UN	United Nations
US\$	United States Dollar
VCDP	Value Chain Development Program
WB	World Bank



BASIC INFORMATION

Country(ies)	Project Name	
Nigeria	Nigeria Rural Access and Agricultural Marketing Project	
Project ID	Financing Instrument	Environmental Assessment Category
P163353	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Disbursement-linked Indicators (DLIs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
18-Feb-2020	30-Jun-2026

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The proposed project objective is to improve rural access and agricultural marketing in participating states while strengthening the financing and institutional base for effective development, maintenance and management of the rural road network.

Components



Component Name	Cost (US\$, millions)
Component A. Improvement of Rural Access and Trading Infrastructure	271.00
Component B. Asset Management, Agro-logistics Performance Enhancement and Sector Reform	253.00
Component C. Institutional Development, Project Management and Risk Mitigation	51.00
Component D: Contingent Emergency Response	0.00

Organizations

Borrower:	Federal Republic of Nigeria
Implementing Agency:	Federal Ministry of Agriculture and Rural Development

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	575.00
Total Financing	575.00
of which IBRD/IDA	280.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	280.00
IDA Credit	280.00

Non-World Bank Group Financing

Counterpart Funding	65.00
Borrower/Recipient	65.00
Other Sources	230.00
FRANCE: French Agency for Development	230.00

IDA Resources (in US\$, Millions)



	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
Nigeria	280.00	0.00	0.00	280.00
National PBA	280.00	0.00	0.00	280.00
Total	280.00	0.00	0.00	280.00

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2020	2021	2022	2023	2024	2025	2026	2027
Annual	29.00	30.00	33.00	34.00	40.00	44.00	42.00	28.00
Cumulative	29.00	59.00	92.00	126.00	166.00	210.00	252.00	280.00

INSTITUTIONAL DATA

Practice Area (Lead)

Transport

Contributing Practice Areas

Agriculture and Food

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Substantial
2. Macroeconomic	● High
3. Sector Strategies and Policies	● Substantial
4. Technical Design of Project or Program	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● High
6. Fiduciary	● Substantial
7. Environment and Social	● Substantial
8. Stakeholders	● Low



9. Other	● High
10. Overall	● High

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

☐ Yes ☒ No

Does the project require any waivers of Bank policies?

☐ Yes ☒ No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04	✓	
Forests OP/BP 4.36		✓
Pest Management OP 4.09		✓
Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10		✓
Involuntary Resettlement OP/BP 4.12	✓	
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description

Counterpart Funding

The Recipient shall provide, promptly as needed, the resources required for the purpose, including the obligation of the Participating State to provide counterpart funding for the purposes of implementation of its activities under the Project in accordance with the approved Annual Work Plans and Budget.

Sections and Description



Involuntary Resettlement and Land Acquisition

The Recipient shall and shall cause the Participating State to: (a) ensure that no physical or economic displacement, limitation of access to natural resources shall occur before resettlement measures under a Supplemental Social and Environmental Safeguards Instrument prepared in accordance with the Resettlement Policy Framework (RPF), including, in the case of either physical or economic displacement, full payment to Affected Persons of fair compensation at replacement value and of other assistance required for relocation and livelihoods restoration, have been implemented; and (b) provide from its own resources, any Financing required for any measures mentioned under (a) above including but not limited to any costs associated with land acquisition required for the Project.

Sections and Description

Maintenance of Key Project Staff

The Recipient shall ensure that the Key Staff, as defined in the Financing Agreement, in the Federal Project Management Unit (FPMU) and the State Project Implementation Units (SPIUs) are not transferred to other positions during the period of Project implementation (and in the case of Project accountants, until six (6) months following the Closing Date or until the submission of the final audited Financial Statements to the Association pursuant to paragraph II “Financial Reports and Audits”, sub-paragraph (ii) of the Disbursement and Financial Information Letter, whichever occurs later), except with the prior concurrence of the Association and as required by the applicable laws of the Recipient.

Sections and Description

Reform Actions

Each Participating State shall be required to complete, no later than 18 months after the date of the Subsidiary Agreement, the following reform actions, to the satisfaction of the Recipient and the Association: finalization of legislation establishing a State Rural Access Roads Agency (RARA) and a State Road Fund (SRF) and placing the same before the State House of Assembly; and failure to comply with the foregoing requirements shall result in the suspension of disbursements to such Participating State until such time as such reforms have been completed.

Conditions

Type Effectiveness	Description The Recipient and at least three (3) of the Participating States have executed a Subsidiary Agreement in accordance with the provisions of Section I.B of Schedule 2 of the Financing Agreement.
Type Disbursement	Description Notwithstanding the provisions of Part A of the Financing Agreement, no withdrawal shall be made under Categories (1) through (4) for payments to any Participating State, unless and until: (i) the respective Participating State has entered into a Subsidiary Agreement with the Recipient; (ii) the Association has received an opinion satisfactory to it establishing that the Subsidiary Agreement has been duly authorized or ratified by the Recipient and the



	respective Participating State and is legally binding upon the Recipient and the respective Participating State in accordance with its terms; and (iii) the respective Participating State has adopted the PIM.
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NIGERIA
NIGERIA RURAL ACCESS AND AGRICULTURAL MARKETING PROJECT

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I. STRATEGIC CONTEXT

A. Country Context

1. Nigeria continues its recovery from the 2016 recession, sustaining an estimated 2 percent growth rate in 2019. The collapse of global oil prices during 2014–16, combined with lower domestic oil production, led to a sudden slowdown in economic activity. Nigeria’s annual real GDP growth rate, which averaged 7 percent from 2000 to 2014, fell to 2.7 percent in 2015 and to -1.6 percent in 2016. Growth slowly rebounded in 2017, levelling about 2 percent in 2018-2019, driven initially by the oil sector and more recently by the services sector, with positive contributions from agriculture. The oil sector however remains the key source of export earnings and government revenues. In the absence of significant structural reforms, economic growth is expected to hover just above 2 percent over the medium-term, vulnerable to oil sector shocks.

2. With population growth (estimated at 2.6 percent) outpacing economic growth in a context of weak job creation, per capita incomes are falling. Today, an estimated 100 million Nigerians live on less than US\$1.90 per day.¹ Close to 80 percent of poor households are in northern Nigeria, while employment creation and income gains have been concentrated in central and southern Nigeria. Unemployment is high (23 percent), with a further 20 percent of the labor force under-employed. Nigeria’s economic and demographic outlook makes job creation an urgent task.

3. The federal Government has been implementing an Economic Recovery and Growth Plan (ERGP) from 2017 and is expected to continue into 2020. The ERGP set out to restore macroeconomic stability in the short-term and to undertake structural reforms, infrastructure investments and social sector programs to diversify the economy and set it on a path of sustained inclusive growth over the medium-to long-term. It had an ambitious target of achieving 7 percent real annual GDP growth by 2020.² So far, progress on implementation of the plan has been mixed with outcomes stronger in some areas than in others. Increasing growth above the baseline of 2 percent will require more effective implementation of the structural reforms laid out in the ERGP. Bolder and more accelerated reforms in areas like power, revenue mobilization, quality of spending, access to finance, and human capital would help accelerate growth, create jobs, and help build the necessary fiscal and external buffers to be prepared for difficult times.

B. Sectoral and Institutional Context

4. The 2017 National Economic Recovery and Growth Plan (ERGP) for the period 2017-2020 sets out to restore macroeconomic stability in the short-term and to set the economy on a path of sustained inclusive growth over the medium to long-term. Improving transportation infrastructure, achieving agriculture and food security, as well as driving industrialization through a focus on small- and medium-scale enterprises are ERGP priority action areas, amongst others.

5. One of the bottlenecks for Nigeria’s development is the inadequate or poor quality of transport infrastructure, including the road infrastructure. Road density of Nigeria is estimated at 22 km per 100 square kilometers (sq. kms.). This density is just below a sixth of that of India (142 km per 100 sq. kms.), a country with slightly lower per capita gross national income than Nigeria (US\$1,880 in 2017 against Nigeria’s US\$2,100). Also, Nigeria’s investment in transport infrastructure is grossly inadequate. The 2015

¹ Source: World Poverty Clock (Projection for 2019).

² Following missed ERGP growth targets in 2017 and 2018, the growth target for 2020 in the Government’s medium-term expenditure framework was moderated to 2.9 percent.



infrastructure master plan has recommended an average investment of US\$25 billion per year over a 30-year period. An analysis of the 2019 budget shows that the transport sector received an allocation of roughly US\$1.25 billion (just 5 percent of the recommended amount).

6. A recent World Bank report³ estimated Nigeria's Rural Access Index (RAI)⁴, at only 25.5 percent. This means that approximately three-fourths of Nigeria's rural population (estimated at roughly 80 million people) do not have good access to the road network. Also, there is significant variation in rural accessibility across states: southern states have relatively higher accessibility than the northern states, e.g., the RAI of Imo State in 2014 (50 percent) was substantially higher than Adamawa State (12.8 percent).

7. Roads account for an overwhelming majority of passenger and freight movements (over 90 percent) in Nigeria. The country's road network was estimated at between 193,000 km and 195,000 km in 2017 (32,000 km federal roads, 31,000 km state roads and remaining 130,000 to 132,000 rural roads). Just over 30 percent of the Nigeria's road network (60,000 km) is paved and an overwhelming majority of roads are in poor condition (40 percent of the federal roads, 78 percent of state roads and 87 percent of rural roads were in poor condition in 2017).

8. The federal roads, state roads and rural roads are the responsibility of the Federal Ministry of Works and Housing (FMWH), state ministries of works or transport (depending on the state institutional architecture) and local governments respectively. The states focus on higher level roads (urban roads and state highways) and carryout maintenance of the paved road network only, which is often done on an ad hoc basis. Local governments cannot carry out their rural road related responsibilities due to lack of capacity and inadequate funding. Again, appropriate classification of state level roads is absent in Nigeria, which creates confusions and, sometimes, leads to inefficient use of scarce resources. At the state level no sustainable institutional and funding mechanisms for the development, maintenance and management of roads exist. The current state of inadequate financing and confusing institutional structure has in effect led to rural roads being in undefined ownership and permanent poor conditions.

9. The agriculture sector is the second largest sector in Nigeria with the services sector being the largest. The agriculture sector contribution to Nigeria's GDP was roughly 26 percent in Q4 of 2018 (comparable oil sector figure was just over 7 percent). The sector is projected to grow by 2.4 percent in 2019 compared to overall GDP growth of 2.1 percent. The ERGP (2017) has prioritized agricultural development. The plan envisaged boosting the agriculture sector's yearly growth to more than 8 percent by 2020, but this is unlikely to be achieved. The importance of the sector is nevertheless increasing, given concerns around food security and foreign exchange earnings.

10. The agricultural sector is the responsibility of both the federal and subnational governments. At the federal level, the Federal Ministry of Agriculture and Rural Development (FMARD) is responsible for development, review and implementation of policies for agricultural development. States have a ministry, responsible for the development and implementation of individual policies and programs that complement the national policy. The local government councils support the state governments in agriculture and rural development. The Constitution gives local councils the authority to develop agriculture and natural resources, barring the exploitation of minerals. The National Council on Agriculture

³ The World Bank, *Measuring Rural Access: Update 2017/18*, February 2019.

⁴ RAI measures the proportion of people who have access to an all-season road within an approximate walking distance of 2 kilometers (km).



is the highest policy advisory body represented by the minister and commissioners. Capabilities at the state level vary widely, with some states being more reform oriented than others.

11. Nigeria's Agriculture Promotion Policy (2016-2020) has identified two key gaps in agriculture: (1) an inability to meet domestic food requirements, and (2) an inability to export at quality levels required for market success. The policy has identified several priority crops and activities for domestic consumption and export markets. The Government wants to close the domestic food requirement gap by developing end to end value chain solutions through partnering with private investors across farmer groups and companies. The policy document has acknowledged that infrastructure challenges need to be overcome to achieve the policy goals, including tackling post-harvest losses along with transport and market access issues, among others. A total of 16 policy action areas, under three thematic topics, have been identified in the policy. Inadequate and costly transport infrastructure, including rural transport, is one of the major constraints in several policy action areas.

12. There are many rural markets in Nigeria which face a variety of challenges, including lack of physical access and affordable transport, unclear land tenure, poor market management, lack of trading infrastructure and amenities, poor or inadequate storage and processing facilities and opaque market transaction platforms. Rural markets, generally, do not have infrastructure to tackle any produce that require specialized handling and waste management procedures. Also, the small and medium-sized enterprises (SMEs) that operate in rural markets, many of which are owned by women, do not have access to credit, are unaware of modern business practices, and lack or have limited access to on-going product prices

C. Higher Level Objectives the Project Supports

13. The project is consistent with Nigeria's Vision 2020 priorities. The proposed interventions will support Pillar 3 (fostering sustainable social and economic development) of the vision's strategic framework. The operation also supports two of the top five execution priority areas of the ERGP, namely: achieving agriculture and food security and improving transportation infrastructure.

14. This operation is consistent with the French Development Agency's (*L'Agence Française de Développement*, AFD's) Country Intervention Framework for 2017–2021, which aims to help create a competitive economy, including jobs and wealth, as well as shared, inclusive, and resilient development. AFD's framework aims to contribute to diversification of the economy outside of the oil sector by targeting SMEs and agriculture, resilient and productive agriculture, and food security by targeting improvement of rural infrastructure and services to farmers.

15. The project is also in line with the World Bank Group's CPF for Nigeria covering FY 2020-2024 that is currently under preparation and will be presented to the Board within the calendar year.

II. PROJECT DEVELOPMENT OBJECTIVES

A. Project Development Objectives

16. The proposed project development objective (PDO) is to improve rural access and agricultural marketing in participating states while strengthening the financing and institutional base for effective development, maintenance and management of the rural road network.



B. Project Beneficiaries

17. The 13 project states⁵ are home to approximately 78 million people (approximately 40 percent of the total population of Nigeria). Over one-half of the people living in these states are poor. The main beneficiaries of the project will be road and market users in these states, including general road users, transport operators (both freight and passenger), all type of buyers and sellers in the improved markets, women, children, the poor, and persons with physical disabilities. They will benefit from the improved or restored year-round access to social, economic, and life-enriching facilities and services as a result of upgrading, spot improvement and maintenance of rural roads. Also, market users, including small traders and small farmers who will use the market to buy and sell produce respectively, will benefit from improvement of agro-logistics centers. The agro-logistics interventions (both off and on-market) will also help small farmers to reduce post-harvest losses and to improve business activities for the small and medium enterprises in the improved markets. The project will generate approximately 69 million person-days of employment, including long-term jobs for maintenance crews who will be responsible for the routine maintenance of rural roads. The overwhelming majority of these employment opportunities will be created for unskilled laborers.

C. Project Development Objective-Level Results Indicators

18. The project will have five PDO-level indicators in three results areas (Improved rural access, improved agriculture marketing, and sustainable financing and management of the rural road network). While Table 1 provides the five indicators that will serve to measure the PDO achievements, Table 2 provides links between operation intervention areas and the key results areas. Section VII provides the project Results Framework. Annex 1 provides the operation's results chain.

Table 1: PDO Result Areas and Indicators

PDO-level Result	PDO-level Indicator
Results Area 1: Improved Rural Access	PDO 1: Rural Access (population living within 2 km of an all-season road in participating states) (percentage)
	PDO 2: Travel time on project improved roads (minutes)
Results Area 2: Improved Agricultural Marketing	PDO 3: Marketed volume of locally produced agricultural commodities by smallholder farmers in improved agro-logistics centers (percentage)
	PDO 4: Satisfaction level of agro-logistics center users (percentage)
Results Area 3: Effective development, maintenance and management of the rural road network	PDO 5: Proportion of rural roads in good or fair condition (percentage)

Table 2: Operation Interventions and Contribution to Key Results Areas

Intervention Areas	Improve Rural Access	Improve Agricultural Marketing	Effective development, maintenance and management of the rural road network
Upgrading or spot improvement of rural roads	▲	★	◀▶

⁵ Kano, Katsina, Sokoto, Kebbi, Bauchi, Plateau, Kwara, Abia, Akwa Ibom, Kogi, Ogun, Oyo and Ondo.



Maintenance of rural roads	▲	☆	▲
Improvement of agro-logistics centers	◄►	▲	◄►
Enhancing agro-logistics performance	◄►	▲	◄►
Road sector reform	☆	◄►	▲
Institutional development	☆	☆	▲

Notes: ▲ - Direct contribution; ☆ - Indirect/partial contribution; ◄► - Neutral

III. PROJECT DESCRIPTION

A. Project Components

Project Component Summary

19. The project has three distinct components. The project will also have a “zero cost” component (Component D: Contingent Emergency Response) to address emergency requests from the Government in the case of any natural disaster events. Table 8 of Annex 1 provides component activity details.

- a. *Component A. Improvement of Rural Access and Trading Infrastructure.* The component will have two sub-components: (i) A.1 Major Civil Works: upgrading of rural roads and the construction of short-span (largely up to clear span of 15 meters⁶) cross-drainage structures (culverts/bridges) on rural roads, and the physical improvement of the existing agro-logistics centers (rural markets); and (ii) A.2 Consultancies and Supervision: technical assistance (TA) support to the planning, design, implementation and supervision and consultancy costs linked to the civil works.
- b. *Component B. Asset Management, Agro-logistics Performance Enhancement and Sector Reform.* This component comprises three sub-components: (i) B.1 Other Civil Works. Support the maintenance and spot improvement of rural roads; (ii) B.2 Support for Improving Agro-logistics Activities. Support to Agro-logistics performance enhancement activities. This will include support to farms and cooperatives to reduce post-harvest losses and support to the SMEs at the agro-logistics centers. The sub-component will proactively work to resolve issues faced by female entrepreneurs and market users. These activities will be identified through a targeted prior study, to be funded by the project; and (iii) B.3 Consultancies Studies and Supervision. This sub-component will provide TA support to state-level road sector reforms activities, to the establishment of an asset management system, and to the design and supervision of civil works under the component.
- c. *Component C. Institutional Development, Project Management and Risk Mitigation.* The component has two sub-components. (i) C.1 Institutional Development and Project Management. This sub-component will involve support to institutional development of the rural transport, trading infrastructure and agro-logistics activities, maintenance and management. It will also support project operating costs, TA consultancies including support to the Department of Lands under the FMWH to address the resettlement activities systematically (e.g. developing national sector-specific guideline on valuation, land acquisition and resettlement, computerizing land valuation and resettlement processes and digitizing databases), training and study tours, project

⁶ The length can be relaxed on a case-by-case basis if bridges over 15 meters are found to be critical from physical accessibility viewpoint.



monitoring and impact evaluation activities. Preparation activities connected to any future rural transport and trading projects, including studies and TA to incorporate new states within the proposed project, will be supported by the sub-component; and (ii) C.2 Risk Mitigation and Resiliency. This sub-component will support project risk mitigation and resiliency activities, including sexual exploitation and abuse (SEA), gender, grievance redressal, rural road safety and climate resiliency of rural roads.

- d. *Component D. Contingent Emergency Response*. The component will address any unforeseen emergency infrastructure needs following a natural disaster.

Component Details

Component A: Improvement of Rural Access and Trading Infrastructure (US\$271 million equivalent - 47 percent of total costs; The Association - US\$140 million equivalent; AFD - US\$114 million equivalent; GoN - US\$17 million equivalent):

20. *Component Objective*. To improve rural access and to improve rural agricultural marketing through the upgrading of rural roads, construction of short-span critical cross-drainage structures, improvement of agro-logistics centers and support to the costs of consultancies and supervision of construction activities.

21. *Component Strategy*. The component design includes a number of strategy elements, namely: (a) rural roads that connect agro-logistics centers planned to be upgraded under the proposed project will be implemented on a priority basis. Next in line for upgrading will be those rural roads that have higher network and agricultural productivity impact when compared with their peers. The remainder of the quota will be fulfilled by roads that are on the longlist; (b) small cross-drainage structures (bridges/culverts), largely up to a clear span of 15 meters, which are crucial for rural access will be constructed on rural roads; (c) the agro-logistics center interventions will be decided on a market-by-market basis depending on the main roles the particular market plays in rural trading; and (d) design-build (with extended defects liability period) procurement method will be adopted that will shift the design, cost-escalation and time overrun risks to the contractors.

22. *Component Targets and Activity Details*. The component targets will be the following. Sub-component A.1 (a) rural roads upgrading – 1,625 km at a cost of US\$179 million; (b) construction of cross-drainage structures 1,040 meters (largely up to 15 meters of clear span) at a cost of US\$12 million; and (c) improvement of 65 numbers of agro-logistics centers at a cost of US\$74 million; Sub-component A.2 Design, procurement and consultancy supervision support to sub-component A.1 activities at a cost of US\$6 million.

23. *Selection of Roads and Agro-Logistics Centers*. Participating states have already completed studies that long-listed the rural roads and agro-logistics centers. These studies have provisionally identified a total of roughly 8,000 km of roads and 94 agro-logistics centers (on average 550 km of roads and seven centers per state). The states used a multicriteria analysis technique for the provisional selection of the roads and markets. The key criteria for the provisional road selection are: overall network connectivity including connectivity to markets, agriculture or agri-business potential of the road corridor, and the road's potential in serving poor and isolated areas. The initial selection of agro-logistics centers is based on social and economic potential as well as physical connectivity of the centers, especially regarding access to state of federal road networks. In some cases, one of the criteria was the value chain analysis of leading produce. An agro-logistics validation study is currently being conducted by the Government in



order to validate the findings and recommendations of state-sponsored agro-logistics studies. The study findings are expected to be available by March 2020. Annex 1 provides the details of the methodology for the provisional roads and market selection processes.

24. *Road Surfacing and Design Standards.* Based on a detailed analysis, the project has devised a surfacing strategy. Main elements of the strategy include: (a) avoidance of gravel surfacing due to its significant disadvantages; (b) use of thin asphalt ($\leq 30\text{mm}$ thickness) surfacing at the initial stage, along with the trial of single Otta seal low-cost surfacing option. Subject to its suitability, the Otta seal surfacing will be systematically mainstreamed, as the capacity of the contractors grows; and (c) other low-cost options, including road stabilization using chemicals, will also be trialed to assess their efficacy in the context of rural roads in Nigeria. Rigid pavement (cement concrete or reinforced cement concrete) trials will also be made on vulnerable road sections. The Project Implementation Manual (PIM) will contain detailed road improvement and agro-logistics center design standards. Annex 1 provides summary design standards.

25. *Agro-logistics center physical interventions.* The market physical interventions will include: (a) construction of open market shades and multiple small-storage-facilities. The open shades will not be allocated to anyone. They will mainly serve the small farmers or producers, who will sell lesser amounts of produce openly. The mini storage facilities (with a single front shutter) will be leased out to small to medium female entrepreneurs. These facilities will serve farmers/sellers to store their produce till the next market days, if they fail to sell the produce on a specific market day; (b) construction of any infrastructure for specialized handling for any produce; (c) construction of market internal paths, drainage infrastructure, toilets and clean water facilities; (d) construction of facilities for holding the market wastes on a temporary basis; (e) office facilities for the market management committee; and (f) improvement of market parking and loading facilities. The above is not an exhaustive list. Market intervention elements will be decided on a market-by-market basis depending on the main roles the particular market plays in rural trading. Annex 3 provides conceptual drawings of markets.

Component B: Sector Reform, Asset Management and Agro-logistics Performance Enhancement (US\$253 million; 44 percent of total costs; The Association - US\$112 million equivalent; AFD - US\$93 million equivalent; GoN - US\$48 million equivalent):

Component Objective. To initiate and carry out the sector reforms, introduction and implementation of the road asset management systems and enhancement of the agro-logistics performance.

26. *Component Strategy.* The component strategy elements include the following: (a) basic institutional and financing reform activities at the state level will top the road subsector reform priority; (b) addressing the road asset management in a comprehensive way through the use of a sustainable framework, appropriate tools and processes for the framework operationalization; and (c) agro-logistics performance enhancement will depend on the existing knowledge, institutional mechanisms and delivery methods in achieving Sub-component B.2 objectives. The sub-component will be targeted to small and medium farmers, in particular women. Studies to generate knowledge regarding enhancing agro-logistics performance will be initiated in cases where there is a dearth of knowledge. The initial period of the project (one to one and a half years) will be used in scoping out intervention details of sub-component B.2, given the dearth of specific knowledge on the agro-logistics requirements, issues and their potential solutions. World Bank transport and agriculture global practices, and the AFD will work closely to provide strategic support to this sub-component.



27. *Component Targets and Activity Details.* The component targets will be the following. Sub-component B.1, Other Civil Works: (a) backlog maintenance/ rehabilitation – 2,600 km - US\$60 million; (b) Spot improvement of rural roads 5,850 km - US\$129 million; (c) routine maintenance of rural roads 9,100 km/year - US\$48 million; and (d) piloting of performance-based maintenance contracts on rural roads 260 km - US\$6 million. Sub-component B.2, Support for Improving Agro-logistics Activities. Implementation of farm/cooperative level post-harvest agro-logistics study recommendations - US\$2.0 million; and Implementation of activities to support SMEs at the agro-logistics centers - US\$2.0 million; Sub-component B.3, Consultancies Studies and Supervision. Consultancies, Studies and Supervision (Road Maintenance and Spot Improvement) - US\$4 million; and Consultancies and Studies (Agro-logistics Activities) - US\$2 million.

28. *Sub-component B.1: Other Civil works (Road Maintenance and Spot Improvement of rural roads).* RAAMP has provisions for four road interventions types: upgrading, spot improvement, backlog maintenance/rehabilitation and routine maintenance. The project has developed the following candidacy requirements for choosing road intervention types (elaborated in the PIM using an operational strategy schema): (a) Upgrading. Satisfies the socio-economic requirements for this type of intervention and funds are available; (b) Spot improvement. Not substantially improved before, currently not maintainable (i.e., extremely poor condition), fulfills the socio-economic requirements for spot improvement and funds are available for such an intervention; (c) Backlog maintenance or rehabilitation. Major interventions made (e.g., upgrading) before, condition justifies such intervention and funds are available; and (d) Routine maintenance. All maintainable road will be subjected to routine maintenance and will get preference over the other three type of interventions mentioned above. Roads that do not satisfy the aforementioned criteria would not receive any interventions. To aid road intervention related decision making, RAAMP will develop a decision making tool, Nigeria Rural Transport Infrastructure Management System (NiRTIMS). Section IVB provides details of NiRTIMS and its capabilities. The project has developed a catalog, which details items under different intervention types and will be included in the PIM.

29. *Sub-component B.2: Support to Agro-logistics Activities.* An analysis, carried out during project preparation that assessed farmers' requirements in making gains through the value chain improvements, has established the broad agro-logistics project intervention activities. The analysis has used the classical value chain framework that comprises two activity types: primary activities (inbound logistics, operations, outbound logistics, marketing, and sales and services) and support activities (infrastructure, human development, technology development etc.). The PIM provides the details of the analysis. The project will support the following activities under Sub-component B.2 (details are provided in the PIM).

- a. *Support to agriculture product processing and packaging.* Existing knowledge on the extent of processing and packaging requirements against specific agriculture products, issues and potential solutions is inadequate. Therefore, a study, linked to the processing and packing of different products, is planned under the project to identify key issues and related solutions, disaggregated by major agricultural products. The study will also confirm the major produce names, within the vicinity of agro-logistics centers, which are being identified in an ongoing agro-logistics validation study. The processing and packaging related recommendations (grading, sorting, weighing, bagging) will include both on-farm and on-market intervention solutions. On-farm recommendations might include introduction or improvement of implements and equipment, as well as intermediate means of transport for transporting produce to markets and consolidation points. The on-market recommendation areas might include handling and bagging equipment, and storage facilities (including cold storage). While Sub-component B.2 will support the



implementation of the study's recommended actions, the study itself will be funded from Sub-component B.3. Linkages will be made with other initiatives operating in project states, in order to achieve optimum outcomes. Notable among them are the International Fund for Agricultural Development (IFAD) supported Value Chain Development Program (VCDP), active in nine project states, and the International Institute for Local Development (IILD), a non-governmental organization (NGO), supported the Trade Health Education and Microfinance Programme (THEMP), active in 13 RAAMP states.

- b. *Support to small and medium enterprises.* This activity will particularly target women entrepreneurs of the SMEs in RAAMP improved markets. The project will provide support to the mainly female run SMEs on access to finance, modern business practices, accounts management, etc. Again, a detailed project supported study on the issues faced by SMEs in the rural context will determine the detailed scope of the support under the project. Sub-component B.2 will implement the study recommendations. Again, assistance may be sought from any other organization (e.g., IFAD or IILD or any other NGOs) working in this area. RAAMP will link up with other World Bank supported projects to maximize synergy between RAAMP and other operations. Notable among them are the Women Entrepreneurs in Nigeria or We-Fi Nigeria (P168390) and the Nigeria for Women Project (P161364), currently under preparation and implementation, respectively.
- c. *Support to transport services.* The project will undertake a comprehensive study in order to generate rural transport services knowledge in Nigeria. The study objective will be to assess the mobility needs in rural Nigeria (transport services demand) and to understand to what extent they are being met (supply of transport services). Availability of safe and affordable transport services is crucial for improving mobility in rural areas. The study recommendations will include, among others, how the rural mobility aspects can be tackled under a rural transport intervention in Nigeria. One of the critical issues the study plans to tackle is the demand for transport services for the transportation of agriculture produce from farm to market and how can they be met. The study will have a particular focus on the prospect of enhancing the roles of intermediate means of transport (IMT) in improving rural mobility including electric vehicles. The study will look into other transport services aspects (e.g., markets structure and competition, policy environment, social and cultural issues, design, maintenance and repairs affordability and provision of credits). If the study recommendations warrant transport services investments by the project, then such investments will be considered under this sub-component.

30. *Sub-component B.3: Consultancies Studies and Supervision.* The sub-component will support three distinct activities: (a) consultancies, studies and supervision (road maintenance and spot improvement); (b) consultancies and studies (agro-logistics) including a study on the identification of rural markets across Nigeria and another study on sustainable market development, maintenance and management; and (c) consultancies, studies and advisory support to sector reform activities. The sector reform activities will include advisory support to the establishment of rural roads agencies and state road funds in participating states.

Component C: Institutional Development, Project Management and Risk Mitigation (US\$51 million equivalent - 9 percent of total costs; The Association - US\$28 million equivalent; AFD - US\$23 million equivalent):



31. *Component Objective.* To provide technical and material support for the rural transport and agro-logistics capacity building, smooth functioning of the project and risk mitigation and resiliency activities.

32. *Component Strategy.* The component's institutional development and capacity building support will be targeted to those officials involved in the rural transport and agro-logistics initiatives. The project will be proactive in project risk mitigation, especially gender, labor-influx, SEA, sexual harassment (SH) and security risks. Climate adaptation activities will be given preference to counteract climate change related phenomena.

33. *Component Targets and Activity Details.* The component will finance (a) goods, logistics and project related operating costs (US\$22 million), TA and advisory support (US\$15 million), training and study tours (US\$5 million), monitoring, project impact evaluation & comprehensive technical audit (US\$2 million) and risk mitigation & resiliency related TA (US\$7 million). The risk mitigation & resiliency TA support will include gender-based violence (GBV)/SEA, grievance redressal and citizen participation, road safety and rural road climate resiliency.

Component D: Contingent Emergency Response (US\$0 million).

34. *Component Objective.* To address any emergency infrastructure needs following a natural disaster.

35. *Component Strategy.* The component will be triggered if there are emergency infrastructure needs following a natural disaster in order to restore livelihoods of affected people.

36. *Component Targets and Activity Details.* This component is expected to support rural transport and trading infrastructure affected by the natural disaster in participating states. However, the inclusion of non-project states is not ruled out. The component will draw resources from the re-categorization and/or reallocation of funds from other components. Such re-categorization and/or reallocation of funds will be done only if a specific request is received from the Government of Nigeria (GoN) following a natural disaster event, and if all external funding entities agree to support such a request.

B. Project Costs and Financing

37. The project, with a total outlay of US\$575 million, will be jointly financed by the International Development Association (hereinafter referred as IDA or Association), the AFD and the Government (participating states). The contribution from the Association is US\$280 million equivalent from IDA credit resources, the contribution from AFD is US\$230 million (Euro 200 million equivalent), and the contribution from the Government is US\$65 million respectively. Table 3 below provides the summary costs and financing of the proposed operation. Table 9 of Annex 1 provides the project cost details of different activities. The Association and the AFD have agreed to co-finance the project on a *pari-passu* basis.

38. The Government will be fully responsible for funding land acquisition and resettlement costs (estimated at US\$17 million). The Government will also fund any taxes under the AFD elements of the project components.

39. Unlike the Second Rural Access and Mobility Project (RAMP-2; P095003), the proposed project will not earmark any funds against the states. Lessons from RAMP-2 show that the fixed fund allocation approach can lead to an inefficient use of scarce resources and it does not provide adequate incentives for making fast implementation progress and thereby achieving project outputs quickly. Although, each state will receive a small portion of the funds at the inception of the project as an advance (up to 15 percent of the notional allocation against each state), the remaining funds will be allocated on progress



made by the states. However, there is an inherent risk in adopting this approach, namely that it may lead to a few states consuming an overwhelming majority of the funds. Also, the states may quicken the implementation of the project's civil works, which can consume funds quickly, neglecting the other project activities, especially the sector reform and capacity building activities. The proposed project will ensure adequate protections against these possibilities (Annex 1 provides details). The protection measures include capping the maximum amount of overall funds (up to a maximum of 35 percent over the notional allocation against each state) a state could use, as well as the amount on infrastructure outputs. Section C of Annex 1 provides details.

Table 3: Project Costs and Financing

Component	Costs (US\$ million)	Financing (US\$ million)			% of Total
		IDA	AFD	GoN	
A: Improvement of Rural Access and Trading Infrastructure	271.0	140.0	114.0	17.0	47%
1. <i>Civil Works: Improvement of Rural Access Infrastructure & Agro-Logistics Centers</i>	265.0	137.0	111.0	17.0	46%
2. <i>Consultancies and Supervision</i>	6.0	3.0	3.0	0.0	1%
B: Sector Reform, Asset Management and Agro-logistics Performance Enhancement	253.0	112.0	93.0	48.0	44%
1. <i>Civil Works: Rural Road Maintenance and Spot Improvement</i>	243.0	108.0	89.0	46.0	42%
2. <i>Support for Improving Agro-logistics Activities</i>	4.0	2.0	1.0	1.0	1%
3. <i>Consultancies and Supervision</i>	6.0	2.0	3.0	1.0	1%
C: Institutional Development, Project Management and Risk Mitigation	51.0	28.0	23.0	0.0	9%
1. <i>Institutional Development and Project Management</i>	44.0	24.0	20.0	0.0	8%
2. <i>Risk Mitigation and Resiliency</i>	7.0	4.0	3.0	0.0	1%
D: Contingent Emergency Response	0.0	0.0	0.0	0.0	0%
Total	575.0	280.0	230.0	65.0	100%

40. The Association has been providing implementation support services to Imo State Rural Access and Mobility Project⁷ (Imo RAMP) under a co-financing agreement with AFD on a fee-for-service basis. Imo RAMP has parallel financing of US\$60 million. To facilitate Imo RAMP operations, it will be subsumed into the proposed project, through restructuring, when RAAMP becomes effective. Association's Imo RAMP services will continue until the closure of Imo RAMP (currently December 31, 2023).

C. Lessons Learned and Reflected in the Project Design

41. Main lessons learned from rural transport operations in Nigeria and other countries are embedded in the project design. These projects are: Nigeria Rural Access and Mobility Project Phase 1 or RAMP-1 (P072644), RAMP-2 (P095003), Nepal Project for Strengthening National Rural Transport Program (P132750), and Bangladesh Second Rural Transport Improvement Project (P123828). These lessons are divided into two groups: project design lessons, and operational and technical lessons. Table 4 summarizes how the lessons learned are incorporated in the project design.

Table 4: Main Lessons Learned and Project Design

Main Lessons	How Are Lessons Incorporated in the Project Design?
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⁷ Currently under RAMP-2 (P095003), which is scheduled for closure in end-October 2020.



<i>Project Design</i>	
Intervention catalogue in a road project needs expanding – roads are not enough.	RAAMP design included roads as well as interventions to improve agriculture product value chains including on and off-market interventions (see Section IIIA).
Allocation of resources uniformly among states can lead to inefficient use of available resources.	RAAMP funds will be fungible, albeit, a small fixed amount will be allocated to states at the inception (see Section IIIB and Annex 1).
A new strategy is required regarding the selection of road surfacing.	A well-articulated road surfacing strategy is developed for RAAMP (Section IIIA and Annex 1).
Sound Road Maintenance Practices and Funding for Road Maintenance are essential for sustainable intervention outcomes.	A comprehensive maintenance strategy developed under RAAMP (Section IIIA and Annex 1)
Although found to be partially effective, community-based maintenance has some limitations and an improved approach is necessary.	An improved routine maintenance model (Road maintenance groups participated by road maintenance crews) will be responsible for routine maintenance of roads under RAAMP (Section IVC and Annex 1)
Avoiding sequencing/phasing and advancing preparation	Phasing of RAAMP operation has been avoided. The project endeavors to streamline prioritization, design, and bidding documents preparation processes.
<i>Operational and Technical</i>	
Federal and state level project implementation entities have severe capacity constraints.	RAAMP has made adequate TA provisions (Section IIIA and Annex 1)
Quality of civil works, including material testing arrangements, is a major issue that needs addressing.	The project will take steps to ensure work quality. Provision will be made in the contract document for setting up site laboratories. Adequate TA provisions have been made for ensuring comprehensive quality assurance mechanism. Also, a provision for a comprehensive technical audit is included (Section IIIA and Annex 1). A smartphone/tablet-based construction site monitoring system to be implemented under the project will also help in quality monitoring.
States often prioritize civil works at the expense of the other ‘soft’ activities, especially the sector reform activities.	The project will monitor the sector reform activities proactively (See Annex 6, Implementation Plan). Also, the project has included protection measures so that some states cannot consume disproportionate amount of resources for civil works at the expense of other activities. Each Participating State will be required to complete, no later than 18 months after the date of the subsidiary agreement, the following reform activities: finalization of legislation establishing a State Rural Access Roads Agency (RARA) and a State Road Fund (SRF) and placing the them before the State House of Assembly. Failure to comply with this requirement will result in the suspension of disbursements to the participating states.
Some states often fail to provide funding for land acquisition and involuntary resettlement.	To mitigate the risks, provisions are made in RAAMP which will be fully financed by the GoN. Also, it will be ensured that no civil works starts before the completion of land acquisition and payments of compensations to project affected people. Provision of counterpart funding to this effect has been added as a legal covenant.



Separate design and supervision consultancy contracts are ineffective in making the design consultants accountable.	The project will adopt design and build approach in road upgrading. The preliminary design consultants will be appointed. Also, separate supervision consultants will be appointed. Provisions will be made for the smooth transfer of responsibilities from the design to supervision consultants.
Two recent incidents show that lack of security at project sites, in some states, is a major operational risk.	Security strategy developed plus an action plan prepared for ensuring site security (Section VIG and Annex 5).
Development of any implementation tools does not necessarily mean that they will be adopted in the operation.	Low-Volume Roads Manual (developed under RAMP-2) will be followed in the design of RAAMP roads (Annex 1).

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

42. The project will follow institutional and implementation arrangements similar to those established under RAMP-2. The Federal Project Management Unit (FPMU), under the FMARD and State Project Implementation Units (SPIUs), will be responsible for implementation of project activities at the federal and state levels respectively. The FPMU and SPIUs will be led by a National Coordinator and State Project Coordinators respectively.

43. The FPMU, which has already been set up for RAMP-2, will assume additional RAAMP responsibilities. At the state level, the SPIUs have been set up in all 13 states comprising officials with varied competencies, including rural road planning, development and maintenance, planning and management of agro-logistics interventions, safeguards (both social and environmental), GBV/(SEA, FM, procurement, monitoring and evaluation (M&E) and communication. The states have also recruited additional technical consultants to support state officials on various project related activities, mainly safeguard and GBV/SEA risk management. The FPMU has organized training for state level officials on different areas, including safeguards, GBV/SEA, communication, procurement and FM. Substantial TA provisions have been kept in the project to support FPMU and SPIUs in discharging their responsibilities. There is also a provision for engaging different experts including disability-inclusive design experts. The PIM provides roles of different institutions supporting the project.

44. Apart from FPMU, SPIUs and external financier, a total of 10 other actors will also play distinct roles in the project. Table 5 provides summary roles of these actors. Details of the RAAMP institutional arrangements are provided in Annex 2.



Table 5: Summary Roles of Entities Supporting the Project

Institution	Summary Roles
<i>Federal level</i>	
1. Federal Ministry of Finance (FMoF)	Liaison with the external financiers, strategic guidance and overall oversight on the portfolio.
2. Federal Ministry of Agriculture and Rural Development (FMARD)	Operation oversight being the anchoring ministry.
3. National Technical Steering Committee (NTSC)	Overall strategic and policy guidance and strategic monitoring
4. Office of the Accountant General of the Federation (OAGF)	Oversight function of FPFMD.
5. Federal Project Financial Management Department (FPFMD)	Overall FM responsibilities at the federal level.
<i>State level</i>	
1. Anchoring Ministry, Department and Agency (MDA)	Operation oversight at the state level.
2. Other state level technical ministry (ies)	Specialized technical or administrative support.
3. State Project Monitoring Committee (SPMC)	Overall strategic and policy guidance and monitoring of the project activities within the state.
4. Office of the Accountant-General of the State (OAGS)	Oversight of PFMU and deployment of qualified and adequate accounting staff for PFMU.
5. Project Financial Management Unit (PFMU)	Financial management of the project within the state.

45. A PIM is being prepared by the FPMU. The manual contents include, among others: (a) project component descriptions; (b) implementation arrangements clearly showing roles of FPMU, SPIU and other actors; (c) guidance on road and agro-logistics interventions; (d) consultancies, studies and TAs envisaged under the project; (e) safeguards, procurement, FM arrangements and risk mitigation measures; (f) reporting requirements; and (g) grievance redressal, GBV/SEA and security risk mitigation measures. The manual will be finalized by March 2020.

46. The project will be implemented over a six and a half years period. A mid-term review will be conducted between two and a half years and three years after the Effectiveness date of the Credit.

Implementation Support Strategy

47. The main focus of the implementation support will be to support the states in managing the project's operation risks so that it can successfully achieve its objectives and targets. The identified risks associated with this project implementation are mainly technical, safeguards, procurement, and SEA-related. The participating states will be implementing an Association-supported rural access and agricultural marketing project for the first time. The operation will require meticulous planning, implementation and monitoring of project activities. Another important issue is that the states will be needed to focus on the sector reform and capacity building activities in order to achieve sustainable investment outcomes. Given the states' lack of experience in implementing a similar project, they will require Association's substantial support, especially at the initial stage of the project implementation.



48. The Association's implementation support strategy is built on the implementation risks associated with different stages of the project. The main elements of the strategy are the following: (a) Providing intensive implementation support at the initial stage of the project (first two years). The Association's support will be scaled down in subsequent years; (b) Close monitoring of states on their management of different risks, especially technical, procurement, safeguards, labor influx and SEA/SH related risks throughout the implementation period; (c) Providing proactive support and close monitoring of sector reform and capacity building activities, plus quality of civil works; (d) Visiting work sites based on an assessment of operational risks; (e) Short and targeted implementation review missions. Missions will mainly confirm and document project activity progress, which will be monitored continuously; and (f) Maximizing the involvement of the country-based staff in providing implementation support.

B. Results Monitoring and Evaluation

49. The project will monitor outputs and outcomes in all participating states through the Results Framework prepared for this operation. Monitoring and evaluation plans have been developed for the project development objective and intermediate results indicators (Section VII). RAAMP will implement these plans. The evaluation officer at the SPIUs will be responsible for the state level performance M&E activities. FPMU will provide necessary supervision and guidance to him/her.

50. RAAMP will fund a comprehensive impact study. The main objective of the study will be to measure the impact of project interventions on the overall welfare of the beneficiary communities, including factors such as (i) income; (ii) employment; and (iii) access to social and economic services. The study will have special focus on the reduction of poverty and shared prosperity, the main tenets of the World Bank's assistance. The study will use a difference-in-difference approach for comparing impacts between treatment groups (project beneficiaries) and control (non-beneficiaries) groups. Where practicable, the study will disaggregate results into different gender and social groups. During the initial

Box 1: NiRTIMS and CosMoS: Technical Features and Capabilities

NiRTIMS. RAAMP plans to develop a comprehensive rural transport management system: NiRTIMS. The system features will include: (a) state-wide complete inventory and condition data of rural transport infrastructure; (b) a cost module for automatic estimation of sub-project costs; (c) an investment prioritization module that will prioritize investments using objective criteria – under both unlimited and budget constraints; (d) a display module for visual assessment of rural transport infrastructure assets and their conditions using Geographic Information Systems (GIS) visual tools; (e) a contract management module that will help in managing contracts including the monitoring of sub-project costs; and (f) generation of the Annual Road Maintenance Plan (ARMP). The system will use a multi-criteria analysis in investment prioritization and use an operational strategy for selection of interventions (Annex 1). The Program for SNRTP (P132750) in Nepal has developed such a system and has been found to be effective in the management of rural transport infrastructure at the sub-national level.

CoSMoS. A smartphone/tablet-based CoSMoS will be developed in order to facilitate the construction site supervision. This will be particularly useful in monitoring the construction activities in security-vulnerable states (mainly in the north of the country). The main features of the CoSMoS include: (a) capturing videos/photos of the worksites and establishing spatial locations of inspected sites; (b) capturing off-line data and allowing the subsequent uploading of data, should there be no internet connectivity; (c) integration of the collected data with the NiRTIMS; and (d) effortless capturing of the worksite information using smartphones or tablets, thereby eliminating the back-to-office report writing responsibilities. The captured information could be published widely, which will increase the project's governance.

years of implementation, a baseline survey will be carried out followed by a subsequent survey at project completion. The NiRTIMS will form the backbone of the monitoring of project physical activities. NiRTIMS



will be developed within six months of the declaration of Credit Effectiveness. The system will include a tool for managing project implementation and monitoring its performance and the progress towards achieving the targets set in the Results Framework (see Box 1 for details on NiRTIMS). The Construction Site Monitoring System (CoSMoS) will also help the project in its progress and quality monitoring, which is also expected to be made operational within six months of project Effectiveness (Box 1).

51. The project will encourage peer-learning among participating states in order to achieve synergies. The SPIUs have already been using social media to exchange views; state project coordinators and other technical officials have set up WhatsApp groups, informally. RAAMP will formalize these social media groups to facilitate information exchange. The project will also organize formal yearly events that will enable the states to showcase their achievements and good practices, which will help in peer-to-peer learning and help improve synergies.

C. Sustainability

52. Ensuring the sustainability of the proposed RAAMP investments is one of the most critical challenges faced during the project preparation and needs to be viewed from economic, social, and environmental dimensions. Acknowledging the complexity of this issue and the need to promote full ownership by state and local stakeholders, RAAMP has undertaken a comprehensive strategy. Annex 1 provides the details of the strategy regarding the sustainability of the road related interventions. The proposed approach not only defined the sustainability framework, but also elaborated the tools and processes to be used for the operationalization of the framework. The institutional and funding mechanism for achieving sustainable rural road asset management approach is also elaborated. The main principles of the strategy include: (a) all maintainable or project improved roads will go under routine maintenance; (b) the project will upgrade only those roads that are viable from a socio-economic perspective; and (c) any unimproved roads that cannot be justified for upgrading will be improved through spot improvement, subject to the fulfillment of socio-economic requirements and availability of funds.

53. The performance-based routine maintenance operation will have an explicit social and gender inclusion aspect. Adequate participation of women and socially marginalized groups will be ensured in road maintenance. This has been found to be successful in other countries, including a recent Association funded operation in Nepal (Project for SNRTP-P132750). The International Labour Organization (ILO) will provide support in the operationalization of the approach. ILO has been providing technical support to the above-mentioned Nepal operation.

54. Knowledge-based institutions, with appropriate administrative and management tools, and regular funding for maintenance are necessary to sustain road infrastructure investments. The project plans to improve the management of rural roads in participating states by streamlining the current institutional mechanism. The project will assist the states in the formulation of a sustainable funding mechanism through the establishment of road funds in participating states. RAMP-2 has undertaken some reform activities, including a study with an objective to transform the management and financing of rural roads in five participating states. The proposed project will review the study recommendations to assess their suitability in RAAMP states and will implement those recommendations which are found appropriate. There are provisions in the proposed project for conducting further studies for road sector reform.

55. A sustainable model for the management and maintenance of the agro-logistics centers will be strategized in the early years of project implementation based on studies planned on the management and operations of these centers. The following strategy will be undertaken while defining the model: (a)



maximizing the involvement of the private sector by capturing efficiency and funding opportunities; (b) defining a market management structure which will include different stakeholders, including market users, local government and/or state government, permanent store owners and small traders and transport operators; (c) self-sustaining agro-logistics center operation based on collection of users tolls in a transparent manner and distribution of the proceeds among different entities (markets, state, local government etc.); and (d) ensuring adequate representations of women and other marginalized (social or persons with physical disabilities) groups. Adequate financial provision has been included in the operation for carrying out relevant studies plus the implementation of the study recommendations.

D. Role of Partners

56. The Association and the AFD will finance the proposed operation, applying similar partnership arrangements as in RAMP-2, which is being financed jointly by the Association and the AFD. The Association and AFD teams are jointly preparing the operation and they will jointly administer implementation, along with fiduciary and safeguards principles and policies of both institutions. The Association will deploy project management, engineering, agro-logistics, fiduciary, safeguards, and M&E specialists and provide implementation support to the Client under a fee-based-service arrangement with external partners. The AFD and the Association will negotiate and sign a supplementary co-financing agreement for this purpose after the approval of the project by the World Bank. The AFD has shown special interest in activities linked to establishing rural agro-logistic centers and associated TA.

57. Many other actors (e.g. United Nations (UN) agencies, Non-governmental Organizations (NGOs)) are working in the agriculture sector value chain improvement, enhancement of smallholder productivity and market information system. The IFAD supported food security and climate resilience initiatives are supporting northern Nigerian states in building resilience to the expansion of the Sahel (and its climate). RAAMP states in northern Nigeria will work in close consultation with IFAD in enhancing agriculture product value chains where the fund's geographical coverage overlaps with RAAMP.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

58. The project's overall risks have been assessed as 'High'. The risks rating summary is shown in the Systematic Operations risk Rating Tool (SORT) of the project paper datasheet. Annex 1 provides the explanation of key risks. Table 6 provides the summary of the risks and mitigation measures.

Table 6: Summary of Risks and Mitigation Measures

Risk Category and Key Risks	Mitigation Measures
<u>Political and governance</u> a. Security challenges including the Boko Haram insurgency, herders and farmers conflicts, and violent kidnappings. b. Political disturbances if the Government embarks on much needed reforms, including fuel subsidy reform.	<ul style="list-style-type: none"> • Beyond the control of the project. • The project will monitor the situation and will take appropriate actions to minimize its impact.
<u>Macroeconomic</u> a. Weak macroeconomic framework and outcomes vulnerable to domestic and external shocks.	<ul style="list-style-type: none"> • Beyond the control of the project. • The project will monitor the macroeconomic trends and will take appropriate actions to minimize its impact on the project, including restructuring.



Risk Category and Key Risks	Mitigation Measures
<ul style="list-style-type: none"> b. Modest forecasted growth, susceptible to oil sector shocks. c. Double digit inflation with high unemployment rates. d. Reforms, including structural reforms, remain the main challenge being faced by the new administration. e. The above risks may result in a difficulty in counterpart funding payments, substantial increase in project costs and in an apathy towards reforms. 	
<p><u>Sector strategies and policies</u></p> <ul style="list-style-type: none"> a. State level rural transport sector policies and strategies either absent or not well articulated. b. Ad-hoc choice of interventions (mainly roads). c. Inadequate policy framework and resources for maintenance of the improved infrastructure. 	<ul style="list-style-type: none"> • One of the objectives of the project is to strengthen the institutional and financing base for sustainable management of state and rural road network. • The project includes adequate provisions for addressing policy and strategy gaps. • An intervention framework has been developed and will be implemented in the project.
<p><u>Technical design of the project</u></p> <ul style="list-style-type: none"> a. Financing fungibility may lead to a few states using a significant portion of available funds. b. States may struggle to mobilize counterpart funding. c. Agro-logistics activities evolving and may pose planning and implementation risks. 	<ul style="list-style-type: none"> • Adequate precautions are included in the project that a few states cannot use disproportionate amount of project resources (Section IIIB and Annex 1). • The project financing clearly establishes the counterpart funding requirements and the counterpart funding contribution situation will be constantly monitored. • Requirements regarding counterpart funding are covenanted. • Adequate precautions will be taken to mitigate the planning and implementation risks of agro-logistics activities.
<p><u>Institutional capacity for implementation and sustainability</u></p> <ul style="list-style-type: none"> a. States have limited institutional capacity to handle such a “large” project. a. Substantial risks linked to achieving quality of physical outputs. b. Inadequate or non-existent funds for maintenance c. Available rural transport infrastructure inventory and condition data are almost non-existent and if available, either incomplete or inaccurate. d. Almost non-existent operations and maintenance (O&M) culture for agro-logistics centers. 	<ul style="list-style-type: none"> • The project will build technical and managerial capacity at the federal levels. Also, an adequate provision of TA is included in the project (Section IIIA and Annex 1). • Adequate safeguard measures have been incorporated to ensure quality of outputs, including comprehensive technical audits of civil work contracts. • The project intends to address the maintenance issues holistically, including financing (see Section IIIA and Annex 1). Development and operationalization of a rural transport infrastructure management system is also planned along with road inventory and condition data of the rural road infrastructure. • The project plans to develop an appropriate system for the O&M of agro-logistics centers.
<p><u>Fiduciary</u></p>	<ul style="list-style-type: none"> • The procurement capacity development process for state officials has already begun and will continue.



Risk Category and Key Risks	Mitigation Measures
<ul style="list-style-type: none"> a. Lack of state level capacity to handle procurement activities, especially development partner assisted projects. b. The introduction of the design-build approach adds an additional risk element. 	<ul style="list-style-type: none"> • Adequate TA provisions have been provided to mitigate against procurement risks, including the provision that each state will employ a contract management consultant to help mitigate contract management risks.
<p><u>Environmental and social</u></p> <ul style="list-style-type: none"> a. States' inexperience and lack of institutional capacity in managing environmental and social risks. b. Labor influx, child labor, and SEA/SH related risks. c. Physical activities are subjected to significant climate and geophysical hazards. 	<ul style="list-style-type: none"> • State officials are being trained on social and environmental risk assessment and management of safeguards risks and impacts, including SEA risks; • States are recruiting additional consultants to support the safeguard officials; • Adequate measures are taken to mitigate SEA risks; and • Climate and geohazards risks have been assessed and actions identified to mitigate them (VIG and Annex 7).
<p>Others: Security Risks</p> <ul style="list-style-type: none"> a. Moderate to high kidnapping risks at the project construction sites exist in project states. 	<ul style="list-style-type: none"> • Detailed strategy and action plan developed to mitigate against security risks (Section VIG and Annex 5).

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

Rural Roads

59. An economic analysis has been carried out on a sample of long-listed roads of approximately 6,500km of total length. The analysis has used the user cost savings method under the partial equilibrium approach. The current traffic on sampled roads varies considerably across the states, from less than 10 to over 800 vehicles. The following assumptions have been made for the economic evaluation: (a) 10 years of evaluation period; (b) discount rate of 5 percent; (c) traffic growth rate of 2.6 percent (consistent with GDP growth); (d) road agency economic cost factor - 0.85; (e) road, consisting of a 4.5-meter-wide carriage way with 0.75- to 1-meter shoulder on each side, with a single or double Otta seal, depending on the state's standard; (f) investment costs: vary depending on specification and local material costs, ranging from NGN 20 million or US\$56,000 (for earth roads) to NGN 42 million or US\$115,000 for double Otta seal road; and (g) investment duration: 2 years (equally distributed to 1st and 2nd year).

60. The results of the economic analysis show that most of the potential priority roads are economically viable (i.e., their net present values are, generally estimated to be positive). The economic internal rate of return ranges from 5.0 percent to over 200 percent, but mostly from 25–50 percent, with an overall average of 33.2 percent.

Rural Agro-Logistics Centers

61. As part of the project preparation, socio-economic surveys of the agro-logistics intervention areas were conducted in all participating states in early-2018. The surveys have sought to identify baseline agro-logistics information. The survey questionnaire was administered to small-holding farmers, intermediaries, market operators, and small-scale processors. Survey key findings include: (a) The average time to reach the primary and secondary markets is more than two hours and up to two and a half hours



respectively; (b) Only a small proportion of respondents have access to credits (less than 3 percent), access to storage, preservation facilities (less than 2 percent), access to processing and packaging facilities (up to 4 percent); receive assistance from agriculture extension officers (less than 3 percent); (c) A fifth of the respondents are members of farmers' cooperatives/associations; and (d) While, an overwhelming proportion of market land (over 70 percent) is owned by the Government, individuals own an overwhelming proportion of shops in the markets (over 90 percent).

62. A preliminary economic and financial analysis of these screened agro-logistics centers has been carried out. The analysis results indicate that the proposed interventions are economically viable. The economic rate of return of each agro-logistics center is high, in the range of 9 to 26 percent, while the financial cost-and-benefit ratio is also high, ranging from 0.74 to 23.60 (based on a 5 percent discount rate). The Government is currently conducting an agro-logistics validation study (see Annex 1. The study, amongst others, will conduct financial cost-benefit analysis of the market interventions.

B. Technical

Choice of Lending Instrument

63. The proposed operation will use the Investment Project Financing (IPF), one of the three financing instruments of the World Bank. The use of the Program for Results (PforR) financing instrument was rejected as the technical, and social and environmental risk management capacities of the participating states are weak. Experience from other PforR operations shows that the instrument works better with a Client that has considerable working experience with the World Bank and has already developed substantial implementation capacity. Nonetheless, once the states develop technical, social and environmental, and FM risk mitigation capacities, the use of PforR financing modalities could be considered.

64. Considerations have been made in the use of IPF instrument with Disbursement Linked Indicators. This option was discarded given the Client's unfamiliarity with this particular type of approach. Although it provides an incentive to achieve results, it adds complications in the form of defining and monitoring expenditure framework, verification of results and its vulnerability to liquidity situation in states. The project will use a simple IPF instrument, which will disburse on inputs. Nonetheless, adequate safeguards have been taken in the project design so that the project objectives are achieved within the duration of the project.

Geographical Coverage

65. The project will cover 13 states of Nigeria (Annex 9 shows project map): seven northern states (Kano, Katsina, Sokoto, Kebbi, Bauchi, Plateau and Kwara) and six southern states (Abia, Akwa Ibom, Kogi, Ogun, Oyo and Ondo). However, there is a provision in the project for inclusion of up to three more states if they show demonstrable preparedness progress towards joining the project. Their preparedness will be assessed using a set of project preparedness criteria. Annex 1 provides details of the criteria. However, these criteria could be revised based on the experience gained during the project implementation. External financiers and the Government state will jointly make the inclusion decision.

Road Safety

66. A detailed assessment on road safety requirements has been made. The objective of the assessment was to establish issues that are being faced at the state levels and to devise a strategy to tackle them and to identify activities that can be supported by the project. Another objective of the



assessment was ensuring that the road safety risks are identified, safety features incorporated in the upgraded road designs and implemented in full. The summary assessment findings include: (a) There is little collaboration among key road safety stakeholders and some activities appear to overlap; (b) The states do not appear to be fulfilling their road safety responsibilities; and (c) The states lack adequate tool (including road safety manual) and capacity to deal with road safety issues of state and/or local governments roads. The key road safety areas that require urgent attention is the delineation of responsibilities among different federal and state institutions. There is also a need to capacitate the states to perform their road safety related obligations.

67. The project will support a number of activities to capacitate the states so that they can fulfill their roads safety related responsibilities. They include TA support for the following: (a) to review and recommend appropriate Road Safety institutional framework at the state level and support the development of a collaborative mechanism between Federal Road Safety Corps and state traffic management authorities; (b) the development and operationalization of the state level crash data management and information system and its potential linkage with the national crash data management information system; (c) development and operationalization of a state road safety design and audit manual; (d) state level road safety capacity building; and (e) road safety training related capacity building of Nigerian educational institutions (universities and institutes).

68. Apart from ensuring that appropriate road safety features are incorporated, using the World Bank's Road Safety Screening and Appraisal Tool (RSSAT), in the design of the project upgraded roads, the project will carry out road safety awareness raising campaign for the residents living along the improved road corridors including school-going children. The project, also, plans to include the roll out of *Zusha*⁸, a road safety program that has been deployed and subject to rigorous evaluation in East Africa over the last decade. Annex 5 provides the details of the road safety assessment and the activities under RAAMP.

C. Financial Management

69. Financial management (FM) functions for the project at the federal and state levels will be provided by the PPFMD and the state PFMUs respectively. The FM arrangements and performance of the PPFMD and PFMUs were re-assessed during the appraisal. The assessment shows that the FM arrangements meet the minimum requirements consistent with the Financial Management Manual and the World Bank's policy and procedure for IPF. The project benefits from the existing PPFMD and PFMUs, which are multi-donor and multi-project FM platforms and are presently involved in the implementation of the Association assisted projects. The PPFMD and the PFMUs will have the responsibilities of establishing and maintaining FM arrangements acceptable to the Association. The FM control features will include the following: (a) a comprehensive Financial Procedures Manual covering all the key elements of FM (i.e., budgeting, funds flow, accounting, internal control, reporting and audit); (b) computerized accounting system; (c) qualified staff who have been trained in relevant World Bank procedures and requirements; (d) robust segregation of functions/duties; (e) a strong control environment for fiduciary risk mitigation; (f) highly independent and well-trained internal auditors; and (g) a full alignment with the government own FM system with some important enhancements and controls. Furthermore, the project

⁸ *Zusha*, swahili for "protest" or "speak up", encourages riders of public service vehicles to demand a safer journey, through the placement of evocative stickers in the passenger section. In a series of randomized control trials, this simple and cheap intervention was shown in Kenya to reduce accident rates by between 25 and 50 percent, thereby representing one of the most cost-effective public health interventions available. It was most effective in small buses in rural areas, similar to the public transport services in Nigeria. Details of *Zusha* can be found using the following link: <https://www.thelifeyoucansave.org/charity-voices/id/1508/window-stickers-that-save-lives>



will benefit from the experience of RAMP-2. Considering the existing FM related institutional setup and control mechanism, the FM risks for the proposed project has been assessed as “Moderate”.

70. Disbursements from the Association will be made based on incurred eligible expenditures (a transaction-based disbursement procedure). The individual states will directly submit withdrawal applications to the Association. For disbursement of AFD funds, the FPFMD will consolidate the disbursement requests from participating states and submit withdrawal applications to the AFD directly. The Association will disburse to federal and state level designated accounts. Details on the disbursement and fund management procedures are provided in Annex 4. The FM procedures will also be elaborated in the PIM and the Financial Procedures Manual, which are being prepared.

71. Interim financial reports (IFR) will be prepared and submitted by the FPFMD and PFMUs within 30 days of the end of each calendar semester and the FPFMD will submit a consolidated IFR within 45 days of the end of each calendar semester. A single set of financial statements for the entire project will be prepared by the FPFMD annually, which will be subjected to external audit. The FPFMD will be responsible for the preparation and submission of audited financial statements within 6 months of the end of the financial year. Independent auditors for auditing of project accounts will be engaged by the FPFMD against terms of reference acceptable to the Association.

72. The FMoF, the AFD, and the World Bank will sign separate financing agreements for funds to be provided by each of the financiers. The Federal Republic of Nigeria, as the Recipient, will be responsible for the repayment to the World Bank and the AFD. As with the RAMP-2 states, the FMoF has indicated that the proceeds of the credits will be on-lent to the states and repaid by the states to the federal government under the same financial terms. In line with this, the ministry and the states will sign subsidiary agreements.

D. Procurement

73. The World Bank’s “Procurement Regulations for IPF Borrowers” dated July 1, 2016 and revised November 2017 and August 2018, under the “Procurement Framework, and the “Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants”, dated October 15, 2006 (revised in January 2011 and July 1, 2016), and other provisions stipulated in the agreement with the Government will be applied for all project procurement activities. The World Bank’s Standard Procurement Documents (SPD) reinforcing the Environmental, Social, Health and Safety (ESHS) as published on its website will be used, where applicable. The project will use the World Bank’s Systematic Tracking of Exchanges in Procurement (STEP), an online tool for planning and tracking of all procurement transactions.

74. The FPMU and SPIUs will be responsible for the project procurement at the federal and state levels respectively. The FPMU and the participating states have a long history of implementing World Bank-financed projects in the past and currently each of the states is implementing World Bank-supported projects. Eleven of the 13 states have procurement laws and have established a Public Procurement Bureau or a Due Process Office. All participating states are at different stages of the establishment of a procurement cadre. A procurement assessment has been carried out which focused on readiness of the SPIUs to implement procurement activities. One of the assessment findings is that there is a need to build the capacity of the SPIU procurement staff on the World Bank’s Procurement procedures and processes. All SPIU procurement staff have already received the first round of training on World Bank procurement procedures and process. Such training efforts will continue during the project implementation under the aegis of the project. The procurement risks are assessed as “Substantial”. Table



6 provides procurement summary risks and mitigation measures. Annex 1 provides detailed procurement risks.

75. The Government has prepared a Project Procurement Strategy Document (PPSD) and the 18 month procurement plan. Major procurement activities involve the upgrading of rural roads (approximately 125 km per state) and construction of agro-logistics centers (roughly five centers per state). Multiple medium-value contracts (up to a value of US\$10 million each), along with many small-value contracts are envisaged. The market analysis has revealed that adequate construction capacity of that contract value exists in-country. The local market is dominated by subsidiaries of major international construction companies and equipment manufacturers. However, indigenous firms have developed fairly good capacity and capability over the years. The project will also benefit from the under-preparation Sustainable Procurement, Environmental and Social Standards Enhancement Project (P169405), which plans to build procurement capacity across Nigeria.

76. The management of the design-build upgrading contracts, with an extended defect liability period (up to three years) may pose a potential procurement risk, if not mitigated properly. This decision to introduce design-build contracts was taken in order to mitigate cost and time escalation and design related risks. The proposed project has adequate TA provisions to support the states in the procurement of these contracts and any other procurement support as needed. Also, some of the SPIU procurement risks will be mitigated by the FPMU, which will provide support in the bidding of the contracts, by conducting due diligence of the state bidding process. The FPMU is also familiar with the World Bank procurement process as it has been involved in RAMP-2 and has successfully completed RAMP-1. RAAMP is in the process of procurement of preliminary design consultancies for the upgrading contracts to support each state not only in preparing the preliminary design, but also in preparing the procurement documents and helping the states in the procurement process. The consultants will develop a set of boundary conditions (minimum or compulsory requirements) on which the bidding process will be based. The bidding of design-build contracts will be in a single stage. The project will support sub-projects under sub-component A.1 that are procured at least one and a half years before the project closing date (currently on June 30, 2026).

77. There has been heightened unease about the site insecurity with two kidnapping incidents on RAMP-2 construction sites in early-2019. Also, there are other risks (e.g., armed robbery, conflict among herdsmen and farmers) in many participating states, which may impede the smooth implementation of contracts. Section VI G and Annex 5 provide the details of security risks at potential RAAMP construction sites, a strategy for their mitigation and actions that the project will undertake to tackle these risks.

E. Social (including safeguards)

78. The project will have a positive socio-economic impact by broadening access to social and economic services and facilities for rural residents in project states, including local women and youth, farmers' cooperatives, and micro and small enterprises. The project's social benefits will include: (a) creation of direct employment through the project's civil works (development and maintenance of rural roads and agro-logistics centers); (b) help in lowering lower post-harvest losses and thereby improving the well-being of farmers living along the road corridors; (c) better income generation for rural farmers through access to markets and trading opportunities and better prices for agricultural products; (d) lower travel time within communities, thereby improving welfare of travelers; and (e) enhanced road safety.

79. OP/BP 4.12 on Involuntary Resettlement is triggered as civil works associated with Components A and B may require land acquisition, temporary loss of livelihood and/or limited physical resettlement.



At this point, not all sub-projects sites are known in sufficient detail. Therefore, the Government has prepared a Resettlement Policy Framework (RPF), which is consistent with the World Bank's Involuntary Resettlement policy (OP/BP 4.12). The framework has been reviewed and cleared by the Association and disclosed in-country on June 12, 2018 (and redisclosed on October 23, 2019) and on the World Bank's external website on October 9, 2018 (and redisclosed on October 23, 2019).

80. Three project states (Abia, Bauchi and Ogun) have been identified, each with one road upgrading work package. To this end, site specific Resettlement Action Plans (RAPs) have been prepared in accordance with the World Bank's Involuntary Resettlement policy (OP/BP 4.12). The RAPs were consulted upon in-country, reviewed and cleared by the World Bank, and disclosed in-country and on the World Bank's external website on October 23, 2019.

81. During project implementation, RAPs will be prepared for each of the specific work packages following the guidelines set out in the RPF. The resettlement process will include identification of any vulnerable groups or individuals, and will guarantee that all affected people receive equitable treatment. The RAPs or abbreviated resettlement actions plans (ARAPs) will be consulted upon, reviewed, and cleared by the World Bank and disclosed publicly in-country and on the World Bank's external website.

82. The Government of each participating state will finance resettlement costs and civil works will not commence on any specific sub-project until project affected persons are compensated in accordance with the principles of the project's RPF. Also, a completion report on compensation and resettlement assistance payments will be prepared and cleared by the Association before the commencement of the civil works. Adequate financial resources (as a separate line item) have been set aside in the project for the Government to cover resettlement related costs (Section III B).

83. The GoN social assessment, completed as part of project preparation activities, revealed that there exist social risks including labor influx, child labor, and SEA/SH related risks. The Environmental and Social Management Framework (ESMF) sets out principles for addressing these risks during project implementation through preparation of an Environmental and Social Impact Assessment. The project has developed an overall action plan to mitigate these risks (Section VI G and Annex 5).

84. The Environmental and Social Management Plans (ESMPs) to be prepared as part of the environmental and social impact assessments will be comprehensive and will cover all social risks. They include: (a) labor, including care of contractors' workers, restriction of the use of child labor and prevention of child sex abuse that could be caused by the influx of workers; (b) safety at construction sites and of the local community; and (c) health aspects, including risks affecting sanitation and general health of the local community and prevention of HIV/AIDS. The Environmental and Social Impact Assessments will document the economic and social benefits of the project to the local community and identify initiatives, if any, to enhance the project's impact on the lives of the rural residents. Safeguards assessment and monitoring during implementation will include possible impacts generated by the influx of workers to be involved in the construction of the access roads and the agro-logistics centers. ESMPs for four roads from four states were prepared, cleared by the World Bank, and disclosed in-country and on the World Bank's external website on October 23, 2019.

85. The design and improvement of the agro-logistics centers will benefit from past projects that were in the development of markets including: the Lagos Metropolitan Development and Governance Project



(P071340),⁹ and the Lagos Urban Transport Project 2 (P112956)¹⁰. The proposed project will conduct social assessments for all markets to be improved under the project. The objective of the social assessment will be to: (a) understand governance structures in each of the agro-logistics centers and how they could be improved for better market management; (b) map stakeholders in order identify the groups with a stake in the project and those who may influence outcomes; and (c) identify the social risks occupants of the market may face due to the upgrading of the agro-logistics centers (including vulnerability risks). The social assessment will recommend concrete steps for the sub-project's adaptation to the local context, addressing key opportunities and risks. These recommendations will feed into the design of the centers.

86. Recognizing the importance of community participation, the project will integrate citizen engagement mechanisms in the design and implementation of the sub-projects. RAAMP has completed a political economy analysis study. The study has helped in understanding and identifying project stakeholders and political economy related issues and mitigation measures. This study has provided substantial inputs to citizen engagement interventions that included the development of project communication strategy, community consultation, sensitization of key stakeholders and the disclosure of project information.

87. The project will set up a project-specific Grievance Redress and Feedback Mechanism to allow aggrieved groups or individuals to lodge complaints, which will be addressed in a timely manner, as well as to provide feedback on project activities, which will be used to assess their effectiveness. Among other things, the mechanism will: (a) provide information on project implementation; (b) provide clear procedures for resolving grievances and disputes at the local level; (c) resolve disputes in a timely and effective manner; (e) build trust with project beneficiaries and stakeholders for their buy-ins; and (f) allow communities to express views, on project activities (e.g., civil work quality, malpractices). The mechanism is envisaged to be at multiple levels (site, local government, state, national) and will address complaints, including logging, tracking, and resolving grievances during and project implementation according to a specific specified grievance redressal mechanism timeframe.

88. The project is in the process of hiring an umbrella NGO or a UN agency to support the project in mitigating SEA related risks. RAAMP has already started the process of mapping of services for survivors in the project area, using the services of an International NGO. Following the completion of the mapping of such services, the NGO/UN agency will be hired. The grievance redressal mechanism will be capable of registering SEA complaints in confidential manners, putting the rights and interests of the survivors at first.

F. Environment (including safeguards)

89. RAAMP has been assigned an Environmental Screening Category – EA Category “B”. This rating is based on the scope of the project, which indicates limited adverse environmental and social impacts of the civil works activities related to the upgrading of rural access roads and the improvement of existing agro-logistics centers. The project will also improve rural connectivity through spot improvement of rural access roads. Sustainable asset management approach is the cornerstone of the project and the project plans to introduce sustainable asset management practices in the participating states. The maintenance activities are expected to counter some of the adverse social and environmental impacts, if any.

⁹ Ashogbon Market.

¹⁰ The Olowo Idikan and Plantain markets along the Ikorodu corridor.



90. The project has triggered three environmental safeguards policies: Environmental Assessment (OP/BP 4.01), Natural Habitat (OP/BP 4.04) and Physical Cultural Resources (OP/BP 4.11). Significant adverse negative impacts are not likely during project implementation; especially as the project is not planning construction of new roads and will essentially remain within the existing right-of-way. The project will only make improvements to the already established agro-logistics centers. In fulfillment of the World Bank's safeguards policies, an ESMF has been prepared and disclosed (in-country on July 30, 2018 and at the World Bank website on September 6, 2018 (rediscovered in-country and at the World Bank website on October 23, 2019). Site specific ESMPs for three different roads in three pilot states (i.e. one road per state) have been prepared by the Recipient according to the National and World Bank policies. The states are Abia, Bauchi and Ogun. They were reviewed cleared by the World Bank. The cleared ESMPs have been disclosed in-country and at the World Bank website prior to appraisal on October 23, 2019. Environmental and Social Impact Assessments (ESIAs), including ESMPs and RAPs will be prepared for each of the remaining/other specific work packages, as needed, following appropriate guidelines and policies in due course of implementation of all sub-projects. All safeguard instruments will be disclosed in-country and at the World Bank website.

91. The ESMF includes an Environmental and Social Screening Checklist. World Bank's environmental and social safeguards guidelines and the Nigeria Environmental Impact Assessment (EIA) guidelines have been used in the design of the checklist, which will assist in the evaluation of proposed project interventions from environmental and social perspectives. A review process will be put in place to ensure screening of all potential civil work activities for environmental and social impacts prior to the approval of sub-projects by the SPIUs. The screening will be carried out by a designated officer, responsible for the environmental safeguards, in an SPIU or the relevant MDA, per the established procedures. This will include an environmental screening sheet showing the estimated impact category of each sub-project meant for physical interventions. The screening process will involve an assessment of the project to determine: (a) the appropriate sub-project categorization for the environmental assessment; (b) applicable World Bank environmental and social safeguards instruments (ESIA/ESMP/RAP); (c) potential environmental and social impacts; and (d) cultural or other sensitivities. In addition, each sub-project will be screened to identify relevant stakeholders and the nature and extent of engagement for each stakeholder category.

92. RAAMP will involve the preparation of ESIAs/ESMPs for approximately 500 km of longlisted roads in each state to address safety and environmental regulatory compliance objectives, institutional responsibilities (e.g., World Bank), and other related commitments. Three, out of 13 participating states have commenced with the procurement of consultants for the preparation of the safeguards instruments (ESIA/ESMP) for the proposed roads. The proposed project will not finance any roads or agro-logistics centers that have significant and irreversible adverse environmental and social impact.

93. The SPIUs, already established in all participating states, will be responsible for monitoring and managing environmental and social safeguards issues at the state level. Most SPIUs are new and have limited experience in the implementation of safeguard instruments following World Bank safeguards policies, principles, and procedures. In some states, staff designated as environmental and social safeguards officers have neither the requisite qualification or experience, and are mainly seconded from other MDAs of the state. At least three states have now recruited experienced environmental and social safeguards and GBV consultants to assist the SPIUs in managing safeguards risks and mitigating their potential impacts. Other states have also started the recruitments of these consultants and the process is expected to be completed before project Effectiveness. At the FPMU level, RAAMP has already recruited



environmental and social safeguard consultants in order to coordinate and monitor the state safeguards activities and to provide support to the SPIUs, whenever necessary. State safeguard officials have received one round of training, organized by the Government. The World Bank's social and environmental safeguard officials have supported the planning and implementation of the training activities. A follow up training is also planned before the commencement of the project.

G. Others

Gender

94. Significant gender inequality exists in Nigeria, and it is worsening, especially as linked to access to services and participation in economic activities. There is also a geographical element in gender inequality – the inequality is more prominent in the north than in the south. The earnings of women in Nigeria are approximately three-fourths those of men, for similar work. In agriculture, women earn and produce less than men. They also have limited access to land, inputs, labor, and extension services. Furthermore, unemployment and underemployment are higher for women than men as reflected in the National Bureau of Statistics data. However, when it comes to starting a business, women are well-represented in Nigeria, making it a country with one of the highest concentrations of female business owners in the world. Nonetheless, access to business services gaps still remain. For instance, in business there are still gaps in business conditions. According to latest data available from the Global Findex database, 35 percent of women in Nigeria compared to 25 percent of men do not have a Bank account

95. The construction sector is one of the sectors with the highest employment potential, per the World Bank's recent Systematic Country Diagnostics study report (June 2019). The employment gap is broader between males and females in the construction sector (in 2008 women represented 6.0 percent of the labor force in the sector against an overall figure of just over 43 percent). There is also a gender gap in the agriculture sector, although not as substantial as in the construction sector (women contribute approximately 37 percent of labor in crop production). Furthermore, plots owned or managed by women are less likely to receive modern agricultural inputs.

96. The project will endeavor to fill this gender gap by: (a) employing at least 30 percent women as maintenance crews in routine maintenance of roads; (b) ensuring women participation in market design, with an objective to confirm that market designs address issues specific to women as market users and traders; (c) directing project support to the small and medium enterprises (operating in agro-logistics centers) with an emphasis to female entrepreneurs. This will be actioned through the development of a Gender Action Plan that will define activities to address their barriers in participating and exploiting business opportunities available at agro-logistic centers; (d) allocating project-developed mini shops cum storage facilities (in agro-logistics centers), exclusively to female entrepreneurs; (e) continuously looking for opportunities to minimize gender gaps during its implementation. The project plans to commission a study to identify opportunities to minimize gender gaps during its implementation; and (f) planning a rural transport services study under the project with a focus on the current level of use of transport services by women and the opportunities to expand their use, and to improve their mobility for accessing socio-economic and life-enriching activities. The planned project impact studies (Section IV B) will present the study results disaggregated by different gender (and social) groups, which will help to measure the project's impact on females. Annex 5 provides gender analysis details and the measures that are planned to reduce gender gaps in the project.

Labor Influx, Sexual Exploitation and Abuse, and Occupational Health and Safety (OHS)



97. A GBV risk assessment has been conducted, specifically for SEA and SH in the workplace, and it has been assessed to be “High”. The assessment included the use of World Bank’s GBV risk assessment tool, which is complemented by an additional analysis of available information from the GBV portfolio review, information from other stakeholders and considering the extent of project scale and scopes. Mitigation and response measures have been designed considering the assessed risk level. Recommendations of the *Good Practice Note Addressing Gender Based Violence in Investment Project Financing Involving Major Civil Works* were taken into consideration while designing the measures.

98. The GBV is prevalent in Nigeria, although not as extensive as in other regional countries. However, help-seeking tendencies are low in Nigeria. In Nigeria, the legal framework against domestic and sexual violence is adequate. The country has already enacted legislation that deals with violence against persons (Violence against Persons (Prohibition) Act 2015), although the legislation has yet to be adopted by all states. Nigeria has also developed a National Action Plan for the implementation of UN Resolution 1325 in 2015.

99. Labor influx risks for the project have been assessed as “low to medium”. An analysis has identified several factors which mitigate against many labor influx risks. However, the analysis has confirmed that, in some cases (especially in medium-sized contracts), there could be increased labor-influx risks (from the engagement of mainly non-local skilled laborers). Furthermore, SEA risks may also arise from local laborers, especially young men with spare cash earned, combined with the prevailing situation regarding violence against women and girls. Additionally, the sub-project locations in poor rural areas that have low adjustment capacity might cause potential power imbalances in the society.

100. The project construction sites are expected to employ some female laborers, although not in great numbers. These females are expected to be young and middle-aged women, given the physically demanding nature of the jobs. It is reasonable to assume that women might face some form of sexual violence in these worksites. Therefore, mitigation measures will be put into place in anticipation of SEA and SH risks. The project will collaborate with the Nigeria for Women Project (P161364) to learn and apply the change approach it has adopted to address social norms from preventive viewpoints. The World Bank will act as a catalyst by bringing in all actors for prevention and mitigation of SEA risks, embracing a survivor-centered approach¹¹ as a guiding principle, and the risk prevention and mitigation efforts will be led by the Government using existing administrative structures and legal avenues.

101. Summary measures have been identified during project preparation to mitigate SEA risks. These measures would include defining contractual obligation involving the signing of the codes-of-conduct by contractor and consultant’s personnel, the use of a project specific SEA specific Grievance Redress Mechanism, SEA capacity building at the FPMU and SPIU levels, and use of a third-party for the monitoring of SEA risks and effectiveness of the adopted mitigation measures. The GoN initiated a study for mapping of services for survivors of SEA is currently on-going. The study outputs will define the SEA/SH mitigation and response strategy, once available services and their capacities are identified. RAAMP plans to employ a third-party (with an NGO or a UN agency) to provide exclusive support to SEA victims and to assist in the monitoring and mitigation of SEA risks.

102. In Nigeria, ensuring worker’s safety at construction sites is a low priority. There is a dearth of information of site accidents in Nigeria. The major construction site incidents which lead to fatalities are often known, and generally reported by the media. It is common throughout the country to find

¹¹ A survivor-centered approach means that all engaged in addressing GBV prioritize the rights, needs, and wishes of the survivor.



construction workers working at construction sites without any protective gear. Although standard contract documents have provisions for ensuring worker safety at worksites, enforcement is almost nonexistent. RAAMP plans to tackle project site occupational health and safety (OHS) issues comprehensively. RAAMP will also face other risks, including use of child laborers and community health and safety at construction sites. An action plan that identifies measures to mitigate the labor-influx, SEA/SH, occupational and community health and safety risks has been developed. Annex 5 (Section II) provides details of the labor-influx, SEA/SH and OHS analysis and the action plan.

Citizen Engagement, Transparency and Accountability

103. There are several opportunities, as well as constraints, in ensuring citizen engagement for project's transparency and accountability. As part of the preparation process, a political economy analysis has been conducted, which identifies project stakeholders and political economy risks linked to them. While designing citizen engagement measures the aforementioned aspects are considered. The measures are based on a number of strategies including maximizing the engagement of local stakeholders in the project activity design and monitoring, ensuring two-way communication between the project and the stakeholders, and taking advantage of the ICT and social media. The project design has identified a total of nine citizen engagement measures that range from conducting annual "town hall" meetings in states to local and national disclosure of project information to the use of social media and internet in the disclosure of project information. Annex 5 provides details on the citizen engagement of RAAMP.

104. The proposed project will also develop an implementation stakeholder engagement plan. The plan will include timing and engagement methods with stakeholders (project affected and other interested parties identified in the political economy analysis), including the disadvantaged and vulnerable groups. The stakeholder engagement plan may subsume activities identified under the citizen engagement plan, if found relevant.

Climate and Disaster Screening

105. Climate change, especially its effects on infrastructure, poses an important development challenge for Nigeria. The Government has taken a number of steps to mitigate against climate change risks, including the establishment of a Climate Change Commission through a legislative process. A Strategic Framework for Voluntary Nationally Appropriate Mitigation Action (NAMA) is also being developed, a step towards meeting national obligations under the United Nations Framework Convention on Climate Change. In 2011, the Government developed National Adaptation Strategy and Plan of Action on Climate Change for Nigeria (NASPA-CNN).

106. An analysis, using the World Bank's Climate and Disaster Risk Screening tool, confirms that the project's physical activities will face significant climate and geophysical hazards. The hazards are associated with the project locations, physical components, and outcomes. Specific climate change project impacts include distresses on road surfaces and collapse of road pavement structural layers, drainage congestion and embankment erosion due to extreme precipitation and flooding. These may result in a reduction of road service life, especially in climate vulnerable coastal areas. Project physical component (road upgrading, cross-drainage structure and maintenance) costs might be increased in tackling these climate change phenomena.

107. The project plans to develop and implement rural transport climate change adaptation strategies. All physical works components (Component A and part of Component B) will be geared towards climate adaptation. The project will support several activities to help the GoN in rural transport infrastructure



climate change adaptation, including developing planning, design, and implementation of climate change adaptation guidelines for rural transport infrastructure, support to developing and implementing climate resilient materials for rural roads and bridges, and climate change related capacity building. Details of the climate related analysis and activities that will be supported by the project are presented in Annex 7.

108. The project has conducted an analysis to assess the amount of emissions that can be reduced by the project over a 15-year time period. Using the World Bank's recommended social value of carbon (US\$30 per ton), the social value of emission (CO₂) reduction is estimated at about US\$5.44 million. Annex 7 provides the analysis details, as well as justification for the project's climate co-benefits.

Security Risks

109. RAMP-2 has observed heightened security risks at construction sites from two kidnapping incidents in Osun and Niger states. An analysis of different security threats, likelihood of their recurrence and their potential impact has been conducted for RAAMP. The results confirm that the likelihood of recurrence of kidnapping of personnel is "Substantial to High".

110. The project has devised a strategy for managing its security risks. Strategy elements include proactive management of security risks, defining security responsibilities at different levels, close monitoring of the delivery of security services, sensitization of the local communities within the vicinity of the construction sites on security and soliciting their cooperation in mitigating security risks, funding for the security costs of contractors, and the recruitment of competent security personnel in the project. An action plan for the mitigation of security risks has been developed. Annex 5 presents the details of the security risks analysis and the action plan that assign responsibilities, timeline and indicators for their verification against each action.

H. World Bank Grievance Redress

111. Communities and individuals who believe that they are adversely affected by a World Bank supported project may submit complaints to existing project-level grievance redress mechanisms or the World Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, because of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and World Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Nigeria

Nigeria Rural Access and Agricultural Marketing Project

Project Development Objective(s)

The proposed project objective is to improve rural access and agricultural marketing in participating states while strengthening the financing and institutional base for effective development, maintenance and management of the rural road network.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	Intermediate Targets	End Target
			1	
Improved Rural Access				
Rural Access (population living within 2 km of an all-season road in participating states) (Percentage)		0.00	2.00	10.00
Travel time on project improved roads (Minutes)		4.00	3.00	2.00
Improved Agricultural Marketing				
Marketed volume of locally produced agricultural commodities by smallholder farmers in improved agro-logistics centers (Percentage)		0.00	5.00	10.00
Satisfaction level of agro-logistics center users (Percentage)		0.00	10.00	25.00
Effective development, maintenance and management of the rural road network				
Proportion of rural roads in good or fair condition		0.00		15.00



Indicator Name	DLI	Baseline	Intermediate Targets	End Target
			1	
(Percentage)				

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets	End Target
			1	
COMPONENT A: Improvement of Rural Access and Trading Infrastructure				
Roads upgraded (Kilometers)		0.00	500.00	1,625.00
Roads improved with road safety interventions (Percentage)		0.00	25.00	75.00
Agro-logistics centers improved (Number)		0.00	10.00	65.00
COMPONENT B: Asset Management, Agro-logistics Performance Enhancement and Sector Reform				
Action towards the establishment of State Road Fund (SRF), Rural Access Roads Administration (RARA) in particpating states (Number)		0.00	10.00	13.00
Nigeria Rural Transport Infrastruture Management System (NiRTIMS). (Number)		0.00	6.00	13.00
Spot improvmenmet plus Maintenance of Rural roads (Kilometers)		0.00	6,000.00	13,975.00
Shops cum mini-storage facilities constructed and leased out to female enterparuners in improved markets (Percentage)		0.00	25.00	100.00
Women employed as routine maintenance crews (Percentage)		0.00	20.00	30.00
COMPONENT C: Institutional Development, Project Management and Risk Mitigation				
Contracts completed with less than 25 percent		0.00	20.00	40.00



Indicator Name	DLI	Baseline	Intermediate Targets	End Target
			1	
time and cost overrun (Percentage)				
Community road safety campaign along the upgraded roads corridors (Percentage)		0.00	25.00	50.00
Introduction of the code of conduct in contracts (Percentage)		0.00	30.00	75.00
Grievances resolved within an accepted timeframe (Percentage)		0.00	25.00	50.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Rural Access (population living within 2 km of an all-season road in participating states)	Increase in rural population living within 2 km of an all-season road in participating states.	Baseline, mid-term and project end.	GIS analysis by states and consolidation by FPMU	The indicator will assess the improvement of rural access (percentage increase). The definition is adopted from the Rural Access Index (RAI). The index is proposed as an indicator to measure the Sustainable Development Goals (SDG) Target 9.1 (under Goal 9). The target aims to “develop quality, reliable, sustainable and	Participating states and FPMU



				resilient infrastructure...to support economic development and human well-being, with a focus on affordable and equitable access for all." Specialized studies using the Geographic Information System will be required to assess this indicator. The World Bank has already developed a standard procedures for measuring this index. It has also been applied in Nigeria.	
Travel time on project improved roads	The indicator will assess the travel time reduction (minutes per km travelled) for vehicles plying on upgraded roads.	Baseline, mid-term and project end.	Surveys along the improved roads	The indicator will assess the travel time reduction (minutes per km travelled) for vehicles plying on upgraded roads. A representative motorized vehicle (with four wheels) that is common in rural areas in Nigeria will be used for the assessment of travel time. The indicator will be measured for	SPIUs with help from FPMU



				upgraded roads only. A representative sample of these roads will be selected. The time taken before and after the road upgrading will be compared.	
Marketed volume of locally produced agricultural commodities by smallholder farmers in improved agro-logistics centers	This indicator will assess the use of the agro-logistic centers by smallholder farmers in marketing locally produced agricultural commodities.	Baseline, fifth year and project end.	Primary market cordon survey data.	Primary market cordon surveys will be applied on a sample of improved markets. The commodities will only be counted if they are produced locally and brought to the centers not over certain volumes, which will be detailed in the survey methodology. The volumes could be different for different commodities. The improved commodity volumes can be considered as improved marketing of agriculture produce in the areas.	SPIUs with guidance from FPMU
Satisfaction level of agro-logistics center users	The indicator will measure the increase in the level of satisfaction of the users of	Baseline, mid-term and project	Market cordon surveys	The market cordon surveys will use a sample of improved markets in	SPIUs with FPMU support



	the improved markets. This should be overall satisfaction of the market users. However, the survey may include satisfaction level for different improved elements (market management, hygiene, infrastructure etc.).	end.		participating states. "Yes/No" questions which could be completed quickly.	
Proportion of rural roads in good or fair condition	The indicator will provide the outcome of the physical, institutional and road finance related interventions planned under the project. The indicator is defined as the percentage increase in rural roads that are in good and fair condition. All three activities mentioned will influence this outcome.	Baseline, mid-term and project end.	Report from SPIUs as compiled by NiRTIMS	The baseline condition of rural roads will be assessed first. It will be done as part of the Nigeria Rural Transport Infrastructure Management System (NiRTIMS) implementation process. With NiRTIMS the assessment could be done instantly, provided the updated data are available.	SPIUs with support from the FMPU.

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Roads upgraded	Length (km) of rural roads upgraded under the project	Annual	Project reports	Simple reporting by SPIUs	FPMU and SPIUs



Roads improved with road safety interventions	Increase in the proportion of road upgraded with comprehensive road safety design features after systematic road safety assessments. The baseline is assumed zero as no rural roads are currently improved with road safety features. Improved roads that comprehensively incorporated road safety features will be counted towards this indicator.	Annual	Project reports.	Project reports and spot checking of the reported information.	FPMU and SPIUs
Agro-logistics centers improved	Number of agro-logistics centers improved under the project	Yearly	Project reports	Project reports with spot check	FPMU and SPIUs
Action towards the establishment of State Road Fund (SRF), Rural Access Roads Administration (RARA) in participating states	Number of states which completed SRF and RARA studies, prepared relevant draft legislations and placed in state assemblies.	Yearly	Project reports	Simple reporting by SPIUs	SPIUs and spot check by FPMU.
Nigeria Rural Transport Infrastructure Management System (NiRTIMS).	NiRTIMS, a comprehensive rural transport infrastructure asset management system, piloted, and rolled out in number of participating states.	Yearly	Project report with spot checks	Simple reporting by the states	SPIUs with support from FPMU
Spot improvement plus Maintenance of	This indicator will assess	Yearly	Project	Information provided in	SPIUs with FPMU



Rural roads	the length of rural roads under spot improvement plus maintenance in the participating states. The scope of maintenance will include routine maintenance, backlog maintenance and performance-based maintenance initiatives. Also the length of roads that will be maintained under the extended warranty as part of the design-build road upgrading will be counted as being maintained.		reports	the project reports plus spot checks	support
Shops cum mini-storage facilities constructed and leased out to female enterparuners in improved markets	This indicator will determine the proportion of markets that constructed shops cum mini-storage facilities and all of them are leased out to female entrepreneurs.	Yearly	Project reports	Project reports information with spot checks	SPIUs with support from FPMU
Women employed as routine maintenance crews	This indicator will assess the percentage of women employed as routine maintenance crews under the project	Yearly	Project reports	Information provided in the project reports plus spot checks	SPIUs with support from FPMU
Contracts completed with less than 25 percent time and cost overrun	The indicator will assess percentage of total contracts completed with	Yearly	Project reports	This indicator will be assessed based on reports from states on	FPMU and SPIUs



	less than 25% time and cost overrun. It is assumed that such monitoring would enable effective contracting procedures are in place in line with World Bank procurement guidelines.			the final completion dates and costs against original completion dates and costs for contracts.	
Community road safety campaign along the upgraded roads corridors	The indicator assess to what extent the community road safety campaign is carried out along the upgraded road corridors, which are now subjected to additional road safety related risks.	Yearly	Project reports	Information from the project reports plus spot checks	SPIUs with support from FPMU
Introduction of the code of conduct in contracts	The indicator will establish to what extent the sexual exploitation and abuse related worker code of conduct (CoC) is introduced in contracts. A contract will be credited towards this indicator, if all workers sign the CoC for this particular contract.	Yearly	Project reports	Information from project reports plus spot checks	SPIUs with support from FPMU
Grievances resolved within an accepted timeframe	The indicator will ensure that the grievances are addressed adequately and in a timely manner. A two-month timeframe has been fixed for addressing the	Yearly	Project reports	Reports from states	SPIUs with support from FPMU



	grievances. The number of complaints received and resolved will be reported by the states as part of their regular reporting mechanism.				
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ANNEX 1: PROJECT DESCRIPTION

A. Project Rationale

1. Inadequate and poor quality of transport infrastructure (including roads) is considered as one of the main bottlenecks for Nigeria's development. Road density of Nigeria is low (only approximately one-sixth that of India, which has slightly lower per capita gross national income than Nigeria). Furthermore, Nigeria does not make adequate investment in transport infrastructure. Approximately three-fourths of Nigeria's rural population do not have good access to the road network. Still, rural access is significantly lower in northern states than in southern ones. An overwhelming majority of passenger and freight movements (over 90 percent) in Nigeria are carried on roads. Rural roads account for approximately two-thirds of the road network length in Nigeria. Almost nine out of ten kilometers of rural roads are in poor condition, which is far higher than other categories of roads (federal and state roads). Again, appropriate classification of state level roads is absent in Nigeria. Besides, the institutional structure for the management of rural roads is complicated and often confusing. Inadequate financial resources and the lack of institutional clarity in the management of rural roads have resulted in rural roads being in a permanently poor condition.
2. The agriculture sector is an important sector in Nigeria; its contribution to the GDP is only second to the services sector. In addition, the importance of the sector is increasing given concerns around food security and improving foreign exchange earnings. Nonetheless, Nigeria's current agriculture policy has identified two key gaps in agriculture - domestic food requirements unmet and non-achievement of the quality levels required for market success. The policy has recommended that post-harvest losses along with transport and market access issues need to be tackled. This proposed project is designed to tackle to a greater extent rural roads and agricultural marketing, and to a lesser extent, agro-logistics enhancement issues in Nigeria.

B. Geographical Coverage

3. As mentioned above, the project will cover 13 states of Nigeria. However, a provision is kept for inclusion of up to three more states if they show demonstrable preparedness progress towards joining the project. The assessment towards progress will be made using a set of project preparedness criteria. These criteria will include: (a) Availability of complete road inventory and condition data of the state's road network and a commitment for the operationalization and use of NiRTIMS in the management of rural transport infrastructure, when available; (b) Setting up the SPIU with full staffing, including gender, social and environmental specialists; (c) Providing a written commitment on the implementation of institutional and sectoral reforms including setting up of RARA and SRF; and (d) Initial selection of rural roads and agro-logistics centers based on detailed studies, including the identification of the leading local agricultural products that are handled at these agro-logistics centers. Based on the experience to be gained during project implementation, this set of criteria may change. However, the state inclusion decision will jointly be made by external financiers and the GoN, based on GoN requests.

C. Project Financing

4. Out of the total project outlay of US\$575 million, the Association, the AFD and the GoN will contribute US\$280 million, US\$230 million (Euro 200 million equivalent) and US\$65 million respectively. These contributions are equivalent to 49 percent, 40 percent and 11 percent of the total costs respectively for the Association, the AFD, and GoN. The World Bank and AFD have agreed to co-finance the project on



a *pari-passu* basis.

5. Unlike RAMP-2, the proposed project will not earmark any funds to the states. RAMP-2 experience shows that the fixed fund allocation approach can lead to inefficient allocation of scarce resources. For instance, two of the four RAMP-2 states, as of end-April 2019, could only use approximately one-tenth (Enugu) and two-fifths (Adamawa) of available funds. It is highly likely that these states would not be able to use the available funds, which will have to be cancelled. Conversely, some of the unspent funds could be used by a well performing state (Osun State) if the project had such a provision.

6. The financing strategy for RAAMP states will comprise the following: (a) each state will receive a small portion (up to 15 percent) of the notional allocation of funds as an advance after the inception of the project; (b) the remaining funds will be allocated to the states based on their implementation performance, subject to some boundary conditions (see Table 7 below); and (c) if a state achieve any of the boundary conditions, then the state will be considered as graduated from the project or activity. For instance, if a state spends 35 percent of the notional allocation, then the state will be graduated from the project, which means that the project will not support any further activities in that state. Similarly, if a state completes the upgrading of 156 km of roads then it will be considered graduated in road upgrading, which means that the project will not support further road upgrading activities in that state. However, the state can receive support in other activities, subject to the maximum financing cap of 35 percent of the notional allocation per state. This strategy has been developed to protect the interests of other participating states.

Table 7: Financing and Physical Work Boundary Conditions

Items	Limitations against each state
Maximum allocation	35 percent over the notional allocation of approximately US\$40 million (i.e. tentatively US\$53 million) ¹² .
Maximum length of roads that can be upgraded and cross drainage structures that can be built	25 percent over the roads upgrading target length (125 km) for or bridges construction (80 m); i.e. 156 km for road upgrading and 100 m for bridges.
Maximum number of agro-logistics centers that can be improved	25 percent over the target number of 5 (i.e. 6 numbers)
Maximum length of roads that can be undertaken for: (a) Backlog maintenance/ Rehabilitation (b) Spot improvement (c) Routine maintenance (d) Performance-based Maintenance Contract (PBMC)	(a) Backlog maintenance – 100 percent over of the target length of 200km (i.e. 400 km) (b) Spot improvement – 100 percent over the target length of 450km (i.e. 900 km) (c) Routine maintenance – 100 percent over the target length of 700km (i.e. 1,400 km/year) (d) PBMC – 100 percent over the target length of 20km (i.e. 40 km)

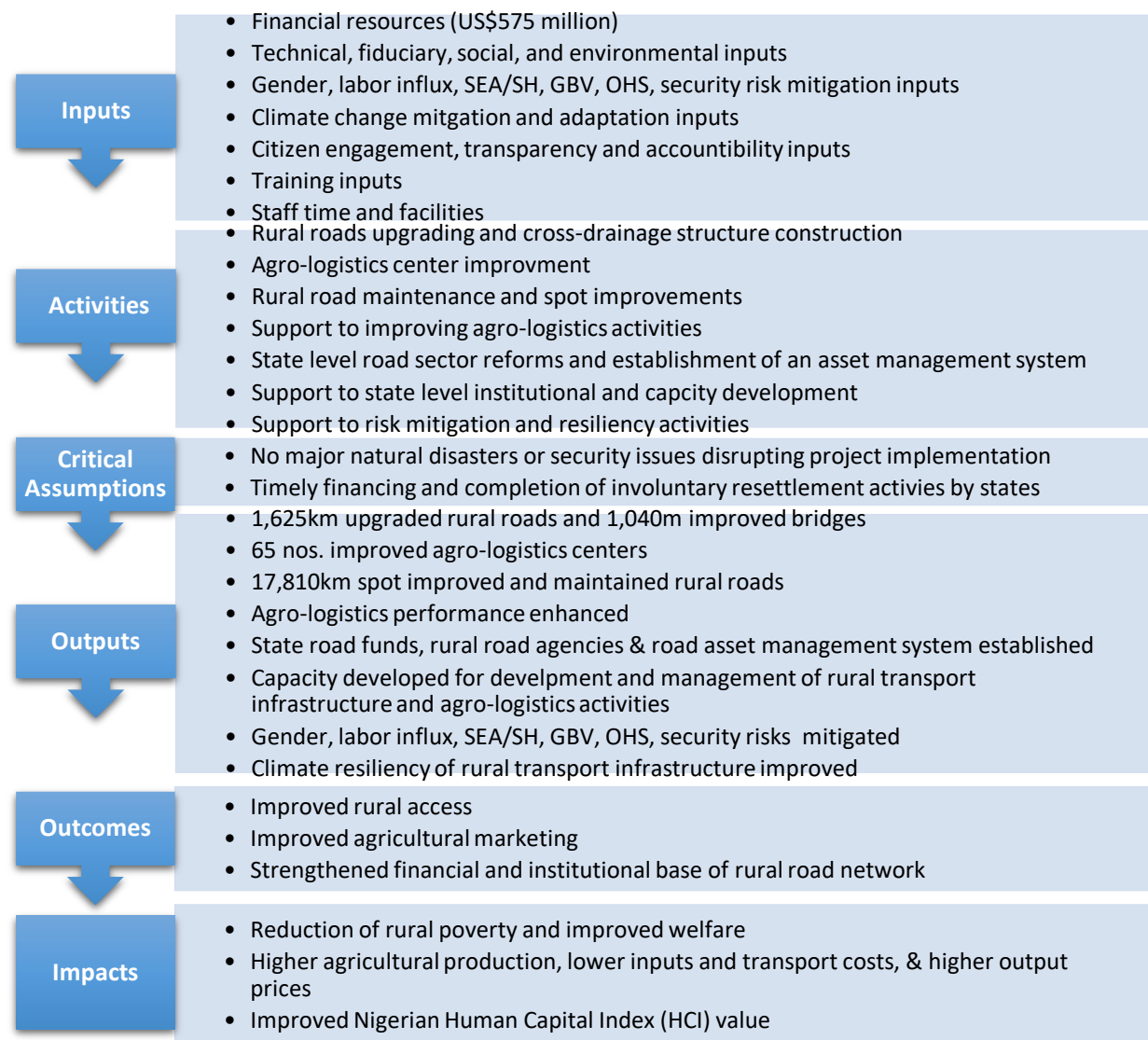
D. PDO and PDO Indicators

7. Section VII provides the results framework that include the PDO, indicators and indicator descriptions. An analysis of operation's results chain provides details of the inputs, outputs, outcomes and impacts of the proposed project, which is presented below.

¹² These monetary and physical target values are indicative only. These values may change depending on the number of additional states the project admits, or any additional funds are injected into the project.



Figure 1: Project Results Chain



E. Project Implementation Period

8. The project will be implemented over a period of six and a half years. A mid-term review will be conducted in approximately three years after Credit Effectiveness.

F. Project Component Activity Details and Costing

9. Table 8 below provides the activity details of the components. Project costing details are provided in Table 9, while the project implementation manual provides the consultancy, study details and the details of the TA to be provided under the project.



Table 8: Component Activity Details

Component	Activity Details
Component A: Improvement of Rural Access and Trading Infrastructure	<ul style="list-style-type: none"> (a) Physical improvement of Rural Access Infrastructure: rural roads (approximately 1,625 km;) and bridges/culverts of generally up to 15m clear span (approximately 1,040 m); (b) Physical improvement of Agro-logistics Centers (approximately 65); (c) Consultancy and supervision support for the planning, design, implementation and supervision of rural transport infrastructure and agro-logistics centers (the PIM provides details).
Component B: Sector Reform, Asset Management and Agro-logistics Performance Enhancement	<ul style="list-style-type: none"> (a) Maintenance and spot improvement of rural roads: <ul style="list-style-type: none"> - Routine maintenance (approximately 9,100 km/year); - Backlog maintenance/rehabilitation (approximately 2,600 km); - Spot Improvement (approximately 5,850 km); - Performance-based Maintenance Contract Piloting (approximately 260 km). (b) Implementation of activities to enhance agro-logistics performance: <ul style="list-style-type: none"> - Implementation of farm/cooperative level post-harvest agro-logistics study recommendations; - Implementation of activities to support SMEs at the agro-logistics centers. (c) Consultancies, studies and supervision support (the PIM provides details): <ul style="list-style-type: none"> - Consultancies and studies to support sector reform activities; - Consultancies. studies and supervision (road maintenance and spot improvement); - Consultancies and studies (agro-logistics activities).
Component C: Institutional Development, Project Management and Risk Mitigation	<ul style="list-style-type: none"> (a) Goods purchase and supporting logistics and operating costs. (b) Training and study tours. (c) TA (the PIM provides details). (b) Support activities linked to risk mitigation and resiliency (Table 6 provides details): <ul style="list-style-type: none"> - Support to GBV/SEA, Grievance Redressal and Citizen Participation; related risk mitigation activities; - Support to rural road safety activities; - Support to rural road climate resiliency activities.



Table 9: Detailed Project Costing

Item	Unit	Target	Target per State	Unit Cost (US\$ million)	Fund (US\$ million)	Contribution (%)			Contribution Value (US\$ million)			% Total
						IDA	AFD	GoN	IDA	AFD	GoN	
RAAMP: Total Costs					575.0	49%	40%	11%	280.0	230.0	65.0	100%
Component A: Improvement of Rural Access and Trading Infrastructure					271.0	52%	42%	6%	140.0	114.0	17.0	47%
<i>A.1 Civil Works: Improvement of Rural Access Infrastructure & Agro-Logistics Centers</i>					<i>265.0</i>	<i>52%</i>	<i>42%</i>	<i>6%</i>	<i>137.0</i>	<i>111.6</i>	<i>16.4</i>	<i>46%</i>
A.1.a Upgrading of Rural Roads	Km	1,625	125	0.105	179.0	52%	42%	6%	92.5	75.4	11.1	31%
A.1.b Construction of Rural cross-drainage structures	M	1,040	80	0.012	12.0	52%	42%	6%	6.2	5.1	0.7	2%
A.1.c Improvement of Agro-logistics Centers	Nos.	65	5	1.000	74.0	52%	42%	6%	38.3	31.2	4.6	13%
<i>A.2 Consultancies and Supervision</i>					<i>6.0</i>	<i>52%</i>	<i>42%</i>	<i>0%</i>	<i>3.1</i>	<i>2.5</i>	<i>0.4</i>	<i>1%</i>
Component B: Sector Reform, Asset Management and Agro-logistics Performance Enhancement					253.0	44%	37%	19%	112.0	93.0	48.0	44%
<i>B.1 Civil Works: Rural Road Maintenance and Spot Improvement</i>					<i>243.0</i>	<i>44%</i>	<i>37%</i>	<i>19%</i>	<i>107.6</i>	<i>89.4</i>	<i>46.2</i>	<i>42%</i>
B.1.a Backlog Maintenance	km	2,600	200	0.023	60.0	44%	37%	19%	26.6	22.1	11.4	10%
B.1.b Spot Improvement	km	5,850	450	0.022	129.0	44%	37%	19%	57.1	47.5	24.5	22%
B.1.c Routine Maintenance	km/yr	9,100	700	0.001/yr	48.0	44%	37%	19%	21.3	17.7	9.1	8%
B.1.d Piloting Performance-based Maintenance Contract	km	260	20	0.024	6.0	44%	37%	19%	2.7	2.2	1.1	1%
<i>B.2 Support to Agro-logistics activities</i>					<i>4.0</i>	<i>44%</i>	<i>37%</i>	<i>19%</i>	<i>1.8</i>	<i>1.5</i>	<i>0.8</i>	<i>1%</i>
B.2.a Implementation of farm/cooperative level post-harvest agro-logistics study recommendations					2.0	44%	37%	19%	0.9	0.7	0.4	0%
B.2.b Implementation of activities to support SMEs at the agro-logistics centers					2.0	44%	37%	19%	0.9	0.7	0.4	0%
<i>B.3 Consultancies, Studies and Supervision</i>					<i>6.0</i>	<i>44%</i>	<i>37%</i>	<i>19%</i>	<i>2.7</i>	<i>2.2</i>	<i>1.1</i>	<i>1%</i>
B.3.a Consultancies, Studies and Supervision (Road Maintenance and Spot Improvement)					4.0	44%	37%	19%	1.8	1.5	0.8	1%
B.3.b Consultancies and Studies (Agro-logistics Activities)					2.0	44%	37%	19%	0.9	0.7	0.4	0%
Component C: Institutional Development, Project Management, and Risk Mitigation					51.0	55%	45%	0%	28.0	23.0	0.0	9%



Item	Unit	Target	Target per State	Unit Cost (US\$ million)	Fund (US\$ million)	Contribution (%)			Contribution Value (US\$ million)			% Total
						IDA	AFD	GoN	IDA	AFD	GoN	
<i>C.1 Institutional Development & Project Management</i>					44.0	55%	45%	0%	24.2	19.8	0.0	8%
C.1.a Goods, Logistics and Incremental Operating Costs					22.0	55%	45%	0%	12.1	9.9	0.0	4%
C.1.b Technical Assistance					15.0	55%	45%	0%	8.2	6.8	0.0	3%
C.1.c Training and Study Tours					5.0	55%	45%	0%	2.7	2.3	0.0	1%
C.1.d Monitoring, Impact Evaluation & Comprehensive Technical Audit					2.0	55%	45%	0%	1.1	0.9	0.0	0%
<i>C.2 Risk Mitigation & Resiliency</i>					7.0	55%	45%	0%	3.8	3.2	0.0	1%
C.2.a GBV/SEA, Grievance Redressal & Citizen Participation					5.0	55%	45%	0%	2.7	2.3	0.0	1%
C.2.b Rural Road Safety					1.0	55%	45%	0%	0.5	0.5	0.0	0%
C.2.c Rural Road Climate Resiliency					1.0	55%	45%	0%	0.5	0.5	0.0	0%
Component D: Contingent Emergency Response					0.0	0%	0%	0%	0.0	0.0	0.0	0%



F. Technical Details

Selection of Roads and Agro-Logistics Centers

10. The participating states have already completed studies that longlisted the rural roads and agro-logistics centers. These studies have provisionally identified a total of roughly 8,000 km of roads (range from 380 km to 728 km of roads) and 94 centers (range from 6 to 20 centers). These equate to approximately 550 km and seven agro-logistics centers per state.

11. All states have a multicriteria analysis technique for the provisional selection of the roads and markets. Although there are some differences in the selection process among states, the following staged approach, in general, followed in the provisional selection of agro-logistics centers and rural roads:

- a. Identification of major agricultural production areas, markets (primary, medium and large) and agriculture processing facilities (including processing centers and mills) in a state;
- b. Dividing the state into key agro-logistic areas, which could comprise one or more local government areas;
- c. Identification of main feeder (rural) roads in the state and screening of candidate roads based on economic criteria (connectivity to facilities and markets); and
- d. Prioritization of roads for intervention based on a set of basic economic, social and transport connectivity criteria (see below);

12. The key criteria used in the prioritization of rural roads for interventions include: (a) market connection, roads connecting markets received higher scores; (b) overall network connectivity potential. Roads that connect higher category roads (state or federal roads) received higher scores; (c) agriculture or agribusiness potential. Roads that have potential of promoting agriculture activities of agribusiness in their corridors received higher scores; and (d) poverty and social aspects. Roads serving poor and isolated communities have received higher scores. Economic evaluation of roads was conducted using a simplified road project evaluation tool (e.g., roads economic decision model or RED), which uses the users' cost savings principle (benefits to roads users, reduced vehicle operating plus time costs minus investment costs).

13. The agro-logistics centers were, again, provisionally selected using a set of criteria including social, economic and physical accessibility. Some states also included a value chain analysis as one of the criteria for the selection of agro-logistics centers. It is to be noted here that physical accessibility (road connectivity) has been used as one of the criteria for the selection of the centers. Therefore, the likelihood is that these centers have good access to road networks, including state or federal road networks. Also, the centers located on these networks are likely to be larger compared with other centers simply due to the benefits they derive from the transport connectivity. For instance, in Abia State, out of the six selected agro-logistic centers, four of them are located on either federal or state highway networks.

14. An agro-logistics validation study is currently being undertaken as part of the RAAMP preparation. The study is conducting an independent review of the state-level agro-logistics studies. The study is expected to validate the findings and recommendations of state-sponsored agro-logistics studies. The study scopes include: (a) technical and financial feasibility of the siting of the markets and a review of the primary processing activities; (b) validation of the identified bottlenecks at the state level value chains in terms of accessibility, infrastructure, legal and regulatory frameworks; and (c) development of a



framework for a governance and operational strategy as well as a cost benefit analysis of the agro-logistics centers. The study findings are expected to be available by end-March 2020.

Road Surfacing, Strategy and Design Standards

Current practices and experience of surfacing options

15. Currently, asphalt concrete is the preferred surfacing option in Nigeria. However, surface dressing options, both double bituminous surface treatment (DBST) and single bituminous surface treatment (SBST), were popular in the 1970s. Since the oil boom in early 70s, the use of Hot Rolled Asphalt in place of surface dressing was preferred as the former provides smoother riding surface and more load bearing capacity than the latter. The costs were not hugely different between the two as well.

16. The Government also tried to introduce bituminous emulsion in place of cut-back bitumen, apparently, to reduce adverse effect on the environment emanating from the latter option. Two circulars were issued in early 2012 in this regard. However, it is understood that the results of the introduction of the new option are not encouraging given the unsatisfactory binding and penetration effect of the emulsion.

17. Since the 1970s, the contractors' road construction capacity using surface dressing has eroded and it is now almost insignificant. For instance, RAMP-2 has tried a surface dressing option in a road (Odogbo Ifewara-Igbowiwu Road) in Osun State. The results of the surface dressing section trail have been poor, mainly due to poor workmanship and poor material quality. The contractor subsequently offered to construct the road with asphalt surfacing at no extra costs.

18. There have been recent new initiatives to re-introduce surface dressing and to introduce Otta Seal options in Nigeria. For instance, Abia State has undertaken an initiative to introduce Otta Seal in a small section (1 km) of a road, although the contractor is yet to start the work. Also surface dressing options are being tried for federal highways.

Table 10: Comparison of Different Options

Option	Pros and Cons [a]	Comments
1. Gravel surface	<ul style="list-style-type: none"> • Least costly • Low service life (3-5 years) • Considered as a "wasting" surface. Significantly vulnerable to the effects of the road environment (both weather and traffic actions) • Generate dusts, which have significant negative social, health, environmental consequences. • High maintenance costs and requires frequent major maintenance. 	This option is rejected as it has more disadvantages than advantages. The only advantage seems to be its low costs.
2. Double-surface Dressing	<ul style="list-style-type: none"> • Lower base cost than thin asphalt. • Medium to long service life (8-10 years). • Less costly (US\$7.95 per sq. meter) than thin asphalt. [b] • Insignificant experience of Nigerian contractors in this type of surfacing. • Life cycle (20 years) costs are higher than single Otta 	Rejected as this option is costlier than single or double Otta Seal without any significant benefits. Also, the Nigerian contractors' capacity to handle this option has eroded since 1970s and currently the capacity is inadequate.



Option	Pros and Cons [a]	Comments
	Seal (US\$21.40 against US\$12.00 per sq. meter)	
3. Thin asphalt (= <30mm)	<ul style="list-style-type: none"> • One of the expensive options (US\$11.3 per sq. meter). • Medium to long service life (8-10 years). • Substantial experience of Nigerian contractors in this option. 	This option will be tried initially until the Otta Seal pilot results are available and contractors are adequately trained and gather experience. It is preferred on the ground that the Nigerian contractors are experienced in this option.
4. Single Otta Seal	<ul style="list-style-type: none"> • Lowest cost option (US\$3.20 per sq. meter). • Medium to long service life (8-10 years). • Has been adopted in many countries as a low-cost surfacing option including countries in Africa (e.g. Tanzania). • Insignificant experience of Nigerian contractors in this type of surfacing. 	Preferred option. However, it depends on the results of the Otta Seal pilots. If the pilot outcomes are positive, it will be mainstreamed in a planned way.
5. Double Otta Seal	<ul style="list-style-type: none"> • Less costly than double surface dressing and thin asphalt (US\$6.50 per sq. meter). • Long service life (15-18 years). • Insignificant experience of Nigerian contractors in this type of surfacing. 	This option will be piloted to a limited extent. However, rejected as the preferred option given its costs compared with single Otta Seal option, although the service life is higher
6. Chemical stabilization agents and additives	<ul style="list-style-type: none"> • Unit cost is similar to thin asphalt (US\$11 to 13.0 per sq. meter) • Needs more trials as their efficacy still to be fully evaluated • Tried under RAMP-2 • Some options need specialized equipment and skills 	This option will be piloted further to assess its effectiveness. Rejected as the preferred option given its costs compared with single Otta Seal option.

Notes: [a] Mainly based on information from the Low Volume Roads Manual developed under RAMP-2; [b] incremental cost of providing the specific surfacing under the assumption that the underneath layers are designed to withstand traffic action effects.

Choice of type of road Interventions

19. RAAMP has provisions for four types of rural road interventions: upgrading, spot improvement, backlog maintenance/rehabilitation and routine maintenance. The following conceptual viewpoints (elaborated in PIM using an operational strategy schema) would apply in choosing a road intervention type: (a) a roads could be upgraded should it satisfy the socio-economic requirements for this type of intervention and funds are available; (b) a road could be improved with spot improvement if it was not substantially improved before, currently not maintainable (i.e., in extremely poor condition), fulfills the socio-economic requirements for spot improvement and funds are available for such intervention; (c) a road could undergo rehabilitation or backlog maintenance if major interventions were made (e.g., upgrading) on it before, and if the conditions justify such intervention and funds are available; and (d) a maintainable road should be undertaken for routine maintenance. This intervention will get preference



over the other three type of interventions mentioned above. Roads that do not satisfy the aforementioned criteria would not receive any interventions.

20. RAAMP will develop a decision making tool, NiRTIMS, to aid in the road intervention related decision making process, among others. Details of the use of the NiRTIMS and its capabilities are provided in Section IV B. The proposed project has been developing a catalog that will detail the items under different intervention types and this information will be provided in the PIM.

21. The operation will follow the following strategy for road upgrading in order to maximize the benefits from road and market synergy: (a) selected rural roads that connect the agro-logistics centers planned to be upgraded under the proposed project will be implemented on a priority basis; (b) next in line for upgrading will be those rural roads that have higher network and agricultural productivity impact when compared with their peers; and (c) the remaining road upgrading quota will be fulfilled by other longlisted roads.

Road Surfacing and Design Standards.

22. A detailed analysis was done on the available road surfacing options for Nigeria rural roads (provided above). RAMP-2 Osun State experience shows that Nigerian contractors have severe capacity constraints in road construction with surface dressing. Although widely practiced before 1970s, the surface dressing options went out of fashion with the advent of the oil boom. Hot rolled asphalt was preferred over the surface dressing as the former provides smooth riding surface and the cost difference was not hugely significant. Nonetheless, there is a renewed interest in surface dressing in Nigeria and Otta Seal is also being tried in rural roads as a low-cost surfacing option.

23. Considering the pros and cons of different surfacing options and contractors' capacity constraints in surface dressing and Otta Seal, RAAMP will undertake the following road surfacing strategy: (a) gravel surfaces will be avoided due to its significant disadvantages; (b) road surfacing will be initiated with thin asphalt ($\leq 30\text{mm}$); (c) Otta Seal will be trialed on a number of roads under different climatic and traffic conditions and if found suitable will be introduced in a systematic fashion coupled with the development of contractors' capacity; and (d) other low cost options, including road stabilization using chemicals, will also be trialed to assess their efficacy in the context of rural roads in Nigeria. The project will also trial rigid pavements (cement concrete or reinforced cement concrete) on vulnerable road sections (i.e., sections that have poor load bearing capacity or are subject to flooding or water logging).

24. Design standards to be adopted in RAAMP are provided below. These standards are generally drawn from the Nigerian Low Volume Roads Manual, developed under RAMP-2. Adoption of these standards will help in the operationalization of the manual. Separate standards are proposed in cases should such standards be unavailable in the manual.

The surfacing strategy

25. Given the aforementioned analysis, RAAMP will undertake the following strategy:

- (i) RAAMP will start with a less risky option (thin asphalt) considering the adequate contractors' capacity with this option;
- (ii) Single Otta Seal will be trialed on roads under different weather and traffic conditions as a pilot initiative and the results will be monitored carefully;
- (iii) If the Otta Seal pilot produces positive results, then it will be slowly introduced as the main surfacing option in a systematic way with the development of adequate contractors capacity; and



- (iv) Other options, including single surface dressing, double-Otta Seal and the use of chemical stabilization agents and additives, will be piloted to a limited extent to evaluate their performance in the context of rural roads in Nigeria. Decisions will be taken based on the trial outcomes.

Design Standards

26. RAAMP will follow design standards recommended by the Low Volume Roads Manual (LVRM) developed under RAMP-2. Where LVRM standards are unavailable, separate standards are proposed. The PIM details the design standards for roads and agro-logistics centers.

Ensuring Intervention Sustainability and Maintenance Approach

27. Ensuring intervention sustainability has been found to be the main challenge in the design of RAAMP. Although RAMP-2 has made considerable progress in mainstreaming maintenance, especially routine and periodic maintenance, a comprehensive maintenance sustainability framework is absent in the project. The framework alone would also not help in achieving sustainable outcomes unless framework implementation tools are available and the processes are clearly defined. Above all, an appropriate institutional structure and adequate maintenance funding are required for sustainable management of assets, including road assets. An attempt has been made to define a comprehensive framework, as well as outlining the tools and the implementation processes. RAAMP plans to address the issue of development and maintenance interventions in a holistic way, including setting up of the institutional structure and sustainable funding mechanism.

The framework

28. The project has developed a comprehensive framework in the form of an operational strategy for the development and maintenance of roads under RAAMP. The PIM provides a schema of the framework. The framework is defined based on the following strategy:

- (a) All roads will come under one of the six interventions or non-intervention options;
- (b) Maintainable roads will receive at least one of the three interventions – routine maintenance, backlog maintenance or rehabilitation;
- (c) Only roads that are viable from a socio-economic context will be upgraded, subject to the availability of funding;
- (d) Any unimproved roads, which cannot be justified for upgrading, will be improved through spot improvement (subject to the fulfillment of socio-economic requirements and availability of funds for such activities) in such a way that they provide almost year-round basic access to the residents living along these road corridors. This spot improvement option will only improve the sections which are impassable with vehicles and will construct small cross drainage structures; and
- (e) All maintainable roads and roads that will be improved under the project will go under the routine maintenance.

29. Each option will have a catalogue of items, which will define the improvement and maintenance scope of that option. Such catalogues are provided in the PIM.

The tool

30. The planned NiRTIMS will play a vital role in the planning and monitoring of not only the maintenance operation, but also the improvement activities of roads and road related infrastructure (e.g., bridges and culverts). Details of NiRTIMS are provided in Section IVB. NiRTIMS is expected to play the



following vital roles regarding development and maintenance planning and implementation: (a) aiding development and maintenance decision making following the decision making framework mentioned above; (b) costing and contract management; and (c) monitoring the road network infrastructure conditions. A similar system has been introduced by an Association-financed project in Nepal, SNRTP.

The processes

31. Once a list of project interventions is drawn, using the aforementioned framework under budget constraint, the upgrading and maintenance interventions will be subjected to the following processes:

- (i) *Upgrading of roads*. Extended warranty period (three-five years) under the design-build contract.
- (ii) *Spot improvement and backlog maintenance or rehabilitation*. (a) detailed costing of the interventions will be made through field verification; (ii) preparation of the bill of quantities (BoQ) and procurement documents; (c) packaging of contracts and procurement of contracts as per the agreed procurement procedures for the project; and (d) implementation of contracts following the procurement requirements mentioned in Section VI D.
- (iii) *Routine maintenance*. A performance-based routine maintenance model will be adopted in RAAMP. The application of the model involves the following steps: (i) an assessment of the road conditions; (ii) intervention costing for engaging a maintenance crew for a particular length of the road. The crews will be paid at least the national minimum wage (currently NGN 30,000 per month). The road condition, terrain, type of road and operational circumstances will define the length for which a crew will be responsible. However, the length will be in the region of 2.0 km per crew. The crews can also form informal groups (Road Maintenance Groups or RMGs) to facilitate the implementation of road maintenance tasks; (iii) selection of maintenance crews using objective selection criteria. The poor, marginalized groups, ethnic minorities and women will be targeted so that the employment opportunities generated by these activities are accrued disproportionately to them; (iv) organizing and administering training (technical, occupation health and safety, etc.) for the crews; (v) performance-based payments to crews, preferably using the electronic money transfer system; and (vi) evaluation of the performance of crews bi-annually and taking decisions regarding the continuation of any particular crews.

32. The aforementioned routine maintenance model has been tried and found to be successful in the Association-funded project mentioned above (P132750). A workshop on rural road maintenance was held in Nigeria in March 2019. Presentations on different rural road maintenance approaches in the world, including Nepal, were made to the workshop. There has been an agreement among different state and federal stakeholders that the Nepal routine maintenance model could be tried in RAAMP. The International Labor Organization (ILO) participated in the workshop. The ILO is providing TA to the Nepal maintenance operation. RAAMP will engage the ILO to support the roll out of the proposed routine maintenance model. ILO support will also be extended to helping the government in tackling occupational health and safety issues at construction sites.

Support to Agro-logistics Activities.

33. The broad agro-logistics project interventions are established using an analysis that assessed farmers' requirements in making gains through the value chain improvements. The classical value chain, mainly applicable for industries, comprises two activity types¹³: primary activities (inbound logistics,

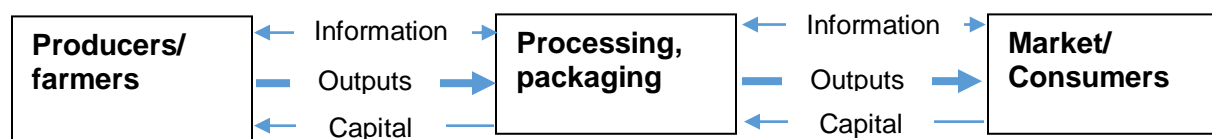
¹³ Christopher M (2005) Logistics and Supply Chain Management: Creating Value-Adding Networks, Prentice Hall.



operations, outbound logistics, marketing, and sales and services) and support activities (infrastructure, human development, technology development, etc.). Requirements of rural Nigerian farmers (mainly small and medium) were analyzed using this framework.

34. The project plans to directly support the following value chain activities: operations (mainly processing and packaging), outbound logistics (rural roads elements and to some extent rural transport services) and market infrastructure. The project will not make direct inbound logistics interventions (e.g., fertilizers, insecticides). However, the improvement of rural roads will also help in inbound logistics through the reduction of transport costs for inputs needed for farm production. **Error! Reference source not found.** provides a schema¹⁴ of the support to be provided under the proposed project.

Figure 2: Outputs, Capital and Information Flow between the Farmers and Consumers



35. RAAMP will follow a set of distinct principles for providing support to improving agro-logistics activities. They are: (a) the project will try not to reinvent the wheel, but rather will be dependent on existing knowledge, institutional mechanisms and delivery methods in achieving its agro-logistics support objectives; (b) in cases where there is a dearth of knowledge, studies to generate knowledge that will help making informed decisions will be undertaken; (c) the project will only provide advisory support to farmers; no direct investments will be made in the purchase of any post-harvest implements or extending credits to the farmers; (d) the project support will be targeted to small and medium farmers, in particular women; and (f) interventions to make price information quickly and easily available to farmers will be made under RAAMP.

36. Project support for agro-logistics activities will be limited to the following key activities:

- a. *Support to the processing and packaging.* The project will conduct studies to identify key issues and related solutions, disaggregated by different agriculture produce, linked to the processing and packing of the produce. Based on the study, recommended actions will be taken, bounded by the aforementioned principles. IFAD has been active in nine states of Nigeria with VCDP. The program supports farmers to enhance their productivity and the quality of their produce. VCDP includes two of the RAAMP states (Kogi and Ogun states). Also, the project will help link the farmers to the macro-credit providers. The IILD, a NGO, has been implementing a project called the THEMP, exclusively, in 13 RAAMP states. THEMP scopes include: (a) the provision of credit and other financial services to producers and other primary value chain actors; and (b) agribusiness advisory to help boost the quality and quantity of production for specific markets by helping small scale producers organize and undertake vertical integration, process upgrading and more control of the management of the chain. The strategy will be to maximize the linkage between activities under these two initiatives or any other similar initiatives and the project's processing and packaging related objectives;
- b. *Support to small and medium enterprises.* This activity will particularly, but not exclusively, target women entrepreneurs of the SMEs in RAAMP improved markets. The SMEs in Nigeria

¹⁴ Adopted from a paper entitled "Logistics and Supply Chains in Agriculture and Food" by Girma Gebresenbet and Techane Bosona, Department of Energy and Technology, Swedish University of Agricultural Sciences, Uppsala.



face a number of obstacles, including lack of access to credits, lack of knowledge about modern business practices, and lack of or limited access to on-going product prices. Furthermore, significant gender gaps in access to finance exist among male and female entrepreneurs. The project will provide support to the mainly female run SMEs on access to finance, modern business practices, accounts management, etc. A detailed study on the issues faced by SMEs in the rural context will determine the detailed scope of the support under the project. Again, assistance might be sought from IFAD, IILD or any other NGOs or development partners working in this area. An Association-financed project, namely Piloting Innovative Solutions to Improve Access to Finance for Women Entrepreneurs in Nigeria or We-Fi Nigeria (P168390), is under preparation. The objective of the We-Fi Nigeria is to pilot innovative instruments to unlock commercial financing for women entrepreneurs. The project target beneficiaries are women run SMEs. RAAMP will link up with the We-Fi Nigeria to maximize synergy between the two projects. RAAMP will also learn and link with the Nigeria for Women Project (P161364), which is currently under implementation, to boost the business/FM skills of women entrepreneurs, as well as behavioral change to address gender social norms.

- c. *Market Development.* RAAMP plans to improve 65 rural markets (agro-logistics centers) in the participating states. A longlist of markets has been prepared using a multicriteria analysis (Section III A). There is no comprehensive information about the number of markets in Nigeria, let alone other information of those markets (e.g., size, turnover etc.). The RAAMP preparation process has identified several issues linked to rural markets in Nigeria. They include: (a) legal and regulatory framework. who owns the markets (local government authorities or traditional rulers)? How are the ownership and occupancy of shops in the market regulated? (b) market management. Who is responsible for market management? (c) market operation and maintenance – who is responsible for the market Operations and Maintenance (O&M)? How is the O&M financed? (d) market revenues – who has the legal authority for market revenue collection? How are the collected toll proceeds used? How transparent is the collection system? What share of the market revenues is ploughed back for market O&M? (e) water, sanitation. Who is responsible for water and sanitation facilities, as well as lighting, in the market? What facilities are available in the markets? How are they managed? (f) disposal of market wastes. Who is responsible for disposal of market wastes, including solid waste? How safely are they disposed?

37. RAAMP will endeavor to address the aforementioned issues in the markets, which the project plans to improve. The market physical interventions will include: (a) construction of open market shades and multiple small-storage-facilities. The open shades will not be allocated to anyone. This will mainly serve the small farmers or producers who would like to sell a small amount of produce openly. Also, the mini storage facilities (with a single front shutter) will be leased out to small to medium female entrepreneurs. These facilities will serve farmers/sellers to store their produce till the next market days if they fail to sell the produce on a specific market day; (b) construction of any infrastructure that requires specialized handling for any produce (e.g., palm oil), for which the market is specialized; (c) concreting of market paths and construction of drainage infrastructure; (d) construction of toilets and clean water facilities. Toilets would be leased out to the private sector operator for their O&M; (e) construction of any facilities for holding the market waste on a temporary basis, until they are disposed of; (f) office facilities for the market management committee; and (g) improvement of market parking and loading facilities. The proposed interventions mentioned above are suggestions only. The interventions will be decided on



a market-by-market basis depending on the main roles the particular market plays in rural trading. The market planning and design will go through an elaborate consultation process with market users. The representation of women, small traders, small farmers who sell their produce in the market will be ensured in the consultation process. Also, RAAMP will endeavor to help improve farmers in the participating states. The IFAD supported VCDP has been working in this area. The project will help in the expansion of the Agricultural Market Information System (AMIS), being used by over 20,000 beneficiary farmers in Nigeria. The project support could include costs for training the farmers on the use of the system or for any other activities making the system operational in the participating states.

Institutional Setup and Funding

38. RAAMP Component B has been designed to tackle, among others, the sector reform and asset management challenges linked to rural transport infrastructure. Activities included in the component include: (a) setting up of a SRF in each of the participating states to facilitate sustainable maintenance financing; and (b) setting up a RARA to tackle rural road development and maintenance institutional challenges. The project will also fund the development and operationalization of the NiRTIMS in the participating states.

G. Project Governance Arrangements

39. The project governance arrangement is provided in Annex 2.

H. Risk Ratings and Explanations

Systematic Operations Risk-Rating Tool (or SORT)
<i>Risk Category and Rating</i>
<i>Political and Governance – Substantial.</i> The re-election of President Buhari will ensure continuity in currently pursued policies. It is likely that the cabinet will be formed quickly, which will guarantee a smooth transition to the new government. The relationship between the executive and legislative branches is expected to be harmonious as the President's party now controls the Senate. However, both the central and state governments will face several security challenges including the Boko Haram insurgency in the north, herders and farmers conflicts, and violent kidnappings in different parts of the country. Furthermore, the Government may be pushed to tackle the petroleum subsidies, which are hemorrhaging the country's finances. This can lead to resistance from the public and subsequent civil disorder. The implementation of the newly introduced national minimum wage will be challenging for the new governors, which may trigger actions from the labor unions. Reform momentum at subnational level may be impaired by the recent change of state governors. The change, however, also offers opportunity for new reform minded governors to embark boldly on the needed reforms. Any future political disturbance will hurt the project activities.
<i>Macroeconomic - High.</i> Nigeria's macroeconomic framework is weak and outcomes are vulnerable to domestic and external shocks. Although the country is out of the recession, the forecasted growth is modest (the economy grew 2 percent year-on-year in the first quarter of 2019) and is susceptible to oil sector shocks. The growth is driven by services and somewhat recovering agriculture, while the oil sector continues to contract. Although stable, the economy is currently experiencing a double-digit inflation (currently at 11 percent) and also a fourth of the population remain unemployed. Nonetheless, the federal government budget has been approved by the outgoing National Assembly and the foreign exchange reserves remain stable (approximately US\$45 billion). The above factors may result in counterpart funding payment difficulties, significant increase in project costs and an apathy towards reforms



Systematic Operations Risk-Rating Tool (or SORT)
<i>Risk Category and Rating</i>
<i>Sector Strategies and Policies - Substantial.</i> In end-2010, Nigeria has published the Nigeria Vision 20:2020 (NV20:2020), country's long term development goal. The government has also launched the ERGP for the period 2017-2020 in 2017. Also, the country has developed a national integrated infrastructure master plan of 2015, although there is a huge gap between the recommended transport sector investments and the current transport sector allocations in the national budget. Also, the Federal Government has published a transport policy in 2010 and an Agriculture Promotion Policy (2016-2020). However, the sector strategies and policies at the state level remain almost non-existent.
<i>Technical Design of Project - Substantial:</i> Unlike the RAMP-2, the project will not earmark funds against states. RAMP-2 lessons show that the fixed fund allocation approach can lead to an inefficient resource use. Although, each state will receive a small portion of the funds at the inception as an advance, the remaining funds will be allocated on progress. However, there is an inherent risk in this approach: it may lead to a few states consuming an overwhelming majority of funds. Also, the states may quicken the implementation of project's civil works, neglecting sector reform activities. The project design also requires the states to co-finance (Component B) or fully-finance (resettlement/involuntary resettlement) activities. Experience from RAMP-2 shows that the states may struggle to mobilize and pay counterpart funds.
<i>Institutional Capacity for Implementation and Sustainability - High:</i> The FPMU has gathered substantial experience in the management of a similar project (RAMP) and SPIUs have been set up in all participating states with adequate staff; however, these are an interim setup. This non-permanent nature of the setup makes these units susceptible to substantial staff turnover risk. Also, a majority of the FPMU and SPIU staff are seconded staff from the federal or state governments. They often lack adequate capacity and motivation. The proposed establishment of the RARA in the participating states may take some time. This can significantly affect the achievements of project objectives. The proposed project is complex and its implementation could be challenging. Specially, the implementation of agro-logistics activities along with a road improvement activity is new in the Nigerian context.
<i>Fiduciary – Substantial.</i> Although the FM risk is assessed as “Moderate”, the procurement risks are “Substantial”. This is mainly due to the general lack of state level capacity to handle procurement activities, especially development partner assisted projects. The introduction of the design-build approach adds an additional risk element. However, the FPMU has gained substantial experience in handling procurement activities under World Bank assisted projects (RAMP-1 and 2).
<i>Environment and Social - Substantial:</i> Given the limited government capacity, especially at the state level, the project necessitates great care and planning in managing both environment and social risks. On the social side, the project activities will trigger involuntary resettlements (OP/BP 4.12). It is expected that some residents along the road corridors, as well as structures, crops, and businesses, might be affected. Failure to complete compensation payments on time could undermine delivery of the project and thereby, achieving the project objective. In addition, the influx of nonlocal laborers at worksites may trigger conflict and social risks if not managed properly. It may also increase SEA/SH related risks. The risks linked to the environmental safeguards are assessed to be substantial as the project involves the rehabilitation and upgrading of existing roads in a rural setting, including ancillary activities (establishment and operation of quarries, borrow pits and workers' camp). Also, there are several other social risks that need careful management in the project, including labor influx, child labor, and GBV-related risks.
<i>Other risk - Security —High:</i> Although, RAMP-2 has faced no substantial security risks since its inception in 2013, there have been two kidnapping incidents in Osun (March 2019) and Niger (April 2019) states in 2019. In both incidents contractors' international site staff were kidnapped, although they were subsequently released.
Overall —High



ANNEX 2: IMPLEMENTATION ARRANGEMENTS

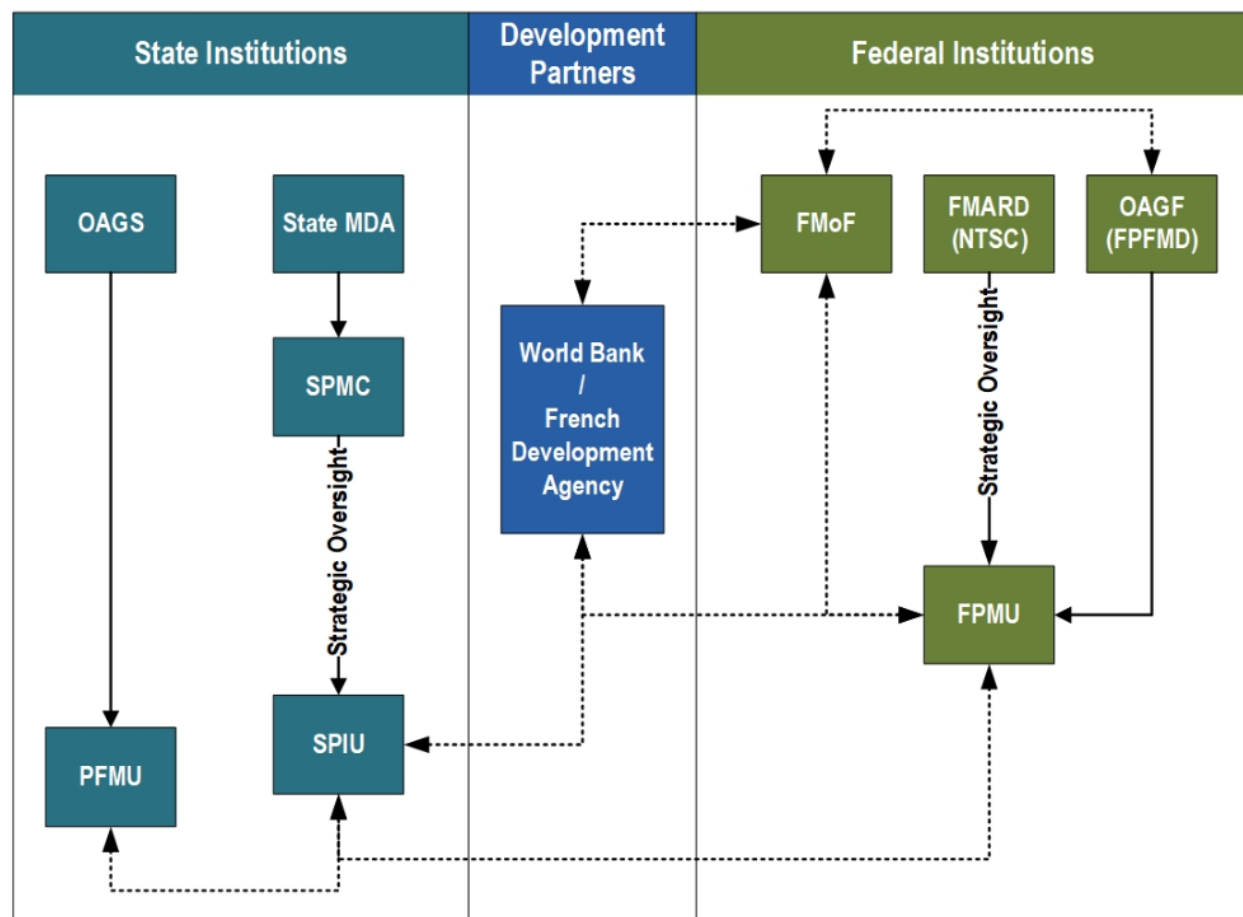
1. The project implementation arrangement is built on the institutional arrangements adopted for RAMP-2 (P095003). Participating states under the relevant ministries (State Ministry of Agriculture and Rural Development or State Ministry of Works or anchoring ministries, departments and agencies; see the list of anchoring MDAs at the end of this annex) have established SPIUs. These units will be responsible for the implementation of the operation in their respective states. At the federal level, the FPMU, under the FMARD, will coordinate, supervise and monitor project implementation, barring FM responsibilities, which will be handled by the FPFMD. The FPMU set up for RAMP-2 will take over RAAMP implementation responsibilities as well. Legal obligations of federal and state governments project entities will be detailed in the financing agreement to be signed between the Association and the Federal Government and in the subsidiary agreements to be signed between the Federal Government and participating states. The AFD will sign a separate financing agreement with the Federal Government. The AFD will disburse funds directly to the Federal Government, while the project will be implemented applying World Bank policies and guidelines, including procurement and safeguards policies and guidelines.

2. **Error! Reference source not found.** provides a schema of RAAMP governance arrangements. FPMU at the federal level and SPIUs at the state level will be the focal points of project implementation. Apart from shouldering implementation activities at the federal level, FPMU provides overall guidance to the SPIUs on the project implementation and will also be responsible for due diligence processes. Apart from FPMU, SPIUs and the external financiers (the Association and the AFD), main entities that will have distinct roles in the project will include: Federal Ministry of Finance (FMoF); Federal Ministry of Agriculture and Rural Development (FMARD); Federal Project Financial Management Department FPFMD); Federal Project Management Unit (FPMU); National Technical Steering Committee (NTSC) of the FMARD; Office of the Accountant General of the Federation (OAGF); state level Anchoring MDAs responsible for RAAMP; Office of the Accountant-General of the State (OAGS); Project Financial Management Unit (PFMU); and State Project Monitoring Committee (SPMC). The PIM provides main project roles of institutions supporting the project.

3. *Relationship between FPMU and SPIUs.* The FPMU is responsible for the overall coordination of the project and providing technical support to participating states. Also, the federal unit will be responsible for the overall due diligence of all documents and reports submitted by the SPIUs. All requests from the states to the funding agencies will be channeled through the FPMU. The FPMU will ensure that the submitted documents, be they a reimbursement request, a technical report or a financial report, are in order and within the project scope. SPIUs will submit a copy of the relevant request to the Association and other financiers, if relevant, for its record. The FPMU will maintain a register of requests with action updates. The pending requests will be discussed with the Association in a monthly meeting to be held between the FPMU and the Association, and AFD. Representatives from the states may also join the monthly meeting if any specific need arises. The monthly meeting decisions will be recorded in the meeting minutes and will be shared with the states and the external financiers. The FPMU will receive technical support from the project for carrying out due diligence and other responsibilities. The technical support will include, among others, a full-time international adviser and two national advisers (one of them will be responsible for northern states and the other one for southern states). These national advisers will be based in one of the states they are responsible for.



Figure 3: RAAMP Governance Arrangements



Note:

FMARD- Federal Ministry of Agriculture and Rural Development; FMoF- Federal Ministry of Finance; FPFMD- Federal Project Financial Management Department; FPMU- Federal Project Management Unit; MDA- Anchoring Ministry, Departments and Agencies; NTSC- National Technical Steering Committee; OAGF- Office of the Accountant General of the Federation; OAGS- Office of the Accountant-General of the State; PFMU- Project Financial Management Unit; SPIU- State Project Implementation Unit; SPMC- State Project Monitoring Committee;

Legends:

←---Lateral Communication---→
——Downward Communication——→

4. The FPMU will operate under the strategic oversight of a NTSC within the FMARD. This Committee is chaired by the Permanent Secretary of FMARD. Technical ministries are represented in this committee, as well as the coordinators of all Association-financed agriculture and infrastructure programs in FMARD. The NTSC's oversight function will include: (a) ensuring proper alignment between RAAMP and other FMARD programs and initiatives; (b) reviewing implementation progress; and (c) providing guidance to FPMU on strategic issues (e.g. program's scaling up, communication, dissemination of best practices). The



NTSC will meet at least every six months.

5. In each of the participating states, a SPMC will be responsible for monitoring and oversight functions of the project. The Permanent Secretary (PS) of the relevant ministry will chair the committee. Members of SPMC may include, apart from state officials, representatives from academia, professional associations, private sector and civil society within the state. The SPIU will provide secretarial support to the SPMC. The SPMC may co-opt technical members to provide specialized support to the committee.

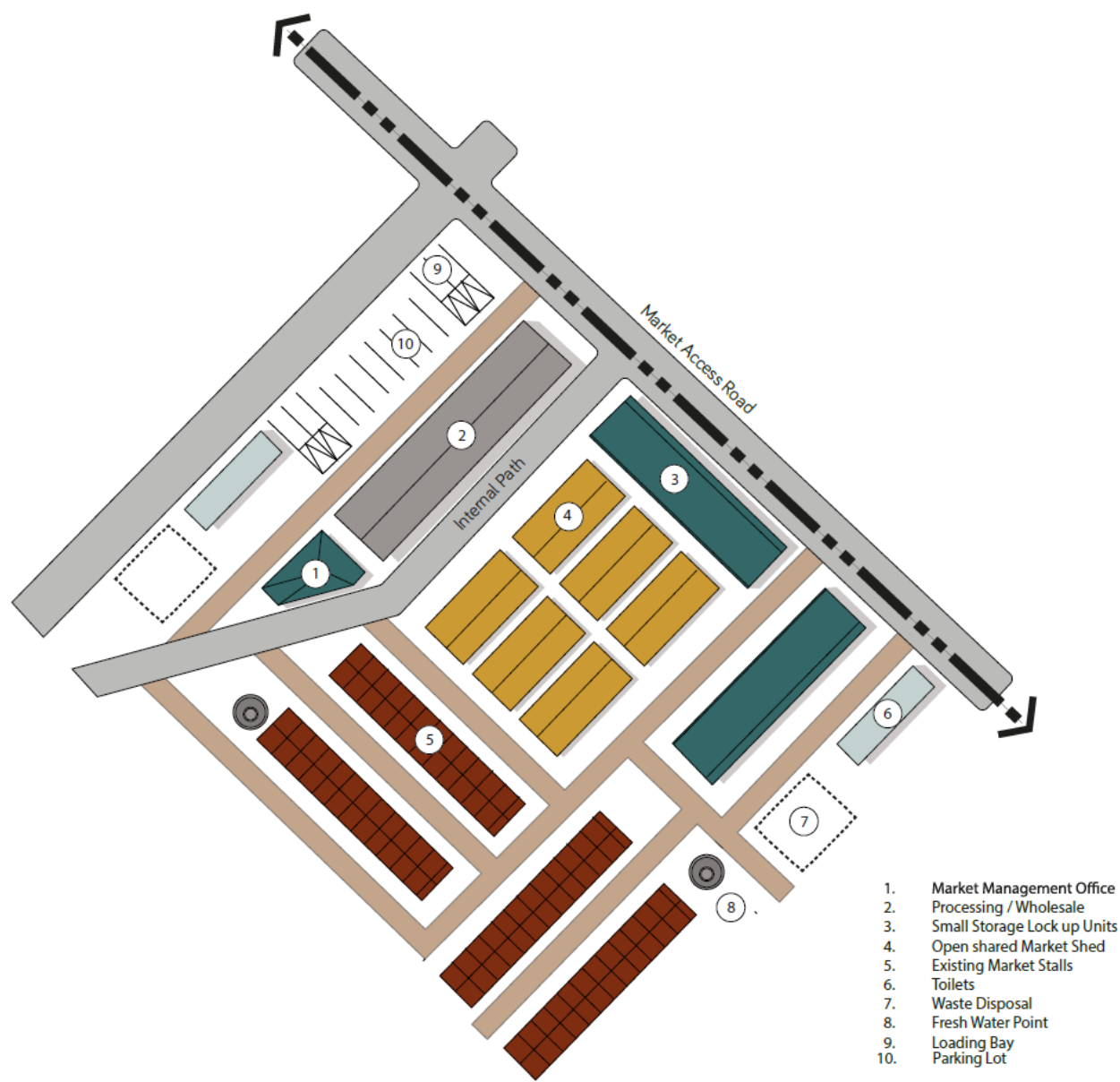
6. *Third-party Technical Audit:* The objective of the technical audit is to ensure that (a) intervened roads and agro-logistics facilities meet agreed design and quality standards; (b) the constructed roads and centers, indeed, satisfy the value for money proposition; and (c) the adopted quality assurance processes are robust and provide sufficient assurances that the outputs are of adequate quality standards. The audit process will also examine whether the road and market designs facilitate physical access for persons with physical disabilities. Given the large number of interventions expected under the proposed project, a technical audit of a sample of civil works will be undertaken. The sample size will be determined using acceptable sampling theories and the samples will be drawn randomly. The sampling will ensure that all types of civil works are represented in the drawn sample (using stratified sampling techniques). The terms of reference of the third-party technical audit will have to be agreed with the Association before the engagement of the technical audit fund.

7. *Engaging with Higher Education Institutions:* The states will be encouraged to link up with the state level educational institutions, especially universities located within the states. This will help in linking the universities with ongoing technical and management practices. The SPIUs will be encouraged to establish a panel of experts, which will consist of relevant educational staff of the universities. The panel will work with the states in providing appropriate solutions to rural transport and agro-logistics issues faced by the states. The envisaged areas where the panel can advise the state government include appropriate low-cost road surfacing, improving value chain of particular products that the state produce in large scale, road maintenance planning and management, road safety, gender analysis and GBV assessment and mitigation.

8. *Project Implementation Manual (PIM)* - The PIM is being prepared by the FPMU based on the one in use for by the RAMP-2 states, as updated for Imo State. The PIM will be comprehensive, containing detailed planning, implementation and M&E procedures including: (a) project component descriptions; (b) implementation arrangements clearly showing roles of FPMU, SPIU and other actors; (c) guidance on road and agro-logistics interventions; (d) consultancies, studies and TAs envisaged under the project; (e) safeguards, procurement, FM arrangements and risk mitigation measures; (f) reporting requirements; and (g) grievance redressal, GBV/SEA and security risk mitigation measures.



ANNEX 3: AGRO-LOGISTICS CENTER CONCEPTUAL DRAWINGS



Conceptual Market Improvement Plan



Open Sheds and Mini Storage Facilities



Wholesale Facilities and Parking/Loading Bays



ANNEX 4: FINANCIAL MANAGEMENT ARRANGEMENTS

Financial Management and Disbursements

Financial Management.

1. An FM assessment of the implementing entities, in line with the Financial Management Manual of February 2017, was carried out in March 2019. The objective of assessment was to determine whether the implementing entities have acceptable FM arrangements in place that satisfy the World Bank's IPF policy and directive in order to provide the following assurances: (i) all transactions and balances relating to the project to be correctly and completely recorded; (ii) the preparation of regular, timely, and reliable financial statements; (iii) safeguarding of the entity's assets; and (iv) existence of auditing arrangements acceptable to the Association.
2. RAAMP project implementation arrangements will build on the institutional arrangements adopted for the Second Rural Access and Mobility programs or RAMP-2 (P095003). The project, at the federal and state levels, will be implemented by the FPMU under the FMARD and the SPIUs respectively. The FPMU has already been set up and is currently implementing the RAMP-2 project. Also, the SPIUs have been functioning in all 13 RAAMP states.
3. The Financial Management (FM) functions will be carried out at the federal and state levels by the FPFMD and project FM units (PFMUs), in the participating states, respectively. The FPFMD and PFMUs are multi donor and multi project FM platforms, established at the federal level and in the states respectively through a joint effort of the World Bank and the Government. These units are currently involved in the implementation of several World Bank-assisted projects. The World Bank's recent reviews showed that the FPFMD and PFMUs were performing satisfactorily. Further to the recommended action plans being implemented, the FM arrangements meet the minimum FM requirement in accordance with World Bank's policy directives for IPF.
4. The FM risk for this project has been assessed as "Moderate". This is based on the assessment of FPFMD and PFMUs, which are existing structures, the Financial Procedures Manual, and implementation of the FM action plan, as well as thorough follow up and implementation support. The FM risk will be reviewed during project implementation and be updated as appropriate.

Planning and Budgeting

5. Budget preparation will follow the federal government or state government procedures. Financial projections/forecasts/disbursement plans for the life of the project (analyzed by year) will be prepared before the start of project activities. On an annual basis, the project accountants, both at federal and state levels, in consultation with key team members, will prepare budget for the coming year based on the work program approved by the Association. The annual budget and work program will be sent to the task team leader at least two months before the beginning of the calendar year. Detailed procedures for planning and budgeting will be documented in the PIM and the financial procedures manual, which are being prepared.

Internal Control and Internal Auditing

6. The project management will be responsible for ensuring proper internal control arrangements in the project. The FM staff will be appointed by each State Accountant General and the Accountant General for the Federation. The control features at the FPFMD and PFMUs include the following: (a) a comprehensive Financial Procedures Manual covering all the key elements of FM, i.e. budgeting, funds



flow, accounting, internal control, reporting and audit; (b) computerized accounting system; (c) qualified staff that have been trained in relevant World Bank procedures and requirements; (d) robust segregation of functions/duties; (e) a strong control environment, which is required to mitigate fiduciary risks; (f) highly independent and well-trained internal auditors; and (g) full alignment with the Government's own FM system with some important enhancements and controls. A risk-based review of project activities will be carried out by the internal auditors (assigned by the Accountant General both at the federal and state levels). Reports of the internal auditors will be shared with the FPFMD at the federal level and with PFMU in respective states and the Association on a quarterly basis.

Accounting

7. The project implementation units, at the federal and state levels, in conjunction with FPFMD and PFMU will account for project funds on a cash basis, with separate records maintained to record and track commitments and assets. Accounting records will be maintained in dual currencies (i.e., US\$ and NGN). All accounting and control procedures applicable will be documented in the Financial Procedures Manual, regularly updated by the FPFMD/PFMU, adopted by the FPIU/PIU and shared with the Association-and the Government (FMoF, State Ministry of Finance, Office of the Auditor General for the Federation (OAuGF) and FMARD/state MDA responsible for the project).

The chart of accounts

8. The chart of accounts will facilitate the preparation of relevant monthly, bi-annual and annual financial statements. This function has been working well in the existing accounting software, namely Flexible, for RAMP-2. Information captured in the chart of accounts will include the following:

- a. Financial contribution from all sources
- b. Expenditure on each project component and activity
- c. Assets and outstanding liabilities as at the end of each reporting period

Financial Reporting

9. The FPFMD and PFMU will prepare annual audited financial statements and periodic unaudited IFRs in a content, format and frequency satisfactory to the Association. The computerized accounting system, Flexible, will be configured to produce the IFRs and the annual financial statements in the required formats for this project.

(a) *Financial Report.* Calendar semester IFRs will be prepared by the FPFMD and the PFMUs. The PFMUs will submit IFRs to the FPFMD not later than 30 days after the semester end while the FPFMD will consolidate IFRs for all PFMUs and the FPFMD for submission to Association within 45 days of the end of each calendar semester. Interim Financial Reports will include information provided for the period and cumulatively for project life and year to date. The content of the IFR will include the following;

- Sources and uses of funds (all sources including the Association, the AFD and counterpart);
- Uses of funds by project component and expenditure category;
- Special account and Draw down account activity statement;
- Bank reconciliation report; and
- Bank statements.



(b) *Annual Financial Statements.* FPFMD will prepare and submit consolidated project annual financial statements (AFS), for the whole project, to the Association within six months of the end of the government financial year i.e., no later than June 30 of the following year. These statements will be prepared in accordance with applicable International Public Sector Accounting Standards (IPSAS). The contents of project financial statements will include the following:

- A statement of funds received, showing funds from the Association, project funds from other donors and counterpart funds separately, and of expenditures incurred;
- A summary of the activity in the special account and draw down account;
- A Balance Sheet;
- A Summary of the principal accounting policies that have been adopted, and other explanatory notes;
- A list of material assets procured to date with project funds; and
- As an Annex to the AFS, project accountant should prepare a reconciliation of the amounts as “received by the Project from the Association”, with those shown as being disbursed by the Association which will be subject to audit.

External Auditing

10. The FPFMD will appoint a relevant, experienced, competent and independent external auditor based on Terms of Reference acceptable to the Association to perform the project audit. The scope of the audit will cover the consolidated annual financial statements from all the participating states and the FPCU. The auditor will express an opinion on the annual financial statements in compliance with International Standards on Auditing (ISA). Additionally, the external auditors will prepare management letter giving observations, comments, and providing recommendations for improvements in and compliance with financial covenants in the financing agreement agreed between the Association and the Government. The audit report will be prepared and submitted to the Association within six months after the end of each financial year. Once concluded, audit reports will be submitted to Association by the client, copies will be shared with the AFD. In addition to the annual financial statements, the audit report will include the following:

- Project information and performance
- Statement of project management responsibilities
- Report of the independent auditor

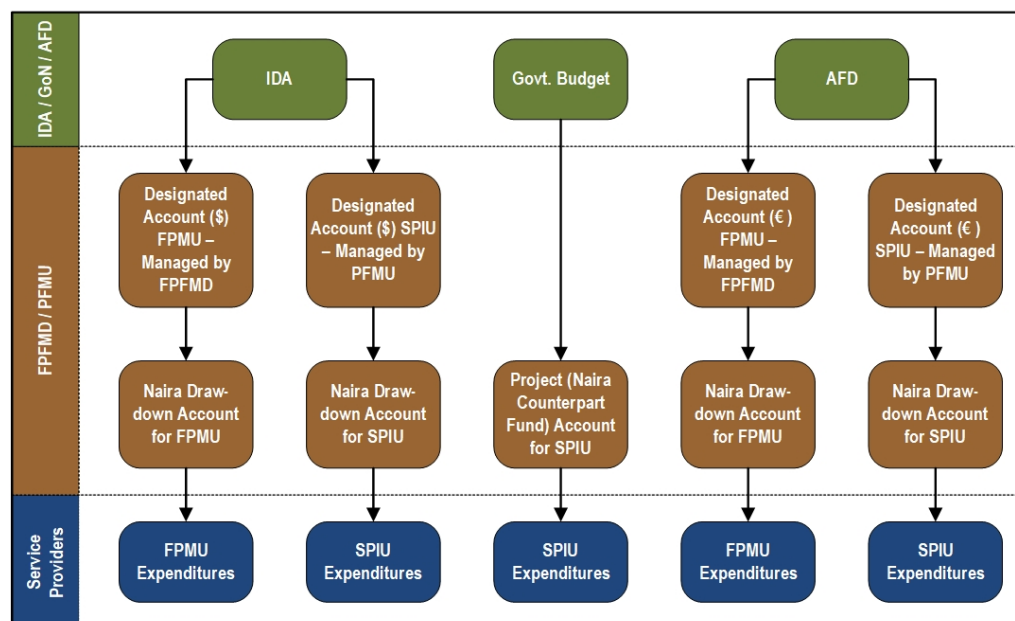
Funds Flow and Disbursement/Banking Arrangements

11. Project funding will consist of the Association credit, AFD and Government Counterpart Funds. The Association and AFD funds will be administered separately by each of the financiers. Segregated designated accounts will be established for the Association and AFD financing at the federal level. The FPFMD on behalf of the FPMU will open a project Designated Account with the Central Bank of Nigeria. In each participating state, the PFMU will establish separate accounts (US\$ and NGN draw down for the Association and Euro and NGN draw down for the AFD) and counterpart funds (NGN) in a commercial bank acceptable to the Association. All project funds will be used in line with the project activities as defined in the Financing Agreement and for activities contained in the approved work program and budget for each year. Details on disbursement procedures will be included in the Financial Procedures Manual. **Error! Reference source not found.** provides an illustration of the flow of funds.



12. The Disbursements from the Association will be made based on incurred eligible expenditures (transaction-based disbursement procedure). The federal level and individual states will directly submit withdrawal applications to the Association.

Figure 4: Illustrative Funds Flow Diagram



13. The total disbursement from the AFD credit, for any single withdrawal/transfer to the Federal Government, will not be lower than Euro 3 million. If several smaller withdrawal requests with a total sum of over Euro 3 million are required, all withdrawal applications should be submitted on the same date. The Association and the AFD will work out the disbursement arrangement and incorporate it into their respective financing agreement.

Bank Account Signatories

14. Authorized signatories will consist of panels (A and B). One signatory from each panel will jointly sign project financial documents. The signatories for FPMU and SPIUs are provided below.

Federal Project Management Unit (FPMU)

Panel A

Project Coordinator, main, and an officer not below the rank of a director from the parent ministry as an alternate.

Panel B

The Director FPFMD as main, and Deputy Director/Sector Head FPFMD as alternate I, and Project Accountant as II.

State Project implementing Unit (SPIU)

Panel A

Project Coordinator, main, and an Officer not below the rank of a director from the parent ministry as an alternate

Panel B

The Head PFMU, main, and Project Accountant, Alternate



15. Table 10 below provides the amount of credit allocated under different categories.

Table 10: Allocation of Credit

Category	Amount of the Credit Allocated (expressed in SDR)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, works, non-consulting services and consulting services for Part A of the Project	100,005,000	54%
(2) Goods, works, non-consulting services and consulting services for Part B of the Project	80,470,000	44%
(3) Goods, works, non-consulting services, consulting services, Training and Operating Costs for Part C of the Project	18,125,000	56%
(4) Emergency Expenditures under Part D of the Project (i.e., CER Part)	0	100 %
(5) Refund of Preparation Advance	4,400,000	Amount payable pursuant to Section 2.07 of the General Conditions
TOTAL AMOUNT	203,000,000	



ANNEX 5: GENDER, LABOR INFLUX, SEXUAL EXPLOITATION AND ABUSE, CITIZEN ENGAGEMENT, ROAD SAFETY AND SECURITY

I. Gender

1. Rural road and agro-logistics activity improvements, along with the improvement of agro-logistics centers, are expected to help local economic growth through improved connectivity and agriculture value chain improvements. However, various constraints can limit its potential benefits to some population groups, including women. The project will endeavor to ensure that the benefits of the program are equitably distributed, and especially that the needs of women as road users and value-chain operators are addressed. This will, in turn, contribute towards gender equality and closing gender gaps in employment.
2. In Nigeria, gender inequality is significant, especially in terms of access to services and participation in economic activities. The inequality is more prominent in the north than in the south of the country. The World Economic Forum has ranked Nigeria 133 (among 149 countries) in the 2018 Global Gender Gap Report¹⁵. The gender inequality situation appears to be getting worse: Nigeria ranked 94 out of 114 countries in 2006, when the gender gap report was first published. With 35 more countries added since the inception of the report, Nigeria has moved down 41 places. Also, the 2018 rank was eleven places behind the previous year. Women in Nigeria earn approximately three-fourths of what men do for similar work. Due to lower wages and less paid hours worked, women's income is approximately two-thirds (65 percent) of men. In agriculture, women earn and produce less than men, and have limited access to land, inputs, labor, and extension services. Even among the elite and in the public sphere, women lag behind men.
3. Unemployment and underemployment were higher for women than for men, as per the statistics by the National Bureau of Statistics. In the Q4 of 2016, 16.3 percent of women in the labor force (those between ages 15–65 years willing, able and actively working or searching for work) were unemployed, and a further 24.2 percent of women in the labor force were underemployed. Comparable figures for men were 12.3 percent and 17.9 percent respectively. However, there are a couple of silver linings with regard to women's employment and their business status. The proportion of females employed in the civil service is not hugely different from the proportion of males: in 2015, the proportion of females employed in junior and senior civil service positions were approximately 47 percent and 45 percent respectively. The comparable figures for men in 2015 were, respectively, approximately 31 percent and 37 percent. Women are well-represented when it comes to starting a business in Nigeria, as per the 2013 Global Entrepreneurship Monitor Annual Survey¹⁶. Females run 41 percent of early stage businesses as opposed to 39 percent for males, making Nigeria the highest concentration of female business owners.
4. The construction sector is a major source of employment in Nigeria and one of the sectors with the highest employment potential. The recently (June 2019) produced World Bank's Systematic Country Diagnostics study report concludes that: "Sectors with the highest employment potential include light manufacturing, construction, ICT, ... and cocoa". In 2017, the construction sector contributed 3.72 percent to GDP and its growth far exceeded the overall GDP growth (4.14 percent compared to the overall growth of 0.8 percent). The employment gap is broader in the construction sector. Women represent only 6

¹⁵ http://www3.weforum.org/docs/WEF_GGGR_2018.pdf

¹⁶ <https://harambeetoday.org/images/PDFS/GEM2013Report.pdf>



percent of the labor force against an overall figure of just over 43 percent for Nigeria in 2008.¹⁷ Female workers remain concentrated in certain occupational sectors such as education, health and service sectors, notably banking, insurance and the retail trade. This means construction continues to be a mostly male-dominated industry. Some of the main barriers for women to participate in the construction sector include society's (negative) perceptions towards women working in the sector, low level of women's self-confidence and inflexible and harsh working conditions.¹⁸

5. There is also a gender issue in the agriculture sector. Women contribute approximately 37 percent of labor in crop production, according to a recent World Bank report. Plots owned or managed by women (who control a quarter less of all cultivated plots) are less likely to receive modern agricultural inputs. Gender differences in agriculture can lead to losses in productivity and food security, while, on the other hand, increasing crop productivity will have an impact on the rural poor, including women, who account for 60-90 percent of the rural labor force.

6. The proposed project will endeavor to fill this gender gap by employing women in project activities. The project sets a target of employing at least 30 percent women as road maintenance crews. This is a sizable target given that the current level of female employment in the construction sector is marginal (see the paragraph above). The target could have been at least a half, but due to cultural and religious reasons it might be difficult to achieve substantial female employment in northern states. This is why the target is kept just about a third.

7. Apart from ensuring adequate participation of women as road maintenance crews, other project activities to ensure that the project benefits are accrued equitably include: (a) women's participation in market design, with an objective that the market designs address issues specific to women as market users and traders; (b) directing project support to the small and medium enterprises with an emphasis towards female entrepreneurs. The support activities will include providing training on access to finance, modern business practices, accounts management, etc.; and (c) the allocation of mini shops cum storage facilities, to be developed under the project, exclusively to female entrepreneurs. The project will also promote community dialogue and behavioral change interventions to prevent any form of violence that could be derived from women's economic empowerment.

8. In addition, the project will continuously look for opportunities to minimize gender gaps during its implementation. The RAAMP plans to commission a study that will focus on improving gender aspects of the project. The study will cover, among others, how to maximize the participation of women in the rural transport and trading sectors (for example, extending employment opportunities in skilled and unskilled jobs). It will also review the current road and market design practices in order to examine their suitability from a woman's, as well as persons with physical disabilities, usability perspective. The study outputs will contain an action plan on gender to be implemented under the project. These outputs will also benefit future rural transport and trading infrastructure operations in Nigeria. The planned project impact studies (Section IV B) will present the study results disaggregated by different gender (as well as social) groups, which will help to measure the project's impact on females. This will help to support the development of policies to maximize benefits of future interventions for women.

¹⁷ Jimoh A. et.al. (2016). "Women professionals' participation in the Nigerian construction industry: finding voice for the voiceless." *Organization, Technology and Management in Construction*. p. 1430.

¹⁸ Jimoh A. et. al. (2016). *Op. cit.* Washington: World Bank.



II. Labor Influx, Sexual Exploitation and Abuse, and Occupational Health and Safety (OHS)

9. The World Bank has conducted a detailed assessment for all its operations in Nigeria, with an objective to identify GBV related risks and to provide general recommendations for their mitigation. The assessment has provided a joint risk score as “High”, considering the country-level violence and project-related risk contexts. In the project context, given the importance of the issue, the size and scope of the proposed project and difficulties in measuring and mitigating GBV risks, specifically arising from SEA and SH at the workplace, the overall risk level has been assessed as “High” as well. Recommendations of the World Bank’s *Good Practice Note Addressing Gender Based Violence in Investment Project Financing Involving Major Civil Works* were taken into consideration while designing the risk mitigation measures. The background and analysis details of the GBV in RAAMP are provided in the subsequent paragraphs.

10. The GBV is prevalent in Nigeria, although not as extensive as in other countries in the region. The National Demographic and Health Survey (2013) quoted intimate partner violence and sexual violence figures as at 16.2 percent and 7.4 percent respectively. According to this 2013 survey, 25 percent of ever-married women (aged 15–49 years) report having experienced emotional, physical, or sexual violence from their spouse, and 24.8 percent of females and 10.8 percent of males (aged 18–24 years) experienced sexual abuse prior to 18 years of age. Almost half of women (45.5 percent), in non-cash paid employment, have experienced GBV. To note, unemployed women are least likely to suffer physical violence. Help-seeking tendencies are low in Nigeria. Almost half of women (45 percent) who have experienced any type of physical or sexual violence never sought help and never told anyone about their experience.

11. The legal framework against domestic and sexual violence is adequate, if not robust, in Nigeria. The Constitution of the Federal Republic of Nigeria (1999) enshrined “the rights of human”. The Constitution has stated that, “[N]o person shall be subject to torture or to inhuman or degrading treatment”. Nigeria has also enacted legislation entitled “Violence against Persons (Prohibition) Act 2015” that prohibits all forms of violence in private and public life and provides maximum protection and effective remedies for victims and punishment for offenders. However, the legislation is yet to be ratified by all states of the federation. Nigeria has developed a National Action Plan for the implementation of UN Resolution 1325 (on women and peace and security) in 2015 with an objective to address and respond to the immediate and long-term needs of women before, during, and after conflicts.

12. Although the overall level of SEA risks is “High”, labor influx risks for the project have been assessed as “low to medium”. The project will implement three types of physical works: upgrading of rural roads, maintenance of rural roads and improvement of agro-logistics centers. The civil works contracts will be small to medium-sized and will be implemented in rural areas. Nigeria has high population density and rural areas are not sparsely populated. Settlement patterns are, generally, in a cluster of households. Given the contract size and implementation locations (rural), it is expected that an overwhelming majority of contractors will be local and they will engage laborers from local communities. These factors will mitigate against many labor influx risks. Nonetheless, in some cases (especially in medium-sized contracts), the contractors might engage non-local laborers, especially skilled laborers. This may have some labor-influx impacts. Furthermore, SEA risks may also be relevant even in the absence of the non-local laborers. This is as the spare cash earned by the local laborers (especially young laborers), combined with the prevailing situation regarding violence against women and girls, may increase the propensity of committing such crimes. Besides, the project physical works will mainly be implemented in poor rural areas that have low adjustment capacity, which might create potential power imbalances in the adjacent communities.



13. The project construction sites are expected to employ female laborers, although their numbers might not be overwhelming. Females are generally engaged as unskilled laborers at construction sites in Nigeria. They are mainly young to middle-aged women, as these jobs are physically demanding. There is no empirical evidence to support the notion that female workers at construction sites in Nigeria are subjected to overwhelming SEA/SH. Nonetheless, it is reasonable to assume that women face some form of sexual violence in these worksites. The project has devised a plan to counteract these SEA/SH risks following a set of principles, which are explained below.

14. The measures that will be adopted in the project to mitigate against SEA/SH risks are based on the following principles: (a) a “do-no-more-harm” approach and proactivity in mitigation and response measures; (b) it may not entirely be possible to mitigate against all SEA risks and, therefore, the project will aim to minimize these risks; (c) all measures will have a survivor-centered approach¹⁹ as a guiding principle; (d) the World Bank will act as a catalyst by bringing in all actors together for effective prevention and mitigation of SEA risks; (e) The Government will lead the risk prevention and mitigation efforts using its existing administrative structures and legal avenues; (f) the involvement of local government and community-based organizations will be maximized; and (g) mitigation and response measures will be built on experience gained by different NGOs and development partners. Also, outputs from the on-going GBV mapping study will be used in the design of mitigation measures.

15. Given the nature and extent of SEA risks, they can be managed through Environmental and Social Management Plans and adequate monitoring²⁰. These measures will be complemented by an effective grievance redress mechanism to detect unanticipated or recurring problems and to manage them. The project has identified the following summary measures to counteract the labor-influx and SEA/SH risks: (a) *Defining contractual obligations*. This will include the signing of the codes-of-conduct, which will define the obligations regarding SEA within the community and worksites by contractor and consultant’s personnel; (b) *SEA specific Grievance Redress Mechanism*. The project will use an independent GRM mechanism given that the regular project specific mechanism may not be effective in this case and the confidentiality requirements; (c) *GBV/SEA Capacity Building*. RAAMP will support GBV/SEA capacity building at the FPMU and SPIU levels. Adequate TA support has been kept in the project for this. Each state plans to hire a GBV support consultant to assist the state in mitigating GBV risks. The FPMU and four states have already hired the GBV consultants; and (d) *Monitoring and Coordination*. The project has been conducting GBV mapping to assess the support mechanism that exists for SEA victims in three states. This exercise will be concluded before the project’s effectiveness. GBV mapping will be undertaken in remaining states. RAAMP will also employ a third-party (an NGO or a UN agency, scope of which is being explored) to provide exclusive support to SEA victims and to assist the project in the monitoring and mitigation of labor-influx and SEA/SH risks.

16. Ensuring worker safety at construction sites is a not a top priority in Nigeria. It is difficult to establish the level of construction site accidents in Nigeria. This is because the contractors are not obliged to report safety incidents and accidents to the appropriate ministry, nor do they keep proper records of such incidents. Only major incidents which lead to fatalities are known. For instance, the collapse of a church building under construction in Lagos in 2014, which killed 80 people, was widely reported in the media. The lack of construction site accident information does not mean that such incidents are infrequent and construction sites are safe. It is common to find construction workers working at

¹⁹ A survivor-centered approach means that all engaged in addressing GBV prioritize the rights, needs, and wishes of the survivor.

²⁰ See “Managing the Risk of Adverse Impacts on Communities from Temporary Project Induced Labor Influx”: <http://pubdocs.worldbank.org/en/497851495202591233/Managing-Risk-of-Adverse-impact-from-project-labor-influx.pdf>.



construction sites without any protective gear in Abuja, the federal capital, let alone in rural areas. Standard contract documents have clauses on ensuring safety of workers at worksites. However, the enforcement is almost nonexistent. RAAMP plans to tackle OHS issues at project sites comprehensively.

17. Apart from the labor-influx, SEA/SH and worker construction site safety risks, the proposed project will face other risks, including use of child laborers and community health and safety at construction sites (including risks to children living nearby who visit the sites, traffic accidents due to increased construction traffic activities, inadequate waste disposal, etc.). The project has developed an action plan that identifies measures to mitigate the labor-influx, SEA/SH, occupational and community health and safety risks. The plan is provided in the PIM.

III. Citizen Engagement, Stakeholder Engagement Plan and Communication Strategy

18. The project has opportunities, as well as constraints, in ensuring citizen engagement for transparency and accountability. The opportunities include strong local support for the project, as evidenced from a political economy analysis, carried out as part of the project preparation. There are several limitations that limit the operationalization of extensive citizen participation in the project. The project is spread over wide non-contiguous geographical areas and are expected to have many contracts ranging from small-size maintenance to medium-size road upgrading and market improvement, which present operational constraints to citizen engagements. Also, citizen engagement is, often, regarded as inviting 'public nuisance', or even, as an extra layer of rent seekers. These factors are considered in the design of citizen engagement measures.

19. The political economy analysis has identified the project stakeholders along with the political economy risks they pose. The risks include undue interferences in the selection of project interventions (especially roads upgrading and agro-logistics hub improvement activities), in the bidding process, ethnic and political bias and in undermining citizen engagements to reduce the project's transparency and accountability to protect vested interests.

20. The citizen engagement measures are designed based on several strategies. The strategies include: (a) maximizing the engagement of stakeholders (both project affected and other interested parties) in the design and monitoring of the project activities; (b) maximizing the transparency of project activities; (c) ensuring two-way communication between the project and the stakeholders; (d) making the most of the use of technology while designing the measures, as well as capitalizing on the use of electronic and print media to facilitate the engagement of citizens; and (e) devising and implementation of a plan for effective stakeholder engagement.

21. RAAMP will engage effectively with the project stakeholders during its implementation. The project will develop and implement a stakeholder engagement plan. The engagement plan will include the timing and method of engagement with stakeholders (both project-affected parties and other interested parties as identified in the political economy analysis study). Methods for engagement and communication with disadvantaged or vulnerable groups will also be a part of the plan. The identified citizen engagement measures, if found feasible, will be subsumed into the stakeholder engagement plan. The project will continue the implementation of the citizen engagement measures until the finalization of the stakeholder engagement plan.

22. Measures that have been devised for effective citizen engagement to foster project transparency and accountability are provided in Table 11.



Table 11: Citizen Engagement Measures

Risk Mitigation Measures	Whose responsibility ?	When?	Where?	Remarks
1. Communication strategy development	SPIUs and FPMU	Within six-month of project effectiveness	State and federal levels	<ul style="list-style-type: none"> The objective is to identify and implement strategy for effective stakeholder communication; The strategy will also include an action plan that will identify activities with responsibilities, time frame and indicators for the verification of activity completion; Lessons learned from relevant projects in Nigeria will be included in the strategy²¹; The strategy will maximize the use of ICT and social media platforms apart from devising strategy for those who do not have access to internet.
2. Sensitization of the key stakeholders	SPIUs and FPMU	At the project inception (within three months of project effectiveness)	State and federal levels	<ul style="list-style-type: none"> The objective is to sensitize the key stakeholders on different project aspects in order to facilitate the project implementation. Key project stakeholder (including high-level politicians, senior government officials from key MDAs, representatives of the civil society organizations, press, and media and local government representatives) will be invited. A short video will be prepared, which will summarize the project objectives, interventions, and the planning and implementation processes. A brief booklet that will summarize the project approach will be distributed.
3. Annual Public Meetings (Town-halls)	SPIUs	Annually	State level	<ul style="list-style-type: none"> The objective will be to inform the general public on the project progress, future plans and to respond to any grievances instantly, if feasible. Will ensure two-way communication State political leaders (including the State Governor), relevant representatives of the state MDAs, SPIU officials should attend the meeting;

²¹ Mainly Erosion & Watershed Mgt Project (P124905) and Third National Fadama Development Project (P096572).



Risk Mitigation Measures	Whose responsibility ?	When?	Where?	Remarks
				<ul style="list-style-type: none"> The meeting should be publicized extensively to ensure wider participation by project stakeholders; Meeting details will be electronically captured and will be uploaded on project website; Local media to be invited to the meeting.
4. Consultation on agro-logistics hub design.	SPIUs	During the design of the agro-logistics hubs	Agro-logistics centers	<ul style="list-style-type: none"> The objective is to ensure that the agro-logistics center designs fulfill requirements of all users irrespective of their social status, gender groups and persons with physical disabilities. To be attended by the design team and the all market users including women; Design discussions will mainly consider location of all facilities and services planned under the project, consultation mechanism during the implementation of hubs, and inclusion of gender and persons with physical disabilities related requirements; and The decisions should be captured in the consultation minutes.
5. Display of signboards and complaint registers at contract sites	SPIUs	Within seven days of the mobilization of the contractors	At the construction sites	<ul style="list-style-type: none"> The objective is to improve project transparency and governance, and to facilitate lodging of grievances. Worksites over a value of NGN 5million (US\$14,000) will have a signboard; The signboard will contain summary information regarding the subproject including the name of the project, name of the implementing organization, contract amount, contract completion date, name of the official, along with contact details for registering complaints, and restrictions regarding engagement of child laborers; Each project site will contain a complaint register which will be used for registering complaints from the general public.



Risk Mitigation Measures	Whose responsibility ?	When?	Where?	Remarks
6. Inception meetings with local communities	SPIUs	At the inception of a sub-project	At the project site	<ul style="list-style-type: none"> The objective is to improve local ownership of project interventions. The SPIU team will brief local community on the sub-project activities including the type of works to be undertaken by the contractors, grievance registering mechanism; Help could be sought from local public in mitigating security risks; Meeting venue and time should be widely advertised.
7. Local disclosure of the project information	SPIUs	At least annually	Local media	<ul style="list-style-type: none"> The objective is to improve transparency of project interventions and accountability; Dissemination of state level project plans and achievements using local newspaper(s) and community radio(s), if available; Organizing yearly question and answer sessions for the state project coordinator using local community FM radio, where available;
8. National disclosure of the project information	FPMU	At least annually	National newspaper	<ul style="list-style-type: none"> The objective is to improve transparency of project interventions and accountability; Dissemination of overall project plans and achievements using national newspaper(s); Dissemination of project information in the national television; and Dissemination of project information and achievements using short-videos.
9. Disclosure of the project information using internet and social media	FPMU/SPIUs	Regularly	Internet and social media	<ul style="list-style-type: none"> The objective is to improve transparency of project interventions and accountability; Creation and maintaining of project portals at federal and state levels that will contain project activities and their progress; Creation and maintaining of social media accounts (Facebook/Instagram/Twitter/WhatsApp) at federal and state levels to facilitate communication with project stakeholders.



IV. Road Safety – Assessment and Interventions

23. A number of entities are currently operating in the area of Road Safety in Nigeria, without appropriate collaboration and cooperation. The Road Safety Strategy (2014-2018) has acknowledged that there is little collaboration among key stakeholders in road safety and some activities performed by stakeholders appear to overlap. This results in conflicts, differing service levels and neglect of some road safety management areas. The strategy document has identified several road safety roles the states play, which are based on current practices. They range from policy and legal framework to road traffic management and control, enforcement of traffic laws, awareness and advocacy, funding, and the provision of post-crash services. It appears that currently the states are not fulfilling their road safety responsibilities due to a number of reasons, among others, the absence of a clear understanding of their roles and responsibilities, and lack of resources and institutional capacity.

24. The FMWH, and the state ministries of works are responsible for ensuring that federal and state/local government roads, respectively, are built according to standards. The ministry has updated the federal roads design manual under a World Bank funded project - the Federal Roads Development Project (P090135). The updated design manual has adequate road safety design provisions for federal roads. Conversely, Nigeria does not have a state and/or local governments road safety manual. In the absence of road safety standards for state and local governments roads, states and local governments often adopt federal road safety standards. Furthermore, state governments do not have institutional capacity to deal with road safety issues. Two agencies, the Motor Vehicle Administration Agency (MVAA) and the State Traffic Management Authority (STMA) are vested with road safety responsibilities at the state level. However, the progress in dealing with road safety issues is marginal apart from the creation of State Traffic Management Authorities in 18 states. These states include 7 RAAMP States (Kano, Kwara, Sokoto, Ogun, Ondo, Oyo and Abia). There is a road safety training program designed for state traffic agencies personnel and periodic capacity building for the heads of the state traffic agencies. However, its impact appears to be limited.

25. The conclusion from the above description is that one of the key areas that requires urgent attention is the delineation of responsibilities among different federal (e.g., Federal Road Safety Corps or FRSC) and state institutions. Also, states need to be capacitated in order to perform their road safety related obligations. Activities the project will support include:

- a. Review and recommend an appropriate Road Safety institutional framework at the state level with clear delineated roles and responsibilities, including its potential interface with the federal level ministries, departments and agencies (MDAs);
- b. Strengthen the existing State Traffic Management Authorities and facilitate their creation in other states;
- c. Develop a collaborative mechanism between the Federal Road Safety Corps and state traffic management authorities;
- d. Examine the feasibility of a state level crash data management and information system and its potential linkage with the national crash data management information system. If found feasible, support the development and operationalization of the system;
- e. Develop and operationalize a comprehensive state road safety design and audit manual;



- f. Carry out state level road safety capacity building in different areas of road safety design and management. The capacity building will involve all road safety 4E areas (education, enforcement, engineering, environment and emergency care of road accident victims);
- g. Build the capacity of Nigerian educational institutions (universities and institutes) in delivering road safety academic courses (bachelor and master levels) and provide training for Nigerian officials on different road safety issues; and
- h. Conduct road safety awareness raising campaign for the residents, including school-age children, living along the roads to be improved under the project. This could involve the development of standardized awareness raising materials (e.g., leaflets, videos and games, presentation templates) for conducting such activities. The project plans will include the roll out of *Zusha*, a road safety program that has been deployed and is subject to rigorous evaluation in East Africa over the last decade. Also, the efficacy of different campaigns will be evaluated by the project.

26. The project will ensure that appropriate road safety features are incorporated in the design of the improved roads. An indicator has been included in the Results Framework of the project. RAAMP will use the World Bank's Road Safety Screening and Appraisal Tool (RSSAT). The tool will help in the evaluation of the impacts of project designs to road safety outcomes and will ensure that the project meets certain quantifiable road safety requirements. The road safety activities will be guided by the World Bank's Good Practice Note on Road Safety, which is being finalized.

V. Security Risks and Mitigation Measures

Overall Assessment of Security Risks

27. Heightened security risks have been observed in RAMP-2 construction sites in early-2019. Osun and Niger states have reported two kidnapping incidents at construction sites. The abductees were contractor personnel and of foreign origin. Although they were released unharmed, they were in the kidnappers' custody for several days. Table 12 provides an assessment of different threats, the likelihood of their occurrence and their potential impact. Table 12 below shows that the likelihood of kidnapping of personnel is substantial to high. The likelihood of occurrence of other threats is only low to moderate.

Table 12: Potential Security Threats and Their Impact

Threats	Likelihood of Occurrence	Potential Impact	Comments
a. Armed attack on work teams	Low to Moderate	Death, injury and project delays	Not widespread. However, the may result from a botched kidnapping attempt or from an unforeseen event that has resulted in a complete breakdown in community relations.
b. Armed attack on contractor's camp	Low to Moderate	Death, injury and project delays	Not widespread. Nonetheless, smaller and less protected construction camps are vulnerable in certain areas. May also result from a complete



Threats	Likelihood of Occurrence	Potential Impact	Comments
			breakdown in community relations.
c. Civil Disorder	Low to Moderate	Injury, reputational damage, project delays	Can evolve from corporate social responsibility failures by contractors, poor engagement with local communities, employment issues etc.
d. Kidnapping of personnel	Substantial to High	Death, injury and project delays	Kidnappings occur to a greater or lesser extent across Nigeria. There have been two kidnapping incidences in RAMP-2 construction sites in 2019, although no other security incidences were reported since its inception in 2013.
e. Damage to heavy plant equipment in laydown areas in the field	Low to Moderate	Project delays	Vandalism or damage caused by attempted fuel theft from heavy plant equipment left in the field can be commonplace if suitable security measures are not taken.
f. Human rights incidents	Low to Moderate	Reputational damage, polarization of local communities against the project	Not common. State provided security services may be overenthusiastic in the execution of their duties when providing project security
g. Ethnic and communal clashes and religious violence	Moderate to Substantial	Death, injury and project delays	Not widespread. However, some project states are vulnerable.

28. Based on the aforementioned assessment, the project will take the following strategy for managing its security risks:

- h. *Proactive risks management.* The project will appoint security personnel at the federal and state levels, a Security Advisor at the FPMU and a Security Specialist at each SPIU, for the assessment, avoidance, reduction and mitigation of security risks. Security risks at each construction site will be assessed and measures will be taken to counter the risks, as per the assessment recommendations;
- b. *Security responsibilities at different levels.* Security responsibilities at different levels – FPMU, SPIUs and contractors - will be defined. This will be specified in the security policy to be developed at the inception of the project;
- c. *Monitoring the delivery of security services.* The project, with help from the security advisor and specialist, will proactively monitor the delivery of security services on a proactive basis. The



Security Advisor and the Security Specialist, at the FPMU and SPIU respectively, will be mainly responsible for such monitoring;

- d. *Local communities and site security.* At the inception of construction activities at each site, the SPIUs, with the assistance of Security Specialists, will sensitize the local communities, within the vicinity of the construction site, on different security aspects and solicit their cooperation in maintaining site security.
- e. *Funding contractors' security related costs.* The project will fund contractors' security costs. These costs will be included in the bill of quantities of the contract.
- f. *Security roles for informal groups.* The project will discourage any security related roles for the informal groups (e.g., vigilante groups) to reduce the reputational risks that emanate from their opaque selection process, limited training, unclear command structure, etc. The Nigerian Police Force will be mainly responsible for providing site security. Nonetheless, personnel of the unarmed local guard services and watchmen from local communities will play their due roles. The project will endeavor to train them on different security aspects, including their code of conduct; and
- g. *Recruitment of security personnel.* Security personnel will only be recruited from the internationally accredited security services in order to ensure the professional competence of the recruited personnel.

Security Action Plan

29. A security action plan has been devised to mitigate security risks that includes actions, responsibilities, timeline and indicators for verification of action completion. The plan is provided in the PIM.



ANNEX 6: IMPLEMENTATION SUPPORT PLAN

1. This Implementation Support Plan details how the Association will support the implementation of the operation to mitigate anticipated risks and achieve its objectives and targets. The plan also identifies the minimum requirements to meet the World Bank's technical, fiduciary, and social and environmental obligations and manage the project risks.

Strategy and Approach for Implementation Support

2. The main focus of the implementation support will be to support the states in managing the project risks and successfully implement the project by achieving its objectives. The risks associated with this project are mainly technical, safeguards, procurement, and SEA-related. The selected project states do not have experience working with the Association. The states are implementing an Association support rural access and agricultural marketing project for the first time, although some states are experienced in Association-financed projects. The operation will require close focus on the achievement of outputs and results, which, in turn, will require meticulous planning, implementation and monitoring of project activities. Also, the states will need to focus on the sector reform and capacity building activities in order to achieve a sustainable project outcome. Given the states' lack of experience in implementing similar projects, the project will require substantial support from the Association, especially at the initial stage of implementation.

3. The Association's implementation support strategy is built on the implementation risks associated with different stages of the project. The strategy includes the following elements: (a) intensive implementation support will be provided at the initial stage of the project (first two years) given the states' lack of experience in the implementation of the Association supported rural access and market project, if not any other Association supported projects; (b) from the third year, the Association's support will be scaled down; (c) the Association will closely monitor how the states manage different risks, especially, technical, procurement, safeguards, labor influx and SEA/SH-related risks throughout implementation; (d) the Association will be proactive in supporting the states in achieving the sector reform and capacity building activities as they are on the critical path to achieving sustainable outcomes; (e) one of the main areas that the Association will concentrate on throughout implementation is the quality monitoring of the civil works; (f) the decision to make field visits to states will be made based on an analysis of risks a particular state poses, which will include the amount of civil works undertaken by the state, the capacity of the SPIU officials and other risks, including political economy related risks; (g) the six-monthly implementation review missions will be short and targeted. Only a small selection of states will be visited. The missions will be used for the confirmation and documentation of the project progress; (h) monthly meetings will be arranged with the FPMU and selected SPIUs, which have implementation issues. The meetings will be attended by the other financiers. (i) efforts will be taken to brief the political leadership (e.g., Governors) of the states on a regular basis (possibly at the end of the implementation support mission); and (j) maximize the involvement of the country-based staff in providing implementation support.

4. The Association will optimize inputs from the field-based staff to minimize costs for providing implementation support. The implementation task team leader is expected to be based in Nigeria. Furthermore, the locally stationed staff will provide implementation support in all areas of the operation. Specialized support will be sought from headquarters or other country staff (regional) only if the project requires such technical support. The monthly coordination meetings will discuss project implementation issues and areas where the FPMU needs specialized support from the World Bank. Also, regular formal



review of the project will identify any implementation support that the project will require from the Association and accordingly support will be mobilized.

Implementation Support Plan and Resource Requirements

5. The World Bank team will provide specific support to implementation during each phase of the project life, as laid out in Table 13 Table 14 and Table 15.

Table 13: Main Focus of Implementation Support

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First 12 months	<ul style="list-style-type: none"> Intensive implementation support with main focus on the successful procurement of road maintenance works; Intensive technical support for rural road sector reform activities; especially, for establishment of SRF, State RARA and nationwide rural road classification study. Intensive technical support for the planning and implementation and quality assurance of civil works of rural roads upgrading & maintenance, construction of bridges/culverts and construction of agro-logistic centers Intensive technical support for road asset management; especially, the development and operationalization of the NiRTIMS Intensive technical support to agro-logistics activities including market improvement planning, identification of agro-logistics centers nationwide, identification of off and on-market activities and Technical support for road safety & climate mitigation activities Technical support for development and operationalization of the smartphone-based CoSMoS Technical support to the development of Grievance Redressal Mechanism (GRS) Implementation support to operationalize occupational health safety facilities Intensive implementation support in order to mitigate labor influx and SEA/SH risks Support to the conceptualization of the impact studies and baseline data collection 	<ul style="list-style-type: none"> Technical (Engineering) Procurement Social and environmental Governance Financial Management M&E 	US\$350,000 [Technical staff time (engineering, procurement, safeguards, and finance): 200 staff-weeks]	The AFD will provide support especially for activities linked to agro-logistics interventions. AFD will participate in all review missions.
13–36 months	<ul style="list-style-type: none"> Intensive implementation support with main focus on the successful procurement of civil works of roads and agro-logistic centers and road maintenance works Intense technical supports for rural road 	<ul style="list-style-type: none"> Legal Procurement Technical (engineering and climate 	US\$450,000 [Technical staff time: 300 staff-	The AFD will provide support especially activities



Time	Focus	Skills Needed	Resource Estimate	Partner Role
	sector reform activities and nationwide rural road classification study <ul style="list-style-type: none"> Intensive technical and implementation support for the planning, implementation, monitoring and quality assurance of civil works of rural roads upgrading & maintenance, construction of bridges/culverts and construction of agro-logistic centers Intensive technical support for road asset management, especially for operationalization of the NiRTIMS Technical support to agro-logistics activities; specially, Identification of agro-logistics centers nationwide, identification and implementation of agro-logistics enhancement activities. Technical support for Piloting Performance-based Maintenance Contract and development of maintenance manual for rural transport infrastructure Monitoring of CosMos activities. Technical support for road safety & climate mitigation activities Implementation support for implementation of Grievance Redress System (GRS) Guidelines Implementation support to operationalize occupational health safety facilities Intensive implementation support in order to mitigate labor influx and SEA/SH risks 	adaptation) <ul style="list-style-type: none"> Social and environmental Financial M&E 	weeks]	linked to agro-logistics interventions. AFD will participate in all review missions.
37–60 months	<ul style="list-style-type: none"> Implementation support with main focus on the successful procurement of civil works of roads and agro-logistic centers. Technical support for rural road sector reform activities. Intensive implementation support for Planning, implementation, monitoring and quality assurance of civil works activities linked to rural roads upgrading & maintenance, construction of bridges/culverts and construction of agro-logistic centers Implementation support for the operationalization of the NiRTIMS Intensive implementation support to agro-logistics activities, including implementation of agro-logistics 	<ul style="list-style-type: none"> Legal Procurement Technical (engineering and climate adaptation) Social and environmental Financial M&E 	US\$415,000 [Technical staff time: 250 staff-weeks]	The AFD will provide support especially for activities linked to agro-logistics interventions. AFD will participate in all review missions.



Time	Focus	Skills Needed	Resource Estimate	Partner Role
	<p>enhancement activities.</p> <ul style="list-style-type: none"> ▪ Implementation support for piloting PBMC and implementation of maintenance manual for rural transport infrastructure. ▪ Monitoring of CosMos activities. ▪ Technical and implementation supports for road safety & climate mitigation activities ▪ Implementation support for implementation of Grievance Redress System (GRS) ▪ Implementation support to operationalize occupational health safety facilities ▪ Intensive implementation support in order to mitigate labor influx and SEA/SH risks 			
61–84 Months	<ul style="list-style-type: none"> ▪ Implementation support for procurement of civil works of roads and agro-logistic centers (for over programming if needed) ▪ Implementation support for rural road sector reform activities ▪ Implementation support for monitoring and quality assurance of civil works of rural roads upgrading & maintenance, construction of bridges/culverts and construction of agro-logistic centers ▪ Implementation support for road asset management ▪ Implementation support to agro-logistics activities ▪ Implementation support for Piloting Performance-based Maintenance Contract and implementation of maintenance manual for rural transport infrastructure ▪ Monitoring of CosMos activities. ▪ Implementation support for road safety & climate mitigation activities ▪ Implementation support for implementation of Grievance Redress System (GRS) ▪ Implementation support to operationalize occupational health safety facilities ▪ Intensive implementation support in order to mitigate labor influx and SEA/SH risks 	<ul style="list-style-type: none"> ▪ Procurement ▪ Technical (engineering and climate adaptation) ▪ Social and environmental ▪ Financial ▪ M&E 	<p>US\$375,000</p> <p>[Technical staff time: 225 staff-weeks per year]</p>	<p>The AFD will provide support especially for activities linked to agro-logistics interventions. AFD will participate in all review missions.</p>
After project closure	<ul style="list-style-type: none"> ▪ Support to the impact studies and ex-post data collection 	Technical and M&E	—	—



Table 14: Task Team Skills Mix Requirements for Implementation Support

Skills Needed	Number of Staff-weeks	Number of Trips	Field and Headquarter Staff Mix
Technical (Engineering, M&E)	850	150	A combination of field and headquarters-based staff with mainly field-based staff
Social development	80	20	Mainly field-based staff with light support from the headquarters-based staff
Procurement	75	Field-based	Field-based staff
Public FM	75	Field-based	Field-based staff
Governance	10	20	Mainly field-based staff with support from the headquarters-based staff
Financial/Private Sector Development	30	Field-based	Field-based staff
Environment	80	Field-based	Field-based staff

Table 15: Role of Partners in Project Implementation

Name	Institution/Country	Role
French Development Agency (AFD)	French Government	a. Project co-financier b. Support and guidance to the Association in project implementation c. Participation in the formal review of the project.



ANNEX 7: CLIMATE AND DISASTER SCREENING AND CLIMATE CO-BENEFITS RATIONALE

Climate and Disaster Screening

1. Climate change, especially its effects on the infrastructure, poses an important development challenge for Nigeria. The likely implication to Nigeria due to the climate change includes: (a) temperature increase; (b) rainfall drainage and water logging; (c) sea level rise and coastal area inundation; (d) river flooding; and (e) cyclone and storm surges. Climate-related risks to infrastructure are expected to grow with the increase in frequency and severity of extreme events.

2. The GoN established a national focal point to drive its response to climate change: the Special Climate Change Unit (SCCU) within the Federal Ministry of Environment. The government also mobilized the Inter-ministerial Coordinating Committee on Climate Change. In 2010, the National Assembly passed a bill to create a national Climate Change Commission, which is tasked to facilitate coordination and support for the multi-level and cross-sectoral adaptation responses. Nigeria is also developing a Strategic Framework for Voluntary Nationally Appropriate Mitigation Action (NAMA), as a step towards meeting national obligations under the United Nations Framework Convention on Climate Change. The NAMA strategic framework will allow Nigeria to develop long-term measures and programs supporting a low carbon, climate-resilient, pro-growth and gender-sensitive sustainable development path. In 2011, the Government developed the National Adaptation Strategy and Plan of Action on Climate Change for Nigeria (NASPA-CNN). The strategy recommended the following overall adaptation strategies for transportation infrastructure sub-sector:

- a. Provide increased protective margins in construction and placement of transportation infrastructure (i.e., higher standards and specifications);
- b. Carry out risk assessment and risk reduction measures to increase the resilience of the transportation sub-sector;
- c. Strengthen existing transportation infrastructure, in part through early efforts to identify and implement all possible 'no regrets' actions; and
- d. Develop and diversify secure communication backup systems to ensure both civil society and security forces have access to emergency communication methods.

3. An analysis, using the World Bank's Climate and Disaster Risk Screening tool, conducted as part of the project preparation confirms that the project's physical activities will face significant climate and geophysical hazards. The hazards are associated with the project locations, physical components, and outcomes. Analysis results show that there are several climate related high-risk future key drivers that might affect the project's locations, physical components, and outcomes. They are: extreme temperature, extreme precipitation, flooding, and sea level rise. Storm surge is also expected to affect the project location and service delivery, albeit moderately. Some specific climate change project impacts include: (a) distresses on road surfaces and collapse of road pavement structural layers, drainage congestions and embankment erosions due to extreme precipitation and flooding. These will lead to the reduction of rural road network's serviceability; (b) a reduction of length of service life of roads due to other climate change factors including high temperature (especially for bituminous roads), sea level rise, and salinity, especially in coastal areas; and (c) an increase in project costs from road upgrading, drainage structure construction and maintenance in order to offset climate change effects.



4. The project will help to develop and implement rural transport climate change adaptation strategies. Although the project development objective (PDO) does not have any climate resiliency related indicator, all physical works components (Component A and part of Component B) will be geared towards climate adaptation. One of the PDO indicators is linked to the reduction of travel time, which will, in turn, help in the reduction of greenhouse gas emission contributing to climate change mitigations. The project will support several activities to help the GoN in rural transport infrastructure climate change adaptation. They include: (a) developing planning, design, and implementation of climate change adaptation guidelines for rural roads & drainage structures; (b) support for developing and implementing climate resilient materials for rural roads & drainage structures; (c) Introducing innovative technologies to optimize the cost for adaptation to climate change; and (d) improving the State agencies' climate change adaptation and decision-making capacity for rural transport infrastructure through training and advisory support.

6. All project activities will help in building resilience and adaptive capacity in the rural transport infrastructure subsector. These activities range from routine maintenance to backlog maintenance to spot improvement to rural road upgrading to new construction of cross-drainage structures to institutional development. The activities, which help in building resilience and adaptive capacity, include: (a) Improving planning, design and technical specification parameters for rural transport infrastructure to make them climate resilient; (b) Improving or preserving rural connectivity through the maintenance & upgrading of rural roads and new construction of cross-drainage structures, which will help to improve network efficiency; (c) Capacity building of government officials in identifying climate related risks linked to the rural transport infrastructure and the planning and implementation of adaptive measures; (d) Improving informed rural transport infrastructure related decision making through climate related research on rural transport infrastructure; and (e) Overall, the project is expected to substantially contribute to the implementation of GoN's climate change adaptation strategies, policies and action plans.

5. An analysis, based on current and future traffic used in the economic analysis for each state, was conducted to assess the amount of emissions that can be reduced by the project over a 15-year time period (Table 166). The expected emissions reduction is likely to be relatively moderate compared to other major roads, where daily traffic is more significant. Current traffic on most project roads is less than 100 vehicles. Other types of pollutants can also be reduced by road improvement works, but the changes will be small. As far as CO₂ emissions are concerned, the social value of emission reduction is estimated at about US\$5.44 million (Table 177), when the World Bank's recommended social value of carbon is used, that is, US\$30 per ton.²²

Table 16: Normal Carbon Dioxide Emissions (g/kilometers) by Vehicle Type

	Motorcycle	Medium Car	Delivery Vehicle	Medium Truck	Heavy Truck	Articulated Truck	Small Bus	Medium Bus	Large Bus
IRI = 20	60.9	283.5	284.5	602.1	1,439.5	1,800.8	296.6	402.1	843.8
IRI = 10	61.2	214.0	220.1	551.8	1,141.2	1,395.0	270.6	378.9	667.8
Change (%)	0.6	-32.5	-29.2	-9.1	-26.1	-29.1	-9.6	-6.1	-26.4

²² World Bank. 2014. "Social Value of Carbon in Project Appraisal." Guidance Note to the World Bank Group Staff.



Table 17: Expected Emission Reduction

State	Length (kilometers)	Net Reduction for 15 Years (ton)	Net Reduction per Year (ton)	Gross Emissions (ton)	Emission Savings over 15 Years (US\$)
Abia	451.5	10,821	721	48,940	324,630
Akwa Ibom	166.0	4,068	271	25,782	122,051
Kogi	324.5				
Kwara	648.6	13,234	882	61,119	397,030
Ogun	400.9	21,746	1,450	96,405	652,390
Ondo	385.4	8,369	558	37,264	251,059
Oyo	361.8	63,785	4,252	298,131	1,913,548
Kano	494.7	7,691	513	39,976	230,738
Katsina ^b	365.0	15,915	1,061	82,671	477,460
Sokoto	333.2	10,772	718	51,963	323,298
Kebbi	352.0	12,698	847	56,640	380,934
Bauchi	338.0	11,305	754	57,029	339,153
Plateau	405.6	4,479	299	21,887	134,380
Total					5,446,740

^a The same traffic composition as Kwara is assumed.

^b The same traffic composition as Kano is assumed.

Table 18: : Climate Co-benefit Rationale

Project Development Objective (PDO)	To improve rural access and agricultural marketing in participating states while strengthening the financing and institutional base for effective development, maintenance and management of the rural road network
PDO Indicator	Although there is no PDO indicator linked to climate change, all physical work components (Component A and B) activities will be geared towards climate adaptation. Nonetheless, one of the PDO indicator is linked to the reduction of travel time, which will, in turn, help in the reduction of GHG emission contributing to climate change mitigations.
Project Area	13 out of 36 states (covering about 35 percent geographical area of Nigeria)
Program Financing	Total US\$575 million (the Association US\$280 million, AFD US\$230 million and GoN US\$65 million)
Vulnerability Context	<p><u>Key risk drivers of Climate change on rural transport infrastructure in Nigeria include:</u></p> <ul style="list-style-type: none"> a. Temperature increase. b. Sea level rise and coastal inundation. c. Tidal flooding and salinity intrusion. d. Cyclone and storm surges. e. Rainfall drainage and water logging. <p><u>Climate change impacts on rural transport infrastructures include:</u></p> <ul style="list-style-type: none"> a. Disruption/discontinuation of the rural road networks due to sudden collapse of roads & drainage structures caused by storm surge, flash flood; b. A reduction of serviceability of rural transport infrastructures due to the deterioration and collapse of pavements and drainage structures, drainage congestions & reduction of navigational clearances of drainage structures, over



	<p>toping, land slide and los of gravel on gravel roads;</p> <p>c. A reduction of rural transport infrastructures' service lives due to increase in temperature, rainfall, sea level rise, and salinity, especially in coastal areas; and</p> <p>d. An increase in project costs from rural transport infrastructures construction and maintenance cost to offsetting climate change effects.</p>
Motivation	<p>One of the primary drivers of the operation has evolved from the need for better climate change adaptation, given Nigeria's noteworthy vulnerability to climate-change phenomenon. The operation plan to introduce climate resilient interventions in all its activities (see below). One of the motivations for undertaking rural transport infrastructures construction and maintenance activities under this project is to enhance states' institutional capacity to plan, construct and manage the rural transport infrastructure sub-sector more comprehensively in adapting and mitigating (to a lesser extent) climate change related risks.</p>
Activity Linkage	<p>The project will support several activities to help the states in rural infrastructure, especially rural transport infrastructure, climate change adaptation. They include:</p> <p>Activity 1. Continuous need based and preventive maintenance of rural transport infrastructures to improve their serviceability & service life and reduction of GHG emission against key risk drivers of climate change.</p> <p>Activity 1.1</p> <ul style="list-style-type: none"> ▪ Introducing backlog maintenance to restore the serviceability of roads which have been deteriorated due to non-maintenance and to improve performance against heavy rainfall and increased temperature exposure. ▪ Repairing/replacement of damaged drainages structures, replace drainage pipes, etc. to improve their performance during heavy rains. ▪ Application of protective paints (anti-corrosive paints in coastal areas), mainly on steel drainage structures, against current and future weathering effects. ▪ Emergency maintenance (major works) due to climate change and natural disasters. <p>Activity 1.2</p> <ul style="list-style-type: none"> ▪ Introducing routine maintenance to maintain road embankment, shoulders, preventing minor distresses of pavement and emergency maintenance (minor works) due to water logging, sudden heavy surface runoff. ▪ Cleaning, removal & disposal to clear blocked cross drainage structures. ▪ Maintaining the water course by cleaning debris within a certain distance on both side of the drainage structures. ▪ Refilling of earthwork of settled/eroded embankments. ▪ Minor repair/retrofitting of structural components of drainage structures considering current & future climate change impacts (saline intrusion, heavy rainfall, extensive high temperature, earthquake, etc.). ▪ Minor river training works to protect existing bridges. <p>Activity 1.3</p> <ul style="list-style-type: none"> ▪ Introducing spot improvement of roads to improve rural access for rural residents. This will include the restoration of road sections that have collapsed due to flood or flash flood. ▪ Construction of small to medium drainage structures to provide improve connectivity and to maintain connectivity in case of extreme weather events including floods. ▪ Construct/Repair/Reconstruct approach embankment and protective works of approaches, etc., which might have been rendered unserviceable due to extreme weather events. <p>Activity 2. Upgrading of rural roads with suitable surfacing options and climate resilient features to prolong service life by countering climate change impacts.</p>



	<ul style="list-style-type: none"> ▪ Reducing travel time, which helps in the reduction of GHG emission contributing to climate change mitigations. ▪ Protecting pavement structural layers by the provision of appropriate low-cost surfacing, which might otherwise have been damaged due to rainfall and water loggings. ▪ Enhancing pavement washout resistance due to heavy surface runoff. ▪ Construction of small and medium bridges to reduce drainage congestions, improving navigation, where applicable. These bridges will help resist breaching of road sections due to heavy to heavy rainfall, storm surge and flash floods. <p>Activity 3. Developing climate change adaptation guidelines for planning, design, and implementation of rural transport infrastructure (roads and cross drainage structures).</p> <p>Activity 4. Initiating research activities for developing concrete specifications for drainage structures to enhance the durability of structure against salinity, in coastal states.</p> <p>Activity 5. Use of modern decision making tools in upgrading and maintenance related decision making to help with climate change adaptation.</p> <p>Activity 6. Improving the states' climate change adaptation and decision-making capacity for rural transport infrastructures through training and expert advice;</p> <p>Activity 7. Introduction of a “zero component” in the project to tackle any natural disasters, which could happen due to climate change phenomenon.</p>
Incremental Costs	<p>Although it is difficult to estimate the incremental costs of climate change related activities (especially Activities 1 and 2, mentioned above), depending on the climate change related vulnerability of states, the climate adaptation incremental costs could well be in the region of 25 (least vulnerable) to 60 percent (most vulnerable). Also, it is to be noted that requirements of upgrading of rural roads and construction of drainage structures are significantly higher in climate vulnerable states as many rural roads & bridges in these states are out of use and replacement due to damages caused by climate change events (sea level rise, tidal flooding and salinity).</p>
Specific Intent	<p>All project activities will help in building resilience and adaptive capacity in rural transport infrastructure subsector. These activities range from routine maintenance to backlog maintenance to spot improvement to rural road upgrading to new construction of drainage structures to institutional development. The activities, which help in building resilience and adaptive capacity, include:</p> <ul style="list-style-type: none"> (a) Improving planning, design and technical specification parameters for rural transport infrastructure to make them climate resilient, especially in coastal states; (b) Improving or preserving rural connectivity through the maintenance & upgrading of rural roads and new construction of drainage structure, which will help improving network efficiency; (c) Capacity building of government officials in identifying climate related risks and implementation of rural transport infrastructure adaptive measures; (d) Improving informed rural transport infrastructure related decision making through climate related research on rural transport infrastructure; and (e) Overall, the project is expected to substantially contribute to the implementation of GoN's climate change adaptation strategies, policies and action plans.



ANNEX 8: PROJECT MAP

