



NIGER STATE RURAL ACCESS AND MOBILITY PROJECT (RAMP-II)

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

SPOT IMPROVEMENT OF 119KM RURAL ROAD IN NIGER STATE

FINAL REPORT

JULY 2019

TABLE OF CONTENTS

Contents

LIST OF TABLES.....	5
LIST OF FIGURES	5
LIST OF PLATES.....	5
LIST OF ABBREVIATIONS AND ACRONYMS.....	6
EXECUTIVE SUMMARY.....	7
CHAPTER ONE: INTRODUCTION.....	15
1.1 Background	15
1.2 Objectives of ESMP	15
1.3 Approach and Methodology	16
1.3.1 Literature Review/Desktop Studies.....	16
1.3.2 Field Data Gathering.....	16
1.3.3 Community and Stakeholder Consultations	16
CHAPTER TWO: ADMINISTRATIVE & REGULATORY FRAMEWORK.....	17
2.1 Introduction	17
2.2 Administrative Structures	17
2.2.1 Federal Ministry of Environment	17
2.2.2 National Environmental Standards and Regulations Enforcement Agency (NESREA)	17
2.2.3 Niger State Ministry of Environment and Forestry (SME&F).....	17
2.2.4 Niger State Environmental Protection Agency (NISEPA)	17
2.2.5 Local Government Authorities.....	18
2.3 Regulatory Framework	18
2.3.1 National and State Legal and Policy Framework.....	18
2.3.2 International Laws and Treaties which Nigeria is a Signatory.....	19
2.3.3 World Bank Safeguard Policies.....	19
2.3.4 World Bank Group Environmental, Health, and Safety Guidelines.....	19
CHAPTER THREE: PROJECT DESCRIPTION	20
3.1 Introduction	20
3.2 The Existing Road	20
3.3 Description of the Intervention	21
3.3.1 Project Component and Activities	21
3.3.2 Road Designs.....	22

3.4	Project Activities and Schedules	23
3.4.1	<i>Preconstruction Phase</i>	23
3.4.2	<i>Construction Phase</i>	23
3.4.3	<i>Operation and Maintenance Phase</i>	23
CHAPTER FOUR: DESCRIPTION OF PROJECT ENVIRONMENT		24
4.1	Introduction	24
4.2	Biophysical and Social Environment	24
4.2.1	<i>Climate /Meteorology</i>	24
4.2.2	<i>Geology and Soils</i>	25
4.2.3	<i>Surface Water and Drainage</i>	25
4.2.4	<i>Vegetation</i>	25
4.2.5	<i>Socioeconomic Environment</i>	26
CHAPTER FIVE: IMPACT IDENTIFICATION AND MITIGATION.....		29
5.1	Introduction	29
5.2	Impact Identification	29
5.3	Environmental and Social Impacts	29
6.3.1	<i>Adverse Environmental Impacts</i>	30
5.3.2	<i>Adverse Social Impacts</i>	31
5.3.3	<i>Labour Influx and Gender Based Violence</i>	32
CHAPTER SIX: GRIEVANCE REDRESS MECHANISM		34
6.1	Introduction	34
6.2	Setting up a Grievance Redress Committee	34
6.3	Informing Parties on Levels and Channels of Grievance Uptake	35
6.4	Grievance Redress Procedure	35
6.5	Financing of the Grievance Redress Mechanism and Cost of Remediation	36
CHAPTER SEVEN: LABOR INFLUX, GENDER BASED VIOLENCE (GBV) AND HIV/AIDS		
37		
7.1	Introduction	37
7.2	Labor Influx	37
7.3	Gender Based Violence	37
7.4	International Treaties Relevant to GBV	38
7.5	Regional Treaties Relevant to GBV	38
7.6	GBV Risk Management Mechanisms	38
7.7	Social Impact Management Plan	39

7.8	<i>Overview of HIV/AIDs in Nigeria and Niger State</i>	39
CHAPTER EIGHT: ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN		44
8.1	<i>Introduction</i>	44
8.2	<i>Environmental and Social Impact Management and Monitoring Programme</i>	44
8.3	<i>Environmental and Social Monitoring Organization & Institutional Arrangement</i>	52
8.4	<i>Training, Awareness and Competence</i>	53
8.5	<i>Monitoring and Reporting</i>	54
8.5.1	<i>Monitoring Activities</i>	54
8.5.2	<i>Reporting Procedures</i>	55
8.5.3	<i>Record Keeping and Control</i>	55
8.6	<i>Implementation Schedule</i>	55
8.7	<i>Contractual Measures</i>	56
8.8	<i>Cost Estimates for ESMP Implementation</i>	56
8.9	<i>ESMP Disclosures</i>	57
CHAPTER NINE: PUBLIC CONSULTATION.....		58
9.1	<i>Introduction</i>	58
9.2	<i>Approach for Public consultation</i>	58
9.3	<i>How Stakeholders were Categorized and Identified</i>	58
9.4	<i>Summary of Consultations</i>	58
9.5	<i>Conclusion and Recommendations</i>	66
REFERENCES		67
ANNEXES.....		68
	<i>Appendix 1: Terms of Reference</i>	68
	<i>Appendix 2: Summary of the triggered World Bank Environmental and Social Safeguard Policies</i> .	72
	<i>Appendix 3: Socio-Economic Assessment Instrument (FGD/KII Interview)</i>	73
	<i>Appendix 4: Attendance at Public Consultation</i>	74
	Appendix 5: General environmental management conditions for construction contracts.....	77
	Appendix 6: Waste Management Plan	81
	Appendix 7: Project Occupational Health and Safety (OHS) Plan.....	82
PROJECT OCCUPATIONAL HEALTH AND SAFETY (OHS) PLAN		82
	Appendix 8: Traffic Management Plan	86

LIST OF TABLES

Table 2.1: Relevant Policies, Laws and Regulations	18
Table 2.2: Some International Laws and Treaties.....	19
Table 3.1: The list of roads, respective LGAs, length and locations	20
Table 3.2: The Summary of design standards for the road construction.....	22
Table 4.1: Demographics of the affected LGAs.....	12
Table 5.1: Project Implementation Phases and Associated Activities.....	29
Table 6.1: Implementation plan for grievance mechanism	36
Table 7.1: Potential Mitigation Measures of Social Impacts	26
Table 8.1: Roles and Responsibility of Institutions	52
Table 8.2: Contractor’s Training Programme.....	53
Table 8.3: Proposed Training Program for the Implementation of ESMP.....	54
Table 8.4: Internal and External Monitoring.....	54
Table 8.5: Reporting Procedures	55
Table 8.6: Tentative ESMP Implementation Schedule.....	56
Table 8.7: Contractual Measures	56
Table 8.8: Estimated Budget for the Implementation of ESMP.....	57
Table 8.9: Disclosure procedure.....	57
Table 8.10: Environmental and Social Management & Monitoring Plan.....	45
Table 9.1: Summary of Consultation with SPIU.....	42
Table 9.2(a): Summary of consultations with affected communities.....	60
Table 9.2(b): Summary of consultations with affected communities	605

LIST OF FIGURES

Figure 3.1: Map of Niger State showing project LGAs.....	6
Figure 4.1: Administrative Map of Nigeria showing Niger State	24
Figure 4.2: Geological Map of Niger State.....	11
Figure 6.1: Grievance Log showing steps for grievance redress	35
Figure 8.1: Institutional Arrangement for ESMP Implementation.....	53

LIST OF PLATES

Plate 3.1: Failed and narrow portion at Mazakuka.....	4
Plate 3.2: Failed section along Adogon-Mallam Road.....	4
Plate 3.3: Failed portions at Daban.....	4
Plate 3.4: Failed portion along Mazakuka road.....	4
Plate 4.1: Firewood gathered by a household in Gunudna Community.....	12
Plate 4.2: Hand-pump borehole at Makera-Beji.....	14
Plate 4.3: Health Centre at Nyela.....	14
Plate 8.1: Consultation at Napankuchi Community	47
Plate 8.2: Consultation at Gangare Community.....	47
Plate 8.3: Consultation with members of Makera Village.....	47
Plate 8.4: Consultation at Emighimanzhi Village.....	47
Plate 8.5: Consultation with women at Galuwi Village.....	47
Plate 8.6: Consultations at Nyela Village.....	47
Plate 8.7: Consultation at Makugi Village.....	47
Plate 8.8: Consultation at Makugi Village.....	47

LIST OF ABBREVIATIONS AND ACRONYMS

AFD	French Development Agency
BoQ	Bill of Quantities
CBO	Community Based Organization
CSO	Civil Society Organizations
CEDAW	Convention on the Elimination of all forms of Discrimination Against Women
EA	Environmental Assessment
E&S	Environmental and Social
EHS	Environmental, Health and Safety
EMP	Environmental Management Plan
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management Specialist
ESO	Environmental and Social Officer
FCT	Federal Capital Territory
FEPA	Federal Environmental Protection Agency
FGD	Focus Group Discussion
FGN	Federal Government of Nigeria
FME	Federal Ministry of Education
FME _{env}	Federal Ministry of Environment
FPMU	Federal Project Management Unit
GBV	Gender Based Violence
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HSE	Health, Safety & Environment
IDA	International Development Agency
IPA	Intimate Partner Violence
KII	Key In-depth Interview
LGAs	Local Government Authorities
M&E	Monitoring and Evaluation
MDA	Ministries, Departments and Agencies
MOH	Ministry of Health
NGO	Non-Governmental Organisation
NISACA	Niger State Agency for Control of AIDS
NISEPA	Niger State Environmental Protection Agency
NSME	Niger State Ministry of Environment
OP	Operational Policy
PAD	Project Appraisal Document
PAP	Project Affected Person
PIM	Project Implementation Manual
PPE	Personal Protective Equipment
RAMP-2	Second Rural Access and Mobility Project
SEA	Sexual Exploitative Abuse
SLO	Social and Livelihood Officer
SME	State Ministry of Environment
SSO	Social Safeguard Officer
SPIU	State Project Implementation Unit
STDs	Sexually Transmitted Diseases
TOR	Terms of Reference
WB	World Bank

EXECUTIVE SUMMARY

ES1: Background

The Federal Government of Nigeria has received financing from the World Bank (WB) and French Development Agency (AFD) for the implementation of Second Rural Access and Mobility Project (RAMP-2) in four States of Adamawa, Enugu, Niger and Osun. RAMP-2 is essentially designed to improve agricultural productivity and value chain, as well as income and competitiveness of small family farmers in rural areas. Most of these farmers reside in the rural communities and movement of their agricultural inputs and outputs (produce) is hinged primarily on accessibility and mobility. Consequently, the priority of RAMP is to connect rural communities and farms to local agricultural markets in order to enhance agricultural productivity, help build rural agricultural value chains, and help producers to market agricultural products competitively.

As part of RAMP-2 Activities in Niger State, a total of 20 Numbers critical river crossings across several Local Government Areas (LGA) of the state have been prioritized, constructed and commissioned to aid accessibility of local farmers, especially during the wet seasons. However, the overarching objective of the new river crossings is not being realized as the existing condition of the access roads to most of the river crossings is poor. The roads are mostly track and characterized by sheet and gully erosion, narrow portions and uneven surfaces making them impassable for vehicles. Despite the construction of the river crossings, the poor condition of these roads is still hampering agricultural productivity and value chain, economic empowerment as well as socio-cultural integration and interaction among members of the rural communities connected by the road. Consequently, the WB has given a no-objection to State Project Implementation Unit (SPIU) for RAMP-2 in Niger State to undertake spot improvement of the roads leading to the river crossings.

The spot improvement works will cover access roads to a total of 16 numbers river crossings scattered across 13 LGAs in the state. The RAMP-2 activities on the selected roads will essentially be civil work entailing rehabilitation of failed portions. These activities could result in environmental and social impacts thus, triggering the World Bank's Safeguard Policies including Environmental Assessment OP/BP 4.01; Natural Habitats OP /BP .04, Physical Cultural Resources OP/BP 4.11, Involuntary Resettlement Policy OP/BP 4.12, and Public Disclosure BP 17.60. Consequently, this Environmental and Social Management Plan (ESMP) is the instrument required to address environmental and social risks and impacts associated with the implementation of the proposed civil work component of the project.

ES 2: The Existing Roads

The cumulative length of the roads is approximately 119km scattered across 13 LGAs in Niger State. The roads provide access to 16 out of the 20 newly constructed river crossings. The condition of the roads has deteriorated over the years with some portions of each road now impassable for vehicles especially during the wet seasons as a result of erosion as well as failed and narrow portions. The roads, critical environmental features, affected LGAs, tentative length and locations of affected river crossings are presented in the Table 1 below.

Table 1: Location of Roads and Affected River Crossings

S/N	Road	Environmental issues	LGA	Length (km)	Location of Road (Start)		Location of River Crossing	
					Northing	Easting	Northing	Easting
1	Kaboji - Adogon Mallam	Erosion prone, sparse vegetation cover	Mashegu	19.0	10.11012	5.40014	10.10186	5.23078
2	Adogon Mallam - Mazakuka	Erosion prone	Mashegun	11.6	10.10189	5.23093	10.01366	5.19182
3	Kutriko - Eyangi-Liman	sparse vegetation cover	Agaje	16.584	9.17615	6.54697	09.15730	6.37276
4	Takuti - Kutriko	sparse vegetation cover	Agaje	12.874	09.17614	6.54701	09.18121	6.43620
5	Shakwatu - Gunudna	sparse vegetation cover	Shiroro	2.585	09.65845	6.70211	09.66625	6.70044
6	Ibeto - Gyengi	Erosion prone, sparse vegetation cover	Magama	0.792	10.49793	5.15119	10.49945	5.14723
7	Maikujere - Madaki	Erosion prone, sparse vegetation cover	Rafi	3.075	10.28021	6.28856	10.28880	6.27156
8	Makera – Beji - Labuda	Erosion prone,	Wushishi	15.95	09.54084	6.08496	09.54681	6.20191
9	Mukugi – Adako	Erosion prone,	Lapai	7.412	09.13017	6.54914	09.11763	6.59494
10	Sarkin Pawa - Iga	Erosion prone,	Munya	5.595	10.02824	7.15676	10.02714	7.16570
11	Kontagora – Gangaren Sagi	Erosion prone,	Kontagora	2.87	10.39412	5.47753	10.38539	5.48215
12	Gbadafu - Emighimanzhi	Erosion prone,	Gbako	3.146	09.24381	5.87854	09.25307	5.90759
13	Daban – Ndaruka	Erosion prone,	Lavun	5.0	09.20316	5.71728	09.29408	5.72415
14	Lambata – Nyela - Baji	Erosion prone,	Gurara	7.0	09.27306	6.98460	09.28554	6.96561
15	Napankuchi	Erosion prone,	Bosso	2.607	09.64283	6.39255	09.65935	6.38916
16	Maikunkele – Jangaru	Erosion prone,	Bosso	6.9	09.42541	6.33388	09.42534	6.333428

ES 3: Legal and Institutional Framework

The project will be guided by applicable Federal and State policies and regulatory framework, and the World Bank operational safeguard policies. The project will comply with the Niger State Policy on Environment backed by the National Policy on Environment which provides a framework for environmental protection and sustainable development in Nigeria. The Niger State Ministry of Environment, Niger State Environmental Protection Agency (NISEPA) and the Federal Ministry of Environment (FMEnv) provide procedures for conducting Environmental Assessments for development projects in line with the Environmental Impact Assessment Act No. 86, 1992 (as amended by EIA Act CAP E12 LFN 2004).

ES4: Description of the Intervention

The project will essentially entail civil work which will comprise of the following activities:

- Rehabilitation of failed portions along the stretch of 119km single lane carriage road of 6m wide with 0.75m shoulders on both sides;
- Construction of culverts at appropriate locations;
- Construction of earth drainage infrastructures;
- Installation of speed breakers, lane markings and road signs.

ES5: Biophysical Environment of the Project Area

The project areas fall within the predominant climatic conditions of Niger State. The tropical climate of the state is broadly of two seasons: rainy season (April - October) and dry season (November – March). Rainfall intensity in the state ranges from 60mm/hr to 105mm/hr with the highest rainfall values usually recorded in August during the peak of rainy season. The mean monthly temperature in Niger State is generally high all year round, with the highest value of about 38.1 °C in the month of March and the lowest value of about 19.6°C in December. The mean monthly sunshine hours range between a low value of 4.7 hours in July and August (rainy season) and a high value of 8.6 hours in November (dry season). The number of daily sunshine hours is strongly subjected to the influence of seasonal atmospheric alteration by cloud and rainfall.

Three major soils types can be found in the project area. These include the ferruginous tropical soils, hydromorphic soils and ferrosols. About 50% of the entire landmass of Niger State is underlain by the hard-rocks belonging to the Basement Complex of Precambrian age while the remaining 50% is outcropped by the soft-rocks of Cretaceous age belonging to the Bida Basin sedimentary rock. The vegetation in Niger State is a typical Northern Guinea Savannah types, characterized by presence of trees, shrubs and herbaceous flora.

ES6: Socioeconomic Environment of the Project Area

There are three dominant ethnic groups, Nupe, Gbagyi, and Hausa in the project areas. The project area is governed at the apex by the Emir who has jurisdiction over an emirate. The emirate towns in the project area include Suleja, Bida and Kontagora. The project areas are located in the rural parts of Niger State where the predominant occupation is farming and trading in agricultural produces. People in the area grow varieties of crops including yam, maize, millet, guinea corn, rice, melon, potatoes and tomatoes. In addition, people in the area also engaged in livestock farming of Cattle, goats, sheep, chickens, and guinea fowl. The two major religions being practiced in the project area are Christianity and Islam. Interaction with community members during consultations revealed that about 90% of the people in the project communities are Muslims. The outcome of consultations with pictures are included in Chapter 9 while attendance is included as Appendix 4.

Among the population surveyed, 70% were illiterate (inability to read and write) while 30% are literate. Among the literate, primary education is the highest academic attainment for the majority (25%), while about 5% have secondary education. There were only primary schools in a few of the communities in the project areas. Social amenities and infrastructure are largely either non-existent or inadequate in the project communities. About 50% of affected communities have hand pump boreholes, 40% have primary schools and less than 10% have health centres. Over 90% of project communities are not connected to national grid for electricity. Evidence from consultation revealed that members of the project communities experience great difficulty in getting water for domestic use. In some places, they go as far as over 1km to fetch water from a perennial stream for drinking and domestic purposes.

Means of transportation across the project communities are vehicles and motor-cycles. The poor conditions of the rural roads have led to the dominance of the use of motor cycles and increased cost of transport. Most of the roads under considerations are impassable during the wet seasons and members of affected communities often trek several kilometers carrying their farm produces to where they can access vehicles to convey them to the markets.

ES7: Women involvement and Participation in livelihood:

Women in the project area are subjects to their husband’s authority and often do not mingle in community leadership matters. However, the women are not restricted by cultural or religious laws from ownership of assets including acquisition and participation in farming and trading activities.

ES8: Environmental and Social Impacts and Mitigation

The activities associated with the different phases of civil work component of road construction projects can result in varying degrees of impacts on the bio-physical and social environment. Most of these impacts will occur due to earth disturbing activities during construction. The cost of implementing mitigation measures will be provided for in the project Bill of Quantities (BoQ) and this ESMP document shall be an integral part of the works contract. Table 3 below and the breakup of the cost will be provided in the project BoQ. The resettlement costs and other social impact mitigation measures shall be described in the RAP document and shall be made part of the RAP budget.

Some of the key environmental and social adverse impacts and recommended mitigation measures are summarized in Table 2 below:

Table 2: Key Potential Impacts and Mitigation Measures

POTENTIAL ADVERSE IMPACTS			
SOCIAL IMPACTS		ENVIRONMENTAL IMPACTS	
Impacts	Mitigation Measures	Impacts	Mitigation Measures
Threat to community culture, safety and security due to presence of workers and business opportunists.	<ul style="list-style-type: none"> Develop an induction program including a code of conduct for all workers. Provide cultural sensitization training to improve awareness of and sensitivity of workers to local cultures, traditions and lifestyles. Prohibit child and forced labour. Implement community-based Grievance Redress Mechanism Limit the number of migrant workers by engaging local workers. Engage competent security personnel. 	Deterioration of local air quality due to the emission of dusts & gases	<ul style="list-style-type: none"> Use water to wet ground for dust suppression. Conduct regular visual inspection of dust pollution and ensure appropriate intervention if dust levels are high. Train drivers/ workers on proper operation of vehicles and equipment to include fuel efficiency and anti-idling. Provide and enforce the usage of appropriate PPE
Increased security risks due to storage of materials and equipment on site	<ul style="list-style-type: none"> Deploy competent security personnel to secure project site. Provide adequate training of security personnel. Disclose site security arrangements to the Police and host communities 	Noise and vibration disturbances from operation of heavy duty vehicles.	<ul style="list-style-type: none"> Select and use vehicles/equipment with lower sound power levels. Install suitable mufflers on engine exhausts and compressor components. Enforce appropriate speed limit to reduce vehicle noise levels. Respond promptly to noise complaints. Provide and enforce the usage of hearing protection devices (ear plugs/muffs) for workers
Risk of communicable diseases such as sexually transmitted diseases (STDs) including HIV/AIDS from influx of workers.	<ul style="list-style-type: none"> Institute HIV prevention programs (peer education, condom distribution etc) Liaise with appropriate health focused NGOs to undertake health awareness and education initiatives on STDs amongst workers and in nearby communities. Provide opportunities for workers to regularly return to their families. Implement community-based Grievance Redress Mechanism (GRM) 	Loss of vegetation and habitat destruction Loss of ecosystem provisions e.g. fuel wood & economic trees Predisposition to soil erosion due to the removal of vegetal cover.	<ul style="list-style-type: none"> Restrict removal of vegetation and trees to the area of need only. Schedule vegetation clearing to occur in phases so that the entire area is not cleared at once. Protect all vegetation not required to be removed against damage; Undertake quick re vegetation of exposed soils with indigenous plant species in areas where active construction is completed. Ensure construction of effective drainage system and use erosion

POTENTIAL ADVERSE IMPACTS			
SOCIAL IMPACTS		ENVIRONMENTAL IMPACTS	
Impacts	Mitigation Measures	Impacts	Mitigation Measures
		Siltation of surface water from eroded top soil	protection structures such as sediment traps, riprap, gabions etc.
Occupational related accidents and injuries to workers	<ul style="list-style-type: none"> • Develop a project specific Occupational Health and Safety Plan (OHSP) but not limited to: - Prohibition of drug and alcohol use by workers while on the job. - Provision of adequate first aid, first aiders, PPE, signages (English and local languages). - Restrict unauthorized access to all areas of high risk activities - Implementation of specific personnel training on worksite OHS management - Ensure that staging areas for contractor equipment are adequately delineated and cordoned off with reflective tapes and barriers - Any uncovered work pits should have appropriate signage and protection around them - Workers should get a daily induction/toolbox before going on the site and a refresher of what happened on site a day before - Adequate safety signage on construction sites should be installed to alert community/drivers/pedestrians - lighting and/or reflective tapes and signages integrated in all worksites for safety at night - appropriate security measures in place to prevent harassment or kidnapping of workers 	Soil contamination from leakage/ spillage of fuel or oil from equipment and vehicles.	<ul style="list-style-type: none"> • Prepare and implement an Emergency Response Plan to respond to incident of spillage. • Ensure fuel storage tanks are installed in a bounded area and checked daily. • Ensure regular maintenance of vehicles to avoid leaks of oil. • Prevent unregulated dumping of fuel waste.
Respiratory and eye related problems for workers due to exposure to fugitive dusts and gaseous emissions.	<ul style="list-style-type: none"> • Use water to wet ground for dust suppression. • Conduct regular visual inspection of dust pollution and ensure appropriate intervention if dust levels are high. • Train drivers/ workers on proper operation of vehicles & equipment to include fuel efficiency and anti-idling techniques. • Provide and enforce the usage of appropriate PPE. 	Generation of spoils and other excavated materials.	<ul style="list-style-type: none"> • Ensure stockpile and disposal areas are stable and protected against erosion and not interfere with run off or subsequent construction activities. • Stockpile to be covered and stored in a sealed and bonded area • Reuse stockpile as fill materials on the site or another construction site
Risk to community health and safety	<ul style="list-style-type: none"> • Provide adequate first aid, first aiders, PPE, signages (English and local languages), engineering barriers e.g. fencing • Restrict unauthorized access to all areas of high risk activities • lighting and/or reflective tapes and signages integrated in all worksites for safety at night 	Generation of construction waste and debris	<ul style="list-style-type: none"> • Ensure that hazardous wastes are stored in properly labelled closed containers placed away from direct sunlight, wind and rain. • Provide secondary containment with 110% of storage containers for hazardous waste. • Ensure usage of approved waste vendor for waste evacuation, processing & disposal.

ES9: Institutional Arrangement for Environmental, Social Management and Monitoring Plan

This plan establishes environmental and social action plans with well-defined desired outcomes and actions to address all potential impacts identified for the proposed project. The successful

implementation of the management and monitoring program will depend on the commitment and capacity of the State Project Implementation Unit (SPIU), environmental and social safeguard consultants and other third parties (institutions) that will implement the ESMP. The SPIU has demonstrated some capacity to implement ESMPs as they have implemented previous ESMPs. However, some gaps in knowledge of ESHS and GBV issues etc will be addressed by this training programme which is essentially for the SPIU, including relevant state and federal MDAs involved in the ESMP implementation. The roles and responsibilities of those that will be involved in the implementation and monitoring of this ESMP have been highlighted in the Report with training programmes as necessary to enhance capacity. Details are captured in Chapter 8 of this ESMP.

The monitoring activity will monitor the application of environmental and social mitigation measures and the result of monitoring activities shall be reflected in the monthly reports that shall be prepared and submitted by the supervision and monitoring consultant.

ES 10: Implementation Schedule

The activities related to environmental and social management and monitoring will be integrated into the overall rehabilitation schedule. The project implementation phase is estimated to be completed in twelve (12) months.

ES11: Cost Estimates for ESMP Implementation

The total estimated cost for the ESMP implementation and monitoring is **N11,550,000 (US\$ 37,869)**. The breakup of the cost will be provided in the project's BoQ. The breakdown of the estimated budget is presented in the Table 3 below:

Table 3: Cost Estimates for ESMP Implementation

Item	Responsibility	Cost Estimate in Nigerian Naira (N)	Cost Estimate in US Dollars (US\$)*
Mitigation	Contractor	5,300,000	17,377
	RAMP – SPIU	1,500,000	4,918
Monitoring	SPIU, MDAs	1,900,000	6230
Capacity Building	SPIU, Niger State Ministry of Environment and other relevant MDAs	1,800,000	5,902
Sub- Total		10,500,000	34,426
GRM Operation	RAMP – SPIU: 5% of Sub-Total	525,000	1,721
Contingency	5% of Sub- Total	525,000	1,721
Total		11,550,000	37,869

*1 US\$ =N305

ES12: Public Consultation

As part of the ESMP, and in line with FMEnv, Niger State Environment Policy and World Bank Environmental and Social Safeguards requirements, extensive consultations were held with the SPIU and communities along the affected roads including Galuwi, Gunudna, Nyela, Mukugi-Tsaza, Napankuchi, Madaki, Bangalaye, Gangare, Makera-Beji, and Emigimanzhi communities. The consultations served as platforms to elicit information, questions and concerns relevant to the project. The consultations were also used to ascertain the nature of impacts of the project from the community perspective and livelihood-based issues that might be supported by the project or other future RAMP activities. Those consulted include the traditional rulers, community leaders, women potential PAPs, and youths.

Project communities expressed their delight about the planned intervention as they believe the road if constructed will enhance the benefits of the newly constructed bridges as it will vehicular

access and thus reduce the cost of transportation and wastage of their produce. The people also believe that the roads will provide access to markets, schools and health centers in nearby towns. The major concerns expressed by community members and how they were addressed are summarized in Table 4.

Table 4: Major concerns and how they were addressed during consultations

Major Concerns	How They Were Addressed
The access road condition is very bad, so the new bridge is having very little impact. Vehicular access is limited, and transport costs are still high. The affected communities appealed to the government to ensure the rehabilitation of the road as promised.	The communities were informed that the rehabilitation of the roads will be implemented as promised to make life more comfortable for rural people. The design of the roads has been completed and construction works will commence after the ESMP/consultations process are completed.
They appealed to the government to provide them with social amenities including potable water, schools, electricity and health centers.	As concerning other amenities, the SPIU maintained that once the road is constructed other development will follow as the government is mindful of their situation.
The communities appealed to the potential contractor to engage their youth during construction.	The SPIU informed the communities that all contractors will source for workers especially unskilled labour from their host communities. The condition to make them do this will be part of contractual agreements.
They are also appealing to the government to tar the road surface in order to protect the road and reduce dust during dry seasons.	The SPIU responded that tarring the road may not apply under this project, however, their concerns regarding dust and erosion will be taking into considerations during project planning and implementation.

ES13: Conclusion and Recommendations

Consulted communities indicated that the proposed spot improvement of rural roads across Niger State will have highly beneficial impacts on the rural adjoining communities and respective LGAs and the state at large, as it will promote integration and improve accessibility to communities, markets, farms and agro-processing centres in the project areas. Below are some of the recommendations advanced by consulted communities which they believe it will enhance the overall sustainability of the proposed project especially during the implementation phase of the project:

- Priority should be given to local workers during project implementation in order to limit the number of migrant workers. This will reduce threats to community culture, health, safety and security as well as stimulate local socioeconomic activities, improve livelihood and reduce poverty in the affected communities.
- Affected communities should be informed in good time about the commencement of civil works. In addition, ongoing consultation with members of the affected communities should be maintained to allow them freely express their views/concerns and make valuable contributions.
- Water should be used for dust suppression during civil works especially those involving excavations and other dust generating activities in order to protect nearby communities from respiratory, eyes problems and other health related challenges of dust.
- All bare and exposed soils should be re-vegetated with native vegetation immediately after construction to prevent erosion.
- Develop Codes of Conduct for contractors with prohibitions against GBV/SEA.
- Grievance Redress Mechanism should be implemented to promptly and effectively resolve grievances from affected persons and other parties.
- The Safeguard Unit of SPIU should ensure active monitoring to ensure the contractor adhere strictly to the requirements of this ESMP, especially in the application of mitigation measures during project implementation.

- Adequate efforts should be made by all stakeholders, especially the government in ensuring provision of adequate infrastructures and social facilities in the rural communities in order to improve the standard of living of the rural dwellers.
- Ensure measures to prevent dust and erosion on the road surface are taking into consideration during road design, construction planning and implementation in order to prevent erosion and reduce dust impacts on communities during the dry seasons.

CHAPTER ONE: INTRODUCTION

1.1 Background

The Federal Government of Nigeria has received financing from the World Bank (WB) and French Development Agency (AFD) for the implementation of Second Rural Access and Mobility Project (RAMP-2) in four States of Adamawa, Enugu, Niger and Osun. RAMP-2 is essentially designed to improve agricultural productivity and value chain, as well as income and competitiveness of small family farmers in rural areas. Most of these farmers reside in the rural communities and movement of their agricultural inputs and outputs (produce) is hinged primarily on accessibility and mobility. Consequently, the priority of RAMP is to connect rural communities and farms to local agricultural markets in order to enhance agricultural productivity, help build rural agricultural value chains, and help producers to market agricultural products competitively.

As part of RAMP-2 Activities in Niger State, a total of 20 Nos critical river crossings across several Local Government Areas (LGA) of the state have been prioritized, constructed and commissioned to aid accessibility of local farmers, especially during the wet seasons. However, the overarching objective of the new river crossings is not being realized as the existing condition of the access roads to most of the river crossings is poor. The roads are mostly track and characterized by sheet and gully erosion, narrow portions and uneven surfaces making them impassable for vehicles. Despite the construction of the river crossings, the poor condition of these roads is still hampering agricultural productivity and value chain, economic empowerment as well as socio-cultural integration and interaction among members of the rural communities connected by the roads. Consequently, the WB has given a no-objection to State Project Implementation Unit (SPIU) for RAMP-2 in Niger State to undertake spot improvement of the roads leading to the river crossings.

The spot improvement works will cover access roads to a total of 16 numbers river crossings scattered across 13 LGAs in the state. The RAMP-2 activities on the selected roads will essentially be civil work entailing rehabilitation of failed portions. These activities could result in environmental and social impacts thus, triggering the World Bank's Safeguard Policies including Environmental Assessment OP 4.01; Natural Habitats OP 4.04 and Public Disclosure BP 17.60. Consequently, this Environmental and Social Management Plan (ESMP) is the instrument required to address environmental and social (E&S) risks and impacts associated with the implementation of the proposed civil work component of the project.

1.2 Objectives of ESMP

The overarching objective of the ESMP is to ensure that adverse E&S impacts likely to arise from the project activities are addressed and appropriate mitigation measures are integrated into project implementation in order to protect the environment and human health. The specific objectives of the ESMP are to:

- Comply with applicable national environmental legislations, standards and guidelines as well as the World Bank's environmental and social safeguard policies;
- Achieve and demonstrate sound environmental performance based on the principle of continual improvement;
- Identify potential positive and negative impacts that may arise from the implementation and operation of the project;
- Proffer management actions that need to be implemented in order to mitigate the negative impacts and enhance the positive impacts of the project;
- Propose environmental monitoring programmes that will ensure that mitigation measures are implemented and effective and timely corrective actions are taken where required;

- Propose institutional arrangements, incorporating roles and responsibilities of stakeholders involved in management actions and monitoring;
- Describe capacity building and training requirements for effective implementation of ESMP;
- Outline the implementation schedule and reporting procedures for the ESMP;
- Communicate E&S expectations and requirements throughout project implementation; and
- Ensure the allocation of sufficient resources for effective implementation.

1.3 Approach and Methodology

This ESMP was prepared in accordance with the requirements of the World Bank's E&S Operational Policies and the Nigerian environmental assessment (EA) guidelines and procedures taking into due cognisance the extant environmental regulations in Niger State. The methodology essentially entailed: Literature Review/Desktop studies, Field studies, Public consultations and Preparation of ESMP Report.

1.3.1 Literature Review/Desktop Studies

Literature review and desktop studies were undertaken to obtain information on the proposed project as well as the environmental and socioeconomic conditions of the project area. The documents reviewed included:

- Project Appraisal Document (PAD);
- Environmental and Social Management Framework (ESMF);
- Project Information Document/Integrated Safeguard Data Sheet (PID/ISDS);
- World Bank Environmental and Social Safeguards Policies
- Existing ESMP reports for RAMP-2 including for the construction of river crossings;
- Baseline information relating to the biophysical and social environment of the project areas;
- Detailed engineering design of the proposed roads and,
- Relevant national and Niger State environmental laws, regulations, policies and guidelines.

1.3.2 Field Data Gathering

Field data gathering was carried out from 7th – 18th January 2019 to establish the existing conditions of the E&S components or resources that may potentially be affected and allow for accurate predictions of how the project may impact these components. The area studied was delineated to cover the entire 119km stretch of roads under consideration and sections of the immediate environment up to 1km corridor from both sides of the road including all communities along the entire stretch. This area is defined based on the extent to which the project activities may interact with the surrounding environment whilst taking into considerations the nature of the project activities, nature of surrounding ecosystem resources and the spatial distribution of communities.

1.3.3 Community and Stakeholder Consultations

Community wide stakeholder consultations were held within the project areas during the field data gathering. Consultations were held to elicit views and concerns about the proposed intervention from the affected communities and other stakeholders using in-depth interviews and focus group discussions. Through this process, concerns and issues raised were addressed while views and inputs regarding potential E&S impacts of the project and proposed mitigation/enhancement measures were obtained. Details of consultations is included in chapter 9.

CHAPTER TWO: ADMINISTRATIVE & REGULATORY FRAMEWORK

2.1 Introduction

The project will be guided by applicable Federal and State policies and regulatory framework, and the World Bank operational safeguard policies. The project will comply with the Niger State Policy on Environment backed by the National Policy on Environment which provides a framework for environmental protection and sustainable development in Nigeria. The Niger State Ministry of Environment, Niger State Environmental Protection Agency (NISEPA) and the Federal Ministry of Environment (FMEnv) provide procedures for conducting Environmental Assessments for development projects in line with the Environmental Impact Assessment Act No. 86, 1992 (as amended by EIA Act CAP E12 LFN 2004).

2.2 Administrative Structures

2.2.1 Federal Ministry of Environment

The Federal Ministry of Environment (FMEnv) is the statutory government institution mandated to coordinate environmental protection and natural resources conservation for sustainable development in Nigeria. The Environmental Assessment (EA) Department of the Ministry is charged with the responsibility of ensuring that all developmental projects are carried out in compliance with relevant environmental laws and regulations in order to ensure environmental sustainability.

2.2.2 National Environmental Standards and Regulations Enforcement Agency (NESREA)

National Environmental Standards and Regulations Enforcement Agency (NESREA) was established by NESREA Act No 25 of 2007 as a parastatal of the FMEnv. NESREA is charged with the responsibility of enforcing all environmental laws, guidelines, policies, standards and regulations in Nigeria. It also has the responsibility to enforce compliance with provisions of international agreements, protocols, conventions and treaties on the environment to which Nigeria is signatory.

2.2.3 Niger State Ministry of Environment and Forestry (SME&F)

The mandate of the ministry includes preserving, conserving and on sustainable basis, maintain the ecosystem and encourage collaboration among the States, local government as well as the domestication of all international treaties. It also ensures that engineering design and specification of appropriate waste disposal and treatment system take into consideration the geological and environmental setting, encourage recycling and preserving the integrity of surface and ground water system.

2.2.4 Niger State Environmental Protection Agency (NISEPA)

The Niger State Environmental Protection Agency (NISEPA) was established by the NISEPA (Amendment) Law of May, 2011. The functions of the Agency amongst others include to:

- Enact and enforce State regulations control criteria, procedure, guidelines and environmental standards for effective prevention, remediation, control and prevention of point and non-point sources of pollution and degradation;
- Implement environmental policy in the State and in particular to demand and review EIA and statements for new development projects and to also demand and review environmental audit reports for existing developments and such other operations which are deemed to have significant impact on the environment; and

- Establish operational mechanisms for refuse collection, transportation and disposal in cooperation with local governments of the State.

2.2.5 Local Government Authorities

Environmental matters at the 13 LGAs hosting the roads under considerations are essentially guided by Environmental Sanitation edicts and bye-laws. The host LGAs have Environment and Public Health Departments that are responsible for environmental health issues in their LGAs.

2.3 Regulatory Framework

2.3.1 National and State Legal and Policy Framework

The provisions of existing state and national policies, laws and regulations relevant to the project activities under RAMP-2 are summarised in Table 2.1 below:

Table 2.1: Relevant Policies, Laws and Regulations

S/N	Regulations	Year	Provisions
1	EIA Act No 86 of 1992 (as amended by EIA Act CAP E12 LFN 2004)	1992	The Act makes EIA mandatory for all major development projects likely to have adverse impacts on the environment and gives specific powers to FMEnv to facilitate environmental assessment of projects in Nigeria.
2	National Environmental Protection (Pollution and Abatement in Industries in Facilities Producing Waste) Regulations	1991	Imposes restrictions on the release of toxic substances and stipulates requirements for monitoring of pollution. It also makes it mandatory for existing industries and facilities to conduct periodic environmental audits.
3	National Environmental Protection (Management of Solid and Hazardous Wastes) Regulations.	1991	Regulates the collections, treatment and disposal of solid and hazardous wastes from municipal and industrial sources.
4	Harmful Wastes (Special Criminal Provisions etc) Decree No. 42	1988	Provides the legal framework for the effective control of the disposal of toxic and hazardous waste into any environment within the confines of Nigeria
5	NESREA Act No. 25, 2007		The NESREA Act No. 25 of 30 th July, 2007 established NESREA and empowers her with the responsibility of enforcing all environmental laws, guidelines, policies, standards and regulations in Nigeria. The Act spells out the functions, powers, structure, staffing of the Agency as well as financial and other miscellaneous provisions.
6	National Environmental (Sanitation and Wastes Control) Regulations	2009	The purpose of the Regulation is the adoption of sustainable and environment friendly practices in environmental sanitation and waste management to minimize pollution. The Instrument amongst others makes provisions for the control of solid wastes, hazardous wastes and effluent discharges. It in addition, spells out roles and responsibilities of State and Local Government Authorities.
7	National Policy on the Environment	1989	The policy identifies key sectors requiring integration of environmental concerns and sustainability with development and presents their specific guidelines
8	National Air Quality Standard Decree No. 59	1991	The World Health Organization (WHO) air quality standards were adopted by the then Federal Ministry of Environment (FMEnv) in 1991 as the national standards. These standards define the levels of air pollutants that should not be exceeded in order to protect public health.
9	National Environmental (Air Quality Control) Regulations (S.I No. 64)	2014	The purpose of these regulations is to provide for improved control of the nation's air quality to such extent that would enhance the protection of flora and fauna, human health, and other resources affected by air quality deteriorations.
10	National Environmental (Noise Standards and Control) Regulations	2009	The objective of the Regulations is to ensure maintenance of a healthy environment for all people in Nigeria, the tranquility of their surroundings and their psychological wellbeing by regulating noise levels. The Instrument prescribes maximum permissible noise levels of a facility or activity to which a person may be exposed; and provides for the control of noise mitigating measures for the reduction of noise.
11	National Environmental (Soil Erosion & Flood Control) Regulations (S.I. 12)	2011	The purpose of these Regulations is to establish technically feasible and economically reasonable standards and procedures to achieve appropriate level of management and conservation practices to abate soil erosion, siltation and sedimentation of the waters of Nigeria, due to soil erosion and flood aggravated by non-agricultural earth-disturbing activities.
12	National Environmental (Construction Sector) Regulations (S.I No. 19)	2011	The purpose of these regulations is to prevent and minimize pollution from construction, decommissioning and demolition activities in the Nigerian environment. It stipulates that new projects in the construction sector shall apply cost-effective, up-to-date, efficient, best available technology, to minimize pollution to the barest degree practicable. In addition, every operator or facility shall carry out an EIA and submit an EMP for new projects or modification including expansion of existing ones before commencement of activity.

13.	EIA Sectoral Guidelines for Infrastructure – Transportation Development Project (Roads and Highways),	1995	The Guidelines were designed to assist project proponents in conducting detailed environmental assessment of roads and highways projects with emphasis on the significant associated and potential impacts of such projects on the environment, mitigation measures for avoiding, minimizing or alleviating any adverse impacts as well as future monitoring programme for ensured sustainability of the project are also contained therein for guidance.
14	Land Use Act CAP L5 LFN	2004	The Land Use Act of 1978 reviewed under Cap L5 of 2004 is the legal framework for land acquisition and resettlement in Nigeria. Subject to the provisions of this Act, all land comprised in the territory of each State in the Federation are vested in the Governor of that State and such land shall be held in trust and administered for the use and common benefit of all Nigerians in accordance with the provisions of this Act.
15	Forestry Act CAP 51 LFN	1994	The Act provides for the preservation of forests and the setting up of forest reserves. The Act makes it an offence, punishable with up to 6 months' imprisonment to cut down trees over 61 cm (2 ft) in girth or to set fire to forest except under special circumstances.
16	Niger State (Amendment) Law 2011	2011	The Niger State Environmental Protection Agency (NISEPA) Law promulgated on the 4th of May, 2011, established NISEPA to have the general responsibility for all matters relating to the environment in the State. The Law spells out the powers and functions of NISEPA and makes provision for the establishment of a governing council for the Agency.

2.3.2 International Laws and Treaties which Nigeria is a Signatory

Nigeria is involved in a number of conventions and treaties with relevance on environmental protection and preservation. Some of these relevant to the present study are presented in the table below;

Table 2.2: Some International Laws and Treaties

1	International Laws and Treaties which Nigeria is a Signatory	1.	United Nations Convention on Biological Diversity
		2.	United Nations Convention on Climate Change
		3.	Vienna Convention for the Protection of the Ozone Layer

2.3.3 World Bank Safeguard Policies

The World Bank has 10+2 Environmental and Social safeguard policies, designed to help prevent and mitigate undue harm to people and their environment in the development process and ultimately ensuring that environmental and social issues are addressed throughout the project life cycle of a World Bank – financed project. Specifically, the proposed project has triggered the following policies: OP/BP 4.01: Environmental Assessment; OP/BP 4.12: Involuntary Resettlement; OP/BP 4.04: Natural Habitat and OP/BP 17.50: Disclosure of Information. The description and applicability of triggered policies are presented in Appendix 2.

2.3.4 World Bank Group Environmental, Health, and Safety Guidelines

World Bank Group Environmental, Health and Safety (EHS) Guidelines are technical reference documents with general and industry-specific examples of good international industry practice. The EHS guidelines contain the performance levels and measures that are normally acceptable to the World Bank Group and that are generally considered to be achievable for infrastructural developments including road construction.

CHAPTER THREE: PROJECT DESCRIPTION

3.1 Introduction

This chapter provides a brief description of the proposed intervention site and project, including the nature of the project, its location, objective, components and project activities in all the phases of the project.

3.2 The Existing Road

The cumulative length of the roads is approximately 119km scattered across 13 LGAs in Niger State (Figure 3.1). The roads provide access to 16 out of the 20 newly constructed river crossings as indicated in Table 3.1. The condition of the roads has deteriorated over the years with some portions of each road now impassable for vehicles especially during the wet seasons as a result of erosion as well as failed and narrow portions, as shown in Plates 3.1 – 3.4 below.

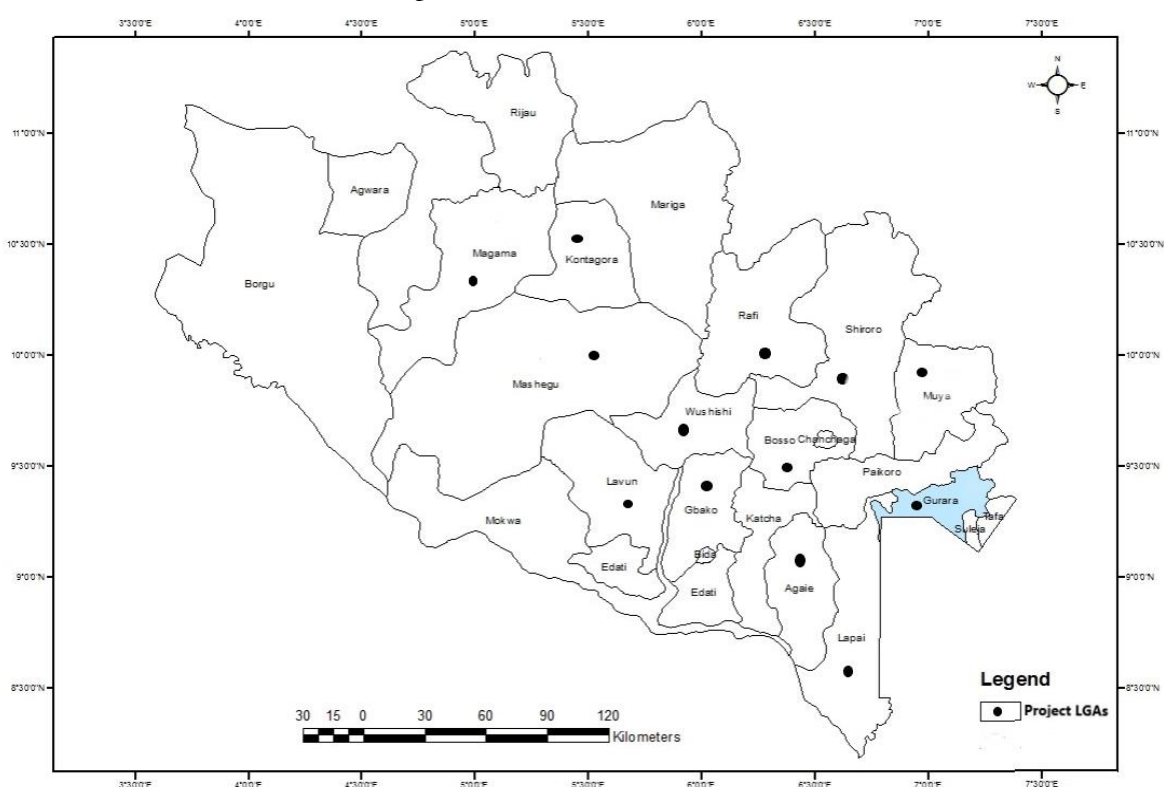


Figure 3.1: Map of Niger State showing project LGAs

Table 3.1: The list of roads, respective LGAs, length and locations

S/N	Road	Environmental issues	LGA	Length (km)	Location of Road (Start)		Location of River Crossing	
					Northing	Easting	Northing	Easting
1	Kaboji - Adogon Mallam	Erosion prone, sparse vegetation cover	Mashegu	19.0	10.11012	5.40014	10.10186	5.23078
2	Adogon Mallam - Mazakuka	Erosion prone	Mashegun	11.6	10.10189	5.23093	10.01366	5.19182
3	Kutriko - Eyangi-Liman	sparse vegetation cover	Agaje	16.584	9.17615	6.54697	09.15730	6.37276
4	Takuti - Kutriko	sparse vegetation cover	Agaje	12.874	09.17614	6.54701	09.18121	6.43620

5	Shakwatu - Gunudna	sparse vegetation cover	Shiroro	2.585	09.65845	6.70211	09.66625	6.70044
6	Ibeto - Gyengi	Erosion prone, sparse vegetation cover	Magama	0.792	10.49793	5.15119	10.49945	5.14723
7	Maikujere - Madaki	Erosion prone, sparse vegetation cover	Rafi	3.075	10.28021	6.28856	10.28880	6.27156
8	Makera – Beji - Labuda	Erosion prone,	Wushishi	15.95	09.54084	6.08496	09.54681	6.20191
9	Mukugi – Adako	Erosion prone,	Lapai	7.412	09.13017	6.54914	09.11763	6.59494
10	Sarkin Pawa - Iga	Erosion prone,	Munya	5.595	10.02824	7.15676	10.02714	7.16570
11	Kontagora – Gangaren Sagi	Erosion prone,	Kontagora	2.87	10.39412	5.47753	10.38539	5.48215
12	Gbadafu - Emighimanzhi	Erosion prone,	Gbako	3.146	09.24381	5.87854	09.25307	5.90759
13	Daban – Ndaruka	Erosion prone,	Lavun	5.0	09.20316	5.71728	09.29408	5.72415
14	Lambata – Nyela - Baji	Erosion prone,	Gurara	7.0	09.27306	6.98460	09.28554	6.96561
15	Napankuchi	Erosion prone,	Bosso	2.607	09.64283	6.39255	09.65935	6.38916
16	Maikunkele – Jangaru	Erosion prone,	Bosso	6.9	09.42541	6.33388	09.42534	6.333428



Plate 3.1: Failed and narrow portion at Mazakuka



Plate 3.2: Failed section along Adogon-Mallam Road



Plate 3.3: Failed portions at Daban



Plate 3.4: Failed portion along Mazakuka road

3.3 Description of the Intervention

3.3.1 Project Component and Activities

The major component of the project is civil engineering work which will entail the following activities:

- Rehabilitation of failed portions along the stretch of 119km single lane carriage road of 6m wide with 0.75m shoulders on both sides;
- Construction of culverts at appropriate locations;
- Construction of earth drainage infrastructures;
- Installation of speed breakers, lane markings and road signs.

3.3.2 Road Designs

• Road Alignment

The proposed roads have been designed to use the existing route alignments as much as possible to limit environmental and social footprint of the project. The route allows for a design which meets the *Draft Low Volume Roads (LVRs) Manual, 2016, Federal Ministry of Agriculture and Rural Development*, which was developed to adequately cater for the specific needs of rural roads in Nigeria, without any impediment and minimal re-alignment. Using the Draft LVR Manual approach, the project roads are expected to fulfill an access function, whereby most of the existing alignment is retained. Thus, the existing alignment dictates the travel speed (and hence, the horizontal and vertical alignments) depending on the terrain and existing roadside development. In cases where there are potential safety issues such as sharp crests and blind curves, appropriate countermeasures will be applied/installed on a site-specific basis.

The road will be of 6m wide with 0.75m shoulders on each side of the road. The pavement of the road will comprise of mostly 1500mm naturally occurring lateritic materials which will be stabilized with 150mm lateritic materials as base course. The surface will be 2 coats of chipping stones surface dressing. The design speed adopted for the road is 40km/hr. The summary of the design standards for the road construction is presented in Table 3.2.

Table 3.2: The Summary of design standards for the road construction

S/N	Parameter	Design
1	Type of Road	Single 2 lane carriageway
2	Design Speed	40km/hr
3	Carriageway Width	6.0m
4	Shoulder Width	0.75m
5	Pavement	150mm thick lateritic materials sub-base materials (Min. CBR = 30%) 150mm thick lateritic material base materials (Min. CBR = 80%)
6	Surfacing	2 coats of chipping stones surface dressing
7	Box Culverts	Reinforced concrete with minimum grade 20 with varying sizes including 1.5m x 1.5m, 2.0m x 2.0m, 3.0m x 2.0m and 3.0m x 3.0m
8	Pipe Culverts	Reinforced concrete with minimum grade 20 of varying diameter including 900mm and 1200mm

Source: Design Unit, Ministry of Agric & Rural Development, 2016

• Culverts

There are a few rivers crossing along the road thus necessitating the provision of drainage structures, essentially culverts. These infrastructures along the route will ensure adequate drainage and maintenance of moisture equilibrium of the road throughout the year. Specifically, the road infrastructure will include box and pipe culverts where needed. The required culverts for the road will be between 1.5m x 1.5m, 2.0m x 2.0m, 3.0m x 2.0m and 3.0m x 3.0m and will include single span and double cell reinforced concrete with channel protection. The diameter of the pipe culverts may vary between 900mm – 1,200mm.

3.4 Project Activities and Schedules

Activities to be undertaken during the implementation of the proposed road construction project are broadly classified into three (3) phases, namely; preconstruction, construction and operation phases. Activities in each phase are described in the following sub-sections.

3.4.1 Preconstruction Phase

Key activities in this phase will include vegetation clearing, installation of workers camp, and mobilisation of equipment and workers.

This project entails the rehabilitation of failed portions on existing rural roads and as such it is envisaged not to require land acquisition. The outcome of the screening of the spot improvement project shows that RAP was not required. This stemmed from the fact that the road widths across the locations of the river crossings are more than the 6m width specified in the design for spot improvement. In addition, the trees spotted within some of the road corridors were non-economic trees. There were no settlements nor farms likely to be encroached upon during civil works. Some selected pictures from the site are included in Plates 3.1 – 3.4 which depict the condition of the spot improvement location.

Prior to the commencement of construction activities, prefabricated shelters will be installed at appropriate area to serve as workers camp, site offices, storage facilities, on-site medical facilities and sanitary facilities. Thereafter, heavy-duty vehicles, equipment, materials and workforce will be mobilized to the project site. Some of the construction equipment may include bulldozers, back hoes, chip spreaders, motor graders, roller machines, excavators, wheel loaders (pay loaders), pavement planers and compactors. Vegetation/site clearing will occur in phases to mitigate impacts of erosion, land degradation and destruction of fauna habitat. The preconstruction activities are envisaged to take place for a period of three (3) months.

3.4.2 Construction Phase

Key activities in this phase will include earthwork and grading, construction of culverts and drainage infrastructure as well as paving and surfacing as described in Section 3.3.2 above. Construction works will essentially entail civil engineering works requiring excavation, movement of earth materials, cement and concrete works, cuttings, filling, soil stabilization and compaction. Construction activities are scheduled to take place for a period of nine (9) months.

3.4.3 Operation and Maintenance Phase

Following construction, the road will become operational. The initial stage of the operation phase is the Defect Liability Period during which the road and ancillary infrastructures will be monitored and maintained by the SPIU to ensure sustainability. The SPIU has sensitized all communities along the road to form community-based road maintenance groups, maintenance equipment will be made available to this group for light maintenance activities including cleaning and vegetation control along the shoulders and around culverts and other drainage structures culverts. In addition to the community-based maintenance there will also be an annual based mechanised.

CHAPTER FOUR: DESCRIPTION OF PROJECT ENVIRONMENT

4.1 Introduction

This Chapter presents a concise summary of the general environmental and socioeconomic conditions in Niger state and especially around the project areas which are scattered across 13 LGAs (out of the 25 LGAs) in Niger State. Niger State is located in the North Central part of Nigeria and covers 76,363 square kilometres making it the largest Nigerian state by land area. The state capital is Minna town which is about 145 km from the Federal Capital Territory (FCT), Abuja. Other major towns in the state include Bida, Kontagora and Suleja. The state is bounded to the south by the Niger River. It is also bounded by the states of Kebbi and Zamfara to the north, Kaduna to the north and northeast, Kogi to the southeast, and Kwara to the south. The Abuja FCT is on Niger state's eastern border, and the Republic of Benin is its western border. The common boundary with the Republic of Benin is along New Bussa, Agwara and Wushishi LGAs, and this has given rise to common inter- border trades between the two countries. The map of Nigeria showing the location of Niger State is presented in Figure 4.1.

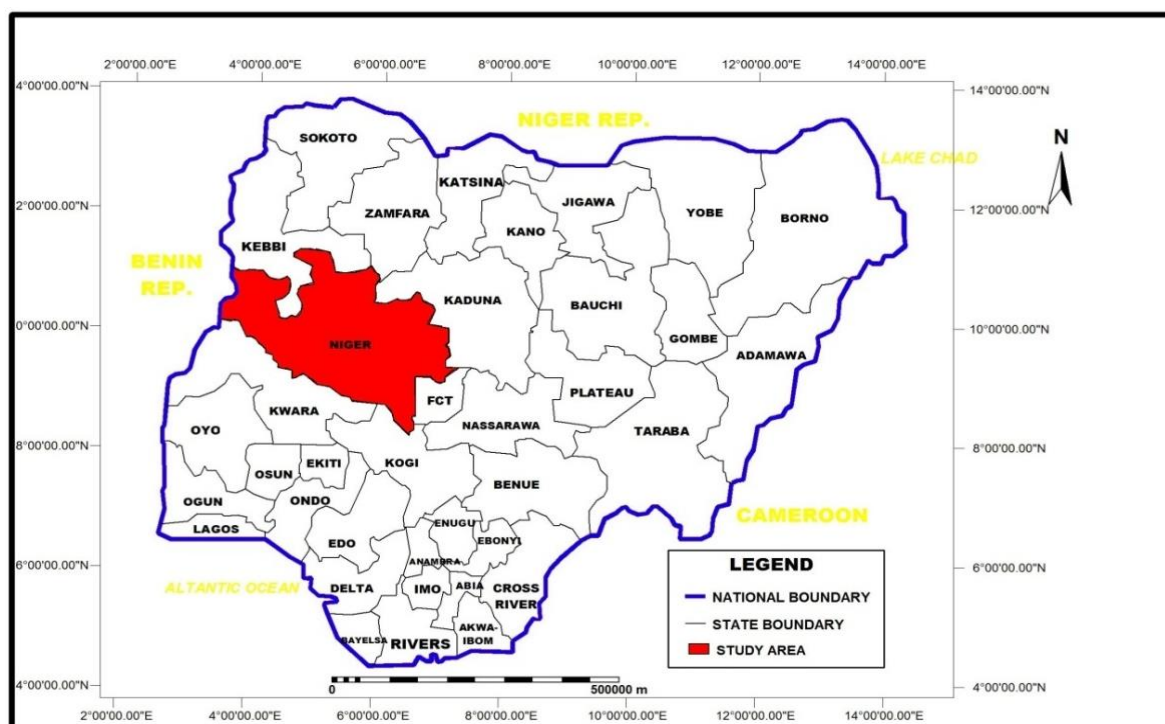


Figure 4.1: Administrative Map of Nigeria showing Niger State

4.2 Biophysical and Social Environment

4.2.1 Climate /Meteorology

The project areas fall within the predominant climatic conditions of Niger State. The tropical climate of the state is broadly of two seasons: rainy season (April - October) and dry season (November – March). Rainfall intensity in the state ranges from 60mm/hr to 105mm/hr with the highest rainfall values usually recorded in August during the peak of rainy season. The mean monthly temperature in Niger State is generally high all year round, with the highest value of about 38.1 °C in the month of March and the lowest value of about 19.6°C in December. The mean monthly sunshine hours range between a low value of 4.7 hours in July and August (rainy season) and a high value of 8.6 hours in November (dry season). The number of daily sunshine

hours is strongly subjected to the influence of seasonal atmospheric alteration by cloud and rainfall.

4.2.2 Geology and Soils

About 50% of the entire landmass of Niger State is underlain by the hard-rocks belonging to the Basement Complex of Precambrian age while the remaining 50% is outcropped by the soft-rocks of Cretaceous age belonging to the Bida Basin sedimentary rock as shown in Figure 4.2. Three major soils types can be found in the project area. These include the ferruginous tropical soils, hydromorphic soils and ferrosols. The most prominent soil type is the ferruginous tropical soils rich in compounds of iron. In general, the project region has high erosion potentials, consequently the potential erosion impacts are addressed as part of project impacts with mitigation measures proffered in Chapter 8.

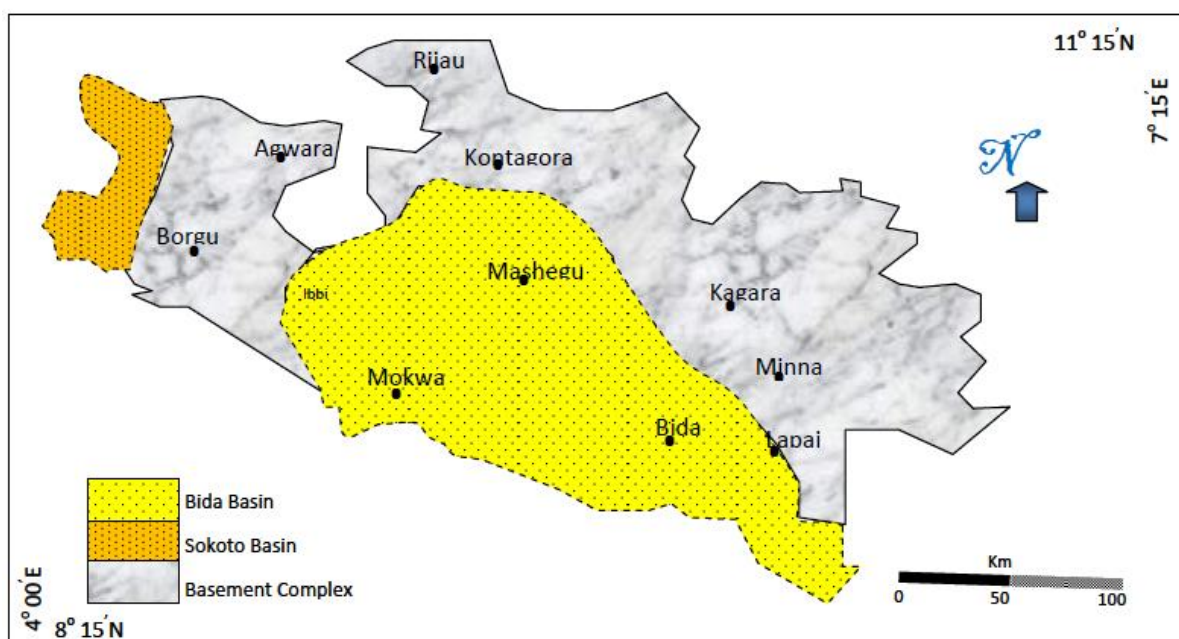


Figure 4.2: Geological Map of Niger State (proposed roads are located within Bida Basin and Basement Complex)

(Source: Amadi *et.al.*, 2013)

4.2.3 Surface Water and Drainage

Niger state is drained by rivers Niger and Kaduna and their numerous flood plains and tributaries some of which traverse the newly built river crossings across the project areas.

4.2.4 Vegetation

The vegetation in Niger State is a typical Northern Guinea Savannah types, characterized by presence of trees, shrubs and herbaceous flora. The rural communities where the roads are located are predominantly agrarian communities where farming, gathering, hunting and fishing are their main occupations. Consequently, the vegetation is highly degraded and most of the forests encountered are secondary woodlands where the plants are struggling to regenerate. It was noted that this vegetation had been cleared by members of the communities, either for their farmlands or as wood-fuel, as well as ranching. It was also gathered that the community (most especially women) gathered the fire woods, not only for use as fuel, but also as means of inheritance to be bequeathed to their children. This is evident from numerous hips of firewood encountered during this study (Plate 4.1).



Plate 4.1: Firewood gathered by a household in Gunudna Community

4.2.5 Socioeconomic Environment

■ **Ethnicity and Language**

There are three dominant ethnic groups, Nupe, Gbagyi, and Hausa in the project areas. Coincidentally, these are the three major ethnic groups in the State. Other minority tribal groups include - Kadara, Koro, Baraba, Kakanda, Ganagana, Dibo, Kambari, Kamuku, Pangu, Dukkawa, Gwada and Ingwai. The major languages spoken in the project areas also include Hausa, Gbagyi and Nupe.

■ **Community Administration**

The project area is governed at the apex by the Emir who has jurisdiction over an emirate. The emirate towns in the project area include Suleja, Bida and Kontagora. However, the administrative hierarchy begins with the Ward Heads. The Ward Heads have social and political jurisdiction over the ward under them. The Ward Head reports to the Village Head. The village Head reports to the District Head who is answerable to the Emir. This order of administrative governance is followed in addressing civil and legacy disputes.

■ **Demographic Characteristics of the Project Area**

The population figures for the project LGAs are 2016 projections based on the 2006 population census. The affected roads as well as the land area and population by LGAs are shown in table 4.1 below.

Table 4.1: Demographics of the affected LGAs

S/N	Road	LGA	Length (km)	Land Area (km ²)	Population	
					2006	2016
1	Kaboji - Adogon Mallam	Mashegu	19.0	9,182	215,022	302,300
2	Adogon Mallam – Mazakuka	Mashegun	11.6			
3	Kutriko - Eyangi-Liman	Agaje	16.584	1,903	132,098	185,600
4	Takuti – Kutriko	Agaje	12.874			
5	Shakwatu – Gunudna	Shiroro	2.585	5,558.0	235,404	331,100
6	Ibeto – Gyengi	Magama	0.792	3,985	181,653	
7	Maikujere – Madaki	Rafi	3.075	3,558.7	181,929	261,500

8	Makera – Beji – Labuda	Wushishi	15.95	1,779.4	81,783	114,900
9	Mukugi – Adako	Lapai	7.412	3,051	117,021	164,400
10	Sarkin Pawa – Iga	Munya	5.595	2,176	103,461	145,400
11	Kontagora – Gangaren Sagi	Kontagora	2.87	2,081	151,968	213,500
12	Gbadafu - Emighimanzhi	Gbako	3.146	1,915	127,466	
13	Daban – Ndaruka	Lavun	5.0	4,218.5	209,917	294,700
14	Lambata – Nyela – Baji	Gurara	7.0	1,126.3	90,974	127,700
15	Napankuchi	Bosso	2.607	1,592	148,136	208,100
16	Maikunkele – Jangaru	Bosso	6.9			

Source: National Population Commission of Nigeria (web), National Bureau of Statistics (web).

■ Occupation and Livelihood

The project areas are located in the rural parts of Niger State where the predominant occupation is farming and trading in agricultural produce. People in the area grow varieties of crops including yam, maize, millet, guinea corn, rice, melon, potatoes and tomatoes. In addition, people in the area also engaged in livestock farming of Cattle, goats, sheep, chickens, and guinea fowl. Engagement with the communities revealed that majority of the people earn between N10,000 and N40,000 per month from agro-related businesses which indicate low income status for the project area.

■ Religion

The two major religions being practiced in the project area are Christianity and Islam. Interaction with community members during consultations revealed that about 90% of the people in the project communities are Muslims.

■ Education

The adults in the project community can be generally classified as being illiterate with about 70% of the population not having the ability to read and write. For the literate 30%, primary education is the highest attainment for the majority, except about 5% with secondary education. There were only primary schools in a few of the communities in the project areas. Lack of access roads to nearby communities where schools are located especially during the wet seasons when the roads are impassable is the major reasons a lot of children are out of school in the project communities.

■ Sources of Drinking Water

Evidence from consultation revealed that members project communities experience great difficulty in getting potable water and water for domestic use. They go as far as over 1km to fetch water from a perennial stream for drinking and domestic purposes. Other sources of water include hand dug wells and boreholes which are available in few of the project communities. The project communities can be said to be in acute need of potable water as about 50% of communities lack access to clean potable water.

■ Amenities and Infrastructure

Social amenities and infrastructure are non-existent in the project communities. There are a few hand pump boreholes, primary schools and some health centres in some communities (Plates 4.2 & 4.3). Over 90% of project communities are not connected to national grid for electricity. There is presence of mobile telecommunication network in all project communities. Access to basic amenities in nearby towns are further hampered by poor access roads.



Plate 4.2: Hand-pump borehole at Makera-Beji



Plate 4.3: Health Centre at Nyela

■ Source of Fuel for Cooking

The predominant source of energy for domestic use (cooking) is firewood in the entire project area. Some members of the communities also use charcoal from wood processing.

■ Waste Management

Waste management practice in the study area is characterized by indiscriminate disposal in the surrounding bush and occasional burning in the dry periods. Although the nature of wastes is largely domestic and bio-degradable, the poor nature of waste disposal may not be unconnected with the breeding of mosquitoes which results in high level of malaria sickness. Most members of project communities defecate in the bush as there are no toilet facilities in the communities. The project areas are rural in nature and lack access to the services of waste management agencies which collect wastes in urban areas.

■ Transportation

Means of transportation across the project communities are vehicles and motor-cycles. The poor conditions of the rural roads have led to the dominance of the use of motor cycles and increased cost of transport. Most of the roads under considerations are impassable during the wet seasons and members of affected communities often trek several kilometers carrying their farm produce to where they can access vehicles to convey them to the markets.

■ Gender Relations and Involvement

Women in the project area are subjects to their husband's authority and often do not mingle in community leadership matters. However, the women are not restricted by cultural or religious laws from ownership of assets including acquisition and participation in farming and trading activities.

■ Health

It was generally observed that an average household in the project area has had one or more members of their household sick in the past two years. Malaria and Typhoid are the most common sickness re-occurring in most of the households. Members of the communities usually go to the nearest Health Centers for treatment. Where they cannot access the nearby health centers, they resort to traditional means to cure. This is because less than 10% of affected communities have health centres which are largely ill-equipped and poorly staffed. Access to health centers is further restricted by bad roads which are usually impassable especially during the wet periods.

CHAPTER FIVE: IMPACT IDENTIFICATION AND MITIGATION

5.1 Introduction

The activities associated with the different phases (pre-construction, construction and operation) involved in road construction projects will result in varying degrees of impacts on the bio-physical and social environment. In this Chapter, the potential E&S impacts that may arise from the proposed road construction are identified with effective mitigation measures proffered for all the impacts.

5.2 Impact Identification

Environmental and social impact assessment started with the scoping analysis where the key potential impacts were identified and followed by more detailed impact analysis. The environmental and social impacts of the 119km road is unlikely to have major negative impacts on the environment and social during the road construction activities. Table 5.1s below provides an overview of potential activities and impacts associated in each project phase:

Table 5.1: Project Implementation Phases and Associated Activities

S/N	Project Phases	Activities
1	Preconstruction Phase	<ul style="list-style-type: none"> • Land acquisition • Installation of site structures and facilities • Mobilization of equipment, materials and workers • Site clearing
2	Construction Phase	<ul style="list-style-type: none"> • Earthworks including excavation and grading • Construction of structures including bridges and culverts
3	Operation Phase	<ul style="list-style-type: none"> • Road usage • Maintenance and Repairs <ul style="list-style-type: none"> - scheduled and unscheduled integrity checks for bridges and culverts - maintenance and replacement of wearing/faulty/damaged components - repairs of cracks and potholes - maintaining road markings and traffic signs - cleaning and vegetation control along the shoulders - Cleaning of drains where and when necessary

The estimated costs of mitigation measures associated with the civil work activities will be included under the ESMP provision sum in the project Bill of Quantities (BoQ). The contractor is responsible to implement the proposed mitigation measures as per the instruction of the FPMU and SPIU. The potential E&S impacts likely to result from the interaction between the project activities in each phase and the environment as well as comprehensive mitigation measures are presented in Table 8.10.

5.3 Environmental and Social Impacts

The proposed road rehabilitation project is expected to have highly positive socio-economic impacts especially on the affected communities. The new road will also promote integration and improve accessibility to communities, markets, farms and agro-processing centres in the project area. As the majority of the population in the affected communities are farmers, the provision of good road network in the affected areas will lead to increase in agricultural output as the road will ultimately facilitate easy access to farm inputs, extension services, primary and secondary (urban) markets. Improvement in agricultural productivity will translate to economic empowerment, poverty reduction and socio-cultural wellbeing of the benefiting communities.

Another contribution of the proposed road rehabilitation project to the overall socio-economic wellbeing of the benefiting region is the provision of employment opportunities. A large number

of locals are expected to be engaged directly especially as semi-skilled (e.g. masons, carpenters, electrical technicians, welders, etc.) and unskilled labour (e.g. for site clearance, loading and offloading of materials, security services etc.). There will also be indirect opportunities for local contractors, businesses and food sellers amongst others. This will be a significant impact since the rate of unemployment is generally high in Nigeria and in project communities.

Inevitably, the project will have some minor adverse impacts on the biophysical and social environment. The minor environmental and social impacts are expected to be typically more pronounced during the construction phase of the project. These minor adverse impacts will be largely localized in spatial extent and short term and can be avoided or managed through the application of appropriate mitigation measures, sound design, good construction practices, effective maintenance and adequate supervision and enforcement during project implementation. The description of the potential environmental and social impacts that may arise from activities to be undertaken during the preconstruction, construction and operation phases of the proposed road construction project are discussed in the following section.

6.3.1 Adverse Environmental Impacts

- **Deterioration of Local Air Quality**

The project will inevitably lead to an increase in the release of gaseous pollutants and dust to the atmosphere within the vicinity of the road corridor. The major sources of air pollution during the project will include construction activities and movement of vehicles. Activities likely to pose adverse impact on air quality will include site clearing, road earthworks, movement of vehicles on unpaved surfaces and transportation of road building materials.

- **Noise and Vibration**

Noise is usually associated with construction especially road development projects. During preconstruction and construction, major noise sources will be from the operation of heavy duty vehicles and motorized equipment and machineries such as earth moving and excavation equipment, concrete mixers etc. These sources of construction noise are however unavoidable and could pose significant risks to construction workers and nuisance to community members.

- **Soil Erosion**

Ground disturbing activities during preconstruction and construction phases will inevitably expose top soil to erosion. Activities such as site clearing with removal of vegetative cover, compaction, excavation, side tipping of spoil materials could be responsible for this. Impact of erosion will be more pronounced especially if construction will take place during the wet season.

- **Soil Contamination**

Accidental leakages or spills of hazardous materials such as fuels, oils and lubricants used in operating and maintaining vehicles and equipment as well as from their improper handling and storage may cause direct contamination to soil especially during construction and operation and maintenance phases of the project. Indiscriminate disposal of hazardous wastes during preconstruction and construction phases may also lead to significant contamination of soils.

- **Waste Impact**

The majority of wastes generated during the preconstruction phase will essentially include cleared vegetal materials and spoils. During the construction phase, excavation and scarification is expected which may result in large quantities of rubbles. Additional wastes are expected to be generated during drainage and culvert construction, general civil engineering works associated with the construction process, from workers camp operations and during site clean-up.

- **Sedimentation of Surface Water**

The road construction project will involve substantial earthworks which inevitably will produce high sediment laden runoff which may affect surface water quality by increasing turbidity. Sedimentation of surface water may occur during both preconstruction and construction phases due to runoff from exposed soil surfaces during site clearing and earthworks.

- **Impact on Biodiversity**

The greatest potential for destruction of vegetation and alteration of terrestrial habitats will occur during the preconstruction phase when the route will be cleared. Vegetation clearing may only occur at some portions where the existing road is not wide enough to accommodate the 6.0 m road and 0.75m shoulders on both sides.

5.3.2 Adverse Social Impacts

- **Impacts of Land Acquisition**

Land acquisition is not envisaged in this project because the existing access roads in most locations are beyond the 6.0m width requirement for RAMP road. In addition, the trees spotted within some of the road corridors were non-economic trees. There were neither settlements nor farms likely to be encroached upon during civil works. If some reason land is required (temporary or permanent). PAPs shall be compensated with the objective of restoring livelihoods to pre-project level or better

- **Grievance and Conflicts**

A grievance redress committee shall be created at project, state and federal levels. It shall be accessible and efficient. PAPs and other concerned parties may have grievances with respect to the project activities, their impacts, valuation of assets, compensation and resettlement assistance payments, and other mitigation measures. The GRM will be provided with operational budget of N815,000. The GRM procedure is presented Chapter 6.

- **Threat to community culture, safety and security**

Influx of migrant workers and business opportunists who arrive at the project site to work or do business during construction may also put the cultures of host communities at risk of being diluted or influenced by outside values and traditions. The influx of more people may also lead to increased vices such as illicit drug use and peddling as well as increased crime rate. It is however instructive to note that no major cultural heritage will be impacted by the project.

- **Pressure on Existing Infrastructures in Host Communities**

Arrival of construction workers during construction and associated influx of camp followers or business opportunists in the project area may put pressure on existing healthcare and sanitary facilities in the host communities. This impact may be negligible because the worker's camp would be equipped with a clinic to cater for the needs of the employed workers. Temporary toilets and bathrooms will also be erected to meet the sanitary needs of workers. Some of the business opportunists are likely to be residents of nearby communities and as such only little pressure is expected to be put on existing facilities.

- **Risk of Sexually Transmitted Diseases**

There is the potential for increased Sexually Transmitted Diseases (STDs), particularly during preconstruction and construction phases of the project, due to increased concentration of people such as construction workers, migrant settlers and camp followers with diverse cultural and social backgrounds. Inevitable interactions among these migrant population and inhabitants of host communities may cause to increased prevalence of STDs especially HIV/AIDS.

The communicable disease of most concern during construction phase, like sexually-transmitted disease (STDs) such as HIV/AIDS, shall be prevented by successful initiative typically involving health awareness; education initiatives; training health workers in disease treatment; immunization program and providing health service. The contractor in collaboration with local health authorities shall be fully responsible for implementing this measure and the supervising consultant shall be responsible for ensuring adherence to this requirement.

- **Impact of vector diseases**

Reducing the impacts of vector borne diseases shall be the responsibility of the contractor and the supervising consultant will ensure adherence to this requirement. This should be accomplished through implementation of diverse interventions aimed at eliminating the factors that lead to vector disease including: i) prevention of larval and adult propagation of vectors through sanitary improvements and elimination of breeding habitat close to human settlements and, ii) eliminate any unusable impounding of water.

- **Security Challenges**

Security challenges may arise in the project area due to the storage of equipment and materials on site. Storage of these materials may attract thieves and hoodlums to the area with increased risks of threats to lives and properties. To prevent security challenges, trained security personnel shall be deployed to secure the sites in consonance with the Police. This security arrangement shall be disclosed to the host communities.

- **Impact on Occupational Health and Safety**

Occupational health and safety issues will likely be of concern particularly during preconstruction and construction phases of the proposed project. Activities such as mobilization of equipment and materials, site clearing and demolition, as well as construction activities involving use of heavy duty vehicles and equipment, road construction, drainage and culvert construction, civil works and road furniture installation may increase construction workers exposure to occupational health and safety hazards. Consequently, there may be potential risks to workers' health and safety with increased predisposition to accidents and injuries.

5.3.3 Labour Influx and Gender Based Violence

This section is discusses some key potential social impacts which requires great deal of attention and therefore must be prioritized and mitigated during project implementation. This does not undermine the need to mitigate other social impacts identified in section 5.3.2 above. These key social areas are labour influx, gender-based violence and HIV/AIDS as discussed below:

- **Labor Influx**

During project implementation, the arrival of construction workers and associated influx of camp followers or business opportunists in the project area may result in some labor influx-related risks such as workers' sexual relations with minors and resulting pregnancies, presence of sex workers in the project communities, the spread of HIV/AIDS, sexual harassment of female employees, child labor and abuse, increased drop-out rates from school, poor community participation, poor labor practice, and lack of road safety. These risks require action plan in order to improve social sustainability of the project as well as resilience and social cohesion in the affected communities.

To ensure adequate protection of project communities against the vices highlighted above, the SPIU should ensure the implementation of the following additional mitigation measures:

- (a) assessing living conditions of workers' camps and ensuring appropriate living conditions;
- (b) establishing proper agreement with host community on equipment staging area

- (c) establishing and enforcing a mandatory Code of Conduct for the company, managers and workers, and an Action Plan for implementation;
- (d) ensuring appropriate location for these camps;
- (e) taking countermeasures - indicated in the ESMP - to reduce the impact of the labor influx on public services; and,
- (f) devising and implementing a strategy for maximizing employment opportunities for local population, including women.

The Supervision Consultant shall be responsible for monitoring the contractor performance and adherence to the labor influx guideline and that of its Sexual Exploitation and Abuse (SEA) obligations, with a protocol in place for immediate, timely, mandatory and confidential reporting in case of incidents to project community.

- **Gender Based Violence**

GBV risks in the project areas might include Intimate Partner Violence (IPV), public harassment including verbal insults, physical abuse, rape, harmful widowhood practices and women and child trafficking. Development and implementation of specific GBV risk prevention and mitigation strategies, tailored to local contexts, will be critical. Therefore, SPIU will include in the bidding documents ('pre-qualification' and 'employers' requirements') key principles and specific requirements to address GBV so as to reduce and mitigate the risks of GBV especially during project implementation. Such measures will include:

- GBV/SEA assessment of project;
- Mandatory contractors' code of conduct on sexual harassment;
- Monthly site visit by the safeguard unit/GBV officer to monitor GBV/SEA during construction/implementation phase;
- Community and workers' sensitization on GBV/SEA;
- Provision of referral units for survivors of GBV/SEA;
- Provisions in contracts for dedicated payments to contractors for GBV/SEA prevention activities against evidence of completion;
- Contractor and SPIU requirement to ensure a minimum target of female employment with incremental rewards of the obtainment of this target.

The following **actions** are recommended for immediate implementation by Niger RAMP SPIU:

- Strengthen/train the safeguards unit to handle issues on GBV/SEA and to manage social risks associated with GBV/SEA in the project.
- Address risks of GBV/SEA by providing guidance, awareness, and dissemination of relevant GBV/SEA materials to local communities where project will be implemented
- Develop a clear RAMP specific internal "Reporting and Response Protocol" to guide relevant stakeholders in case of GBV/SEA incidents,
- Identify development partners and cultivate pragmatic partnership on GBV/SEA prevention measures and referral services,
- Develop Codes of Conduct for civil works contractors with prohibitions against GBV/SEA,
- Strengthen consultations and operationalizing GBV/SEA specific GRM,
- Provide financial support implementation of the GBV/SEA actions described herein, including training and awareness building for various stakeholders,
- Provide toe free lines to key community members and maintenance groups for reporting project related social complaints;
- Establish inter-ministerial committee to advance GBV/SEA actions described above.

CHAPTER SIX: GRIEVANCE REDRESS MECHANISM

6.1 Introduction

The grievance redress mechanism is anchored on the need to provide a forum locally to receive, hear and resolve disputes arising from component 1 activities implementation in the best interest of all parties to prevent the lengthy process of litigation, which could affect the efficiency and effectiveness of dispute resolution. Therefore, the setting of grievance redress committee early during the project's preparation is imperative. Grievances may not be limited to but can arise from any of the following: 1) involuntary resettlement and compensation issues, 2) violence, 3) exclusion from project benefits and non-compliance of the contractor to the agreement reached with RAMP or the community.

6.2 Setting up a Grievance Redress Committee

Channel 1: GRC at the Site/community Level:

The first channel for filing grievance shall be the district heads. The underlying merit is that the district heads leadership system has proven a cordial and notable channel for conflict resolution in the project areas. The district head shall head this committee while membership of the committee will consist of:

- The District head or a person appointed by him from his council;
- Secretary to the district head
- The village/ward head;
- The Woman leader in the community or her secretary
- 2 Representatives of PAPs in the project
- 2 members of the road maintenance committee

Channel 2: GRC at the SPIU Level:

The second channel for filing grievance shall be at the level of the project's SPIU. The state project coordinator shall constitute a team within the SPIU to receive, hear and address complaints that are not resolved by district level GRCs at district level. The team will be headed by the Social and Livelihood Officer. The SPC shall head this committee while membership of the committee shall be as follow:

- Social Safeguard Officer;
- Communication officer/ Public relations officer;
- Environmental officer
- Monitoring and Evaluation officer, and
- The project Engineer
- A witnessing NGO

Channel 3: GRC at the State Steering Committee Level:

The committee at this level shall be headed by the Permanent Secretary Ministry of Agriculture while the SPC shall serve as the secretary of the committee.

Membership of the GRC at this level shall constitute as follows:

- The Permanent Secretary;
- Director Ministry of Land & Survey
- Director Ministry of Agriculture;
- Director Ministry of Environment
- The State Project Coordinator of RAMP
- A witnessing NGO

6.3 Informing Parties on Levels and Channels of Grievance Uptake

Community members have been sufficiently informed during public consultation meetings held across the project areas that there will be 3 levels at which aggrieved persons can channel his/her complaints for redress. Grievance redress shall be funded by the SPIU so that there shall be no cost to the aggrieved/complainant for redress. These shall include: 1) the project site/community level, 2) the State Project Implementation Unit level and 3) the State Project Monitoring Committee level. PAPs have also been informed that it is their right to seek redress in the court of law as the last resort, if they felt dissatisfied with the judgments obtained from the grievance redress committees set up by this project.

6.4 Grievance Redress Procedure

The procedure for addressing potential grievance arising from this project shall involve the steps described in the grievance log shown below:

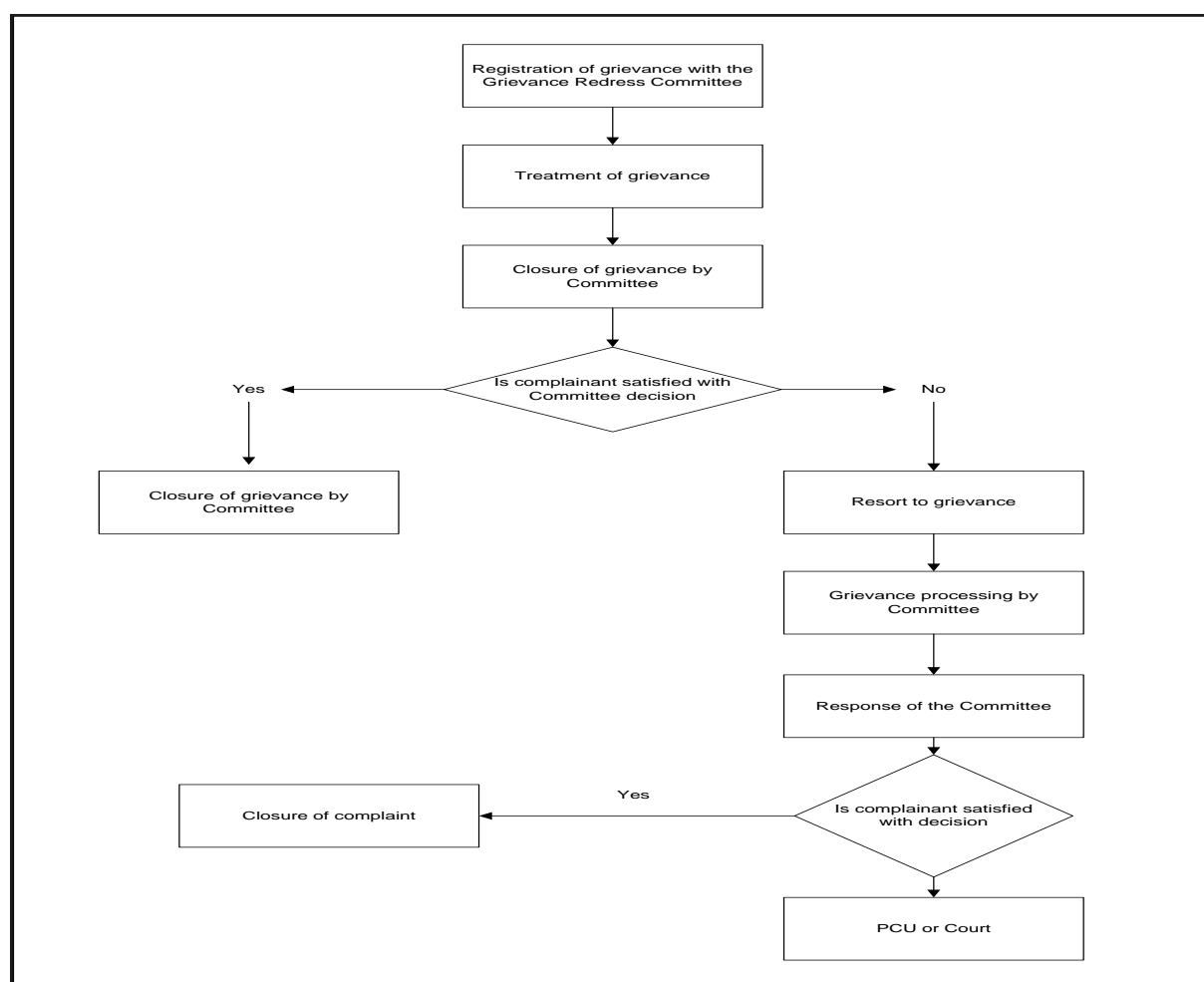


Figure 1: Grievance Log showing steps for grievance redress

As shown in the grievance log, an aggrieved PAP will have the opportunity to lodge complaint with the GRC at the residence or palace of the community district head. That will be the first channel of grievance uptake. It is expected that the matter should be addressed and determined within 10 days from date of receiving the complaint. If a complainant feels dissatisfied with the outcome of the closure of the matter by the community GRC, he/she is encouraged to go to the higher channel for redress. Steps for grievance redress shall involve:

i. Registration

The secretary of the committee will receive grievance from the complainant, register and acknowledge receipt of grievance to the grievant within 2 days. The registration will capture the following data: name of the complainant, date of the grievance, category of the grievance, persons involved, and impacts on complainant life, proofs and witnesses. A registration form will have all these bits of information.

ii. Treatment of Grievance

This involves the verification of grievance to determine among other things whether the matter has relationship with the project activities, and whether the matter can be handled/resolved at the level where it is presented. This will determine if the matter should be referred to the next level or not. Part of the investigations may also be to assess the cost of lost or risk involved in the grievance.

iii. Closing of the Grievance or the Processing of the matter

This involves options and approach taken to resolving the case. This may involve site visit for physical inspection and determination of the claim, negotiation with the aggrieved PAP and feed back to the parties involved.

iv. Feed back

All responses to the complainant in a grievance redress process that moves beyond a unit level must be communicated in writing and/or by verbal presentation to the complainant. This will include a follow up on the corresponding authority where cases are referred, to ascertain the status of reported cases. Feedback on outcome of each case should get to the complainant through the secretary of committee or social contact/safeguard person as the case may be. It is expected that reported complaints at each level will be resolved and determined within **10 days** from date of receipt of the complaint.

6.5 Financing of the Grievance Redress Mechanism and Cost of Remediation

The proponent shall be responsible for the funding of logistics for the GRC as well as the eventual compensation or resettlement remediation that aggrieved party may be entitled to. The proponent will also be responsible for the cost of the judicial process for cases that result to court for adjudication. The anticipated cost of GRM is 5% of the project mitigation cost. The implementation plan for the GRM is shown in Table 6.1.

Table 1: Implementation plan for grievance mechanism

Steps	Process	Description	Completion Time frame	Responsible Agency/Person
1	Receipt of complaint	Document date of receipt, name of complainant, village, nature of complaint, inform the SPIU	1 day	Secretary to GRC at project level
2	Acknowledgement of grievance	By letter, email, phone	1-2 days	Social safeguard officer at SPIU
3	Screen and Establish the Merit of the Grievance	Visit the site; listen to the complainant/community; assess the merit	5-10 days	GRC & social safeguard officer & the aggrieved PAP or his/her representative
4	Implement and monitor a redress action	Where complaint is justified, carry out resettlement redress in line with the entitlement matrix/OP 4.12	14 days or at a time specified in writing to the aggrieved PAP	PC-PIU and Social safeguard Officer
5	Extra intervention for a dissatisfied scenario	Review the redress steps and conclusions, provide intervention solution	10 days of receiving status report	PC-PIU
6	Judicial adjudication	Take complaint to court of law	No fixed time	Complainant
7	Funding of grievance process	GRC logistics and training, redress compensation, court process	No fixed time	The proponent

CHAPTER SEVEN: LABOR INFLUX, GENDER BASED VIOLENCE (GBV) AND HIV/AIDS

7.1 Introduction

This section is dedicated to discussion around critical potential social impacts which the implementers of the project must prioritize and mitigate. This does not undermine the need to mitigate other E&S impacts identified in the project. These key social areas are labour influx, gender-based violence and HIV/AIDS as discussed below:

7.2 Labor Influx

It is believed that this project may face an influx of non-local labor and working condition issues as skilled laborers might not be available in some of the project sites. Therefore, Niger RAMP will take concrete measures to mitigate potential labor influx-related risks such as workers' sexual relations with minors and resulting pregnancies, presence of sex workers in the community, the spread of HIV/AIDS, sexual harassment of female employees, child labor and abuse, increased dropout rates from school, inadequate resettlement practices, and fear of retaliation, failure to ensure community participation, poor labor practice, and lack of road safety. These risks require careful consideration to improve social and environmental sustainability, resilience and social cohesion.

The SPIU will include mitigation measures such as:

- a) assessing living conditions of workers' camps and ensuring appropriate living conditions;
- b) establishing proper agreement with host community on equipment staging area
- c) establishing and enforcing a mandatory Code of Conduct for the company, managers and workers, and an Action Plan for implementation;
- d) ensuring appropriate location for these camps;
- e) taking counter measures - indicated in the Social Management Plan - to reduce the impact of the labor influx on the public services; and,
- f) devising and implementing a strategy for maximizing employment opportunities for local population, including women.

The Supervision Consultant shall be responsible for monitoring the contractor's performance and adherence to the labor influx guideline and that of its Sexual Exploitation and Abuse (SEA) obligations, with a protocol in place for immediate, timely, mandatory and confidential reporting in case of incidents to project community.

7.3 Gender Based Violence

Nigeria has ratified or acceded to the core international human rights treaties and is a party to the major regional human rights instrument which obliged States to respect, protect and fulfil human rights of all persons within the territory and subject to the jurisdiction of the State, without discrimination. Rape may violate several human rights obligations enshrined in the instruments ratified by Nigeria and is also a form of gender-based violence and a brutal manifestation of violence against women. As a State party to the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (the "Maputo Protocol"), Nigeria has made legally binding commitments to exercise due diligence to combat gender-based violence and discrimination.

Accordingly, Nigeria has an obligation to take all appropriate measures to prevent rape, ensure that there are adequate sanctions for rape in law and in practice, and ensure access

to reparation for the victims. Furthermore, several human rights instruments¹ require Nigeria to take special measures to protect the rights of individuals who are vulnerable to sexual violence, namely women, children, and persons with disabilities.

7.4 International Treaties Relevant to GBV

- The International Covenant on Civil and Political Rights (ICCPR) (2004)
- The International Covenant on Economic, Social and Cultural Rights (ICESCR) (2004)
- The Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (CAT) (1993)
- The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) (1984)
- The Convention on the Rights of the Child (CRC) (1990), and the Convention on the Rights of Persons with Disabilities (CRPD) (2012)
- International Convention on the Elimination of all forms of Racial Discrimination (1976)

7.5 Regional Treaties Relevant to GBV

- The African Charter on Human and Peoples' Rights (ACHPR) (1982)
- The African Charter on the Rights and Welfare of the Child (ACRWC) (2007)
- The Protocol to the ACHPR on the Rights of Women in Africa (the "Maputo Protocol") (2007) **National polices**
- The National Action Plan for the Implementation of United Nations Security Council Resolution 1325 (2009);
- The National Gender Policy (2010).

7.6 GBV Risk Management Mechanisms

GBV risks in the project target areas might include Intimate Partner Violence (IPV), public harassment including verbal insults, physical abuse, rape, harmful widowhood practices and women and child trafficking. Development and implementation of specific GBV risk prevention and mitigation strategies, tailored to local contexts, will be critical.

Therefore, SPIU will include in the bidding documents ('pre-qualification' and 'employers' requirements') **key principles and** specific requirements to address GBV so as to reduce and mitigate the risks of GBV in the project. Such measures will include:

- i) GBV/SEA assessment of project;
- ii) Mandatory contractors' code of conduct on sexual harassment;
- iii) Appointment of NGO to monitor GBV/SEA in RAAMP;
- v) Community and workers' sensitization on GBV/SEA;
- vi) Provision of referral units for survivors of GBV/SEA;
- vii) Provisions in contracts for dedicated payments to contractors for GBV/SEA prevention activities against evidence of completion;
- viii) Contractor and SPIU requirement to ensure a minimum target of female employment with incremental rewards of the obtainment of this target.

The following **actions** are recommended for immediate implementation:

- Training the social safeguard officer for project induced GBV/SEA or hiring a dedicated GBV/SEA specialist;

- Building and improving FPMU/SPIUs, local communities and other relevant stakeholders' capacities to address risks of GBV/SEA by developing and providing guidance, training, awareness, and dissemination of relevant materials to communities,
- Developing a clear RAMP specific internal "Reporting and Response Protocol" to guide relevant stakeholders in case of GBV/SEA incidents,
- Identifying development partners and cultivating pragmatic partnership on GBV/SEA prevention measures and referral services,
- Developing Codes of Conduct for contractors with prohibitions against GBV/SEA,
- Strengthening consultations and operationalizing GBV/SEA specific GRM,
- Providing financial support implementation of the GBV/SEA actions described herein, including training and awareness building for various stakeholders,
- Establishing inter-ministerial committee to advance GBV/SEA actions described above.

7.7 Social Impact Management Plan

The identified social impacts, necessary mitigation measures and the parties expected to play some roles in the implementation of the mitigation measures are summarised in Table 7.1.

7.8 Overview of HIV/AIDs in Nigeria and Niger State

In 2016, Nigeria had 220 000 (150 000 - 310 000) new HIV infections and 160 000 (110 000 - 230 000) AIDS-related deaths. There were 3 200 000 people living with HIV in 2016, among whom 30% were accessing antiretroviral therapy. Also, in Niger state (the project state) the Niger State Agency for Control of Aids (NISACA) report shows that about 32,550 persons were living with HIV/AIDS. Among this, NISACA stated that 17,944 representing 55% are receiving antiretroviral treatment. Among pregnant women living with HIV in Nigeria, 32% were accessing treatment or prophylaxis to prevent transmission of HIV to their children. An estimated 37 000 children were newly infected with HIV due to mother-to-child transmission. Among people living with HIV, approximately 24% had suppressed viral loads. Since 2010, new HIV infections have decreased by 21% and AIDS-related deaths have decreased by 6%.

Nigeria's HIV epidemic affects all population groups and geographic areas of the country. Nigeria is a Fast-Track country and its response is guided by the National Strategic Framework 2017–2021, which aims at ending AIDS by achieving zero new infections, zero AIDS related deaths and zero discrimination. Elimination of mother-to-child transmission of HIV is a priority. Stigma and discrimination are major challenge, especially towards key populations and people living with HIV.

It can be deduced from the overview of HIV/AIDS in Nigeria that rural people are largely prone to the HIV/AIDS infection as a result of unprotected heterosexual sex which might be consequential upon the low level of campaign against HIV/AIDS in the rural settlements. Therefore, it is essential to make provision for a protective approach for inhabitants of the communities where RAMP will undergo road rehabilitation/construction project in order to prevent increasing spread of the diseases among the people.

Risk: While the project can contribute significantly on combating HIV/AIDS and other diseases by providing access to health services and centers, the likelihood of the project attracting labor influx in the project area is high. This could increase contractor workers' interaction with local communities which could also increase the likelihood of HIV/AIDS prevalence, STDs, sexual harassments of women and girls, exploitive sexual relations, illicit sexual relationships and crime.

Mitigation Measure: All risks related to labor influx will have to be mitigated. Participation of project beneficiaries, project proponent and project contractors is critical in identifying

mitigation and implementing measures. The mitigation measure should include instruments such as GRM, “Labor Influx Management Plan” and “Workers Camp Site Management Plan”.

Table 7.1: Potential Mitigation Measures of Social Impacts

<i>Expected Adverse Impact</i>	<i>Potential Mitigation Measures</i>			
	<i>Contractor</i>	<i>FPMU/SPIU</i>		<i>World Bank</i>
		<i>Project-specific – With Support of the Monitoring/ Supervision Consultant</i>	<i>Broader Enabling Environment</i>	
<i>All Disputes</i>	Follow GRM provision	<ul style="list-style-type: none"> ▪ Establishment and operation of an effective GRM accessible to community members—ideally with involvement of the community, district level committee and Community Based Organizations to facilitate early identification of problems and targeted mitigating interventions by SPIU; ▪ Establishment and operation of an effective GBV GRM accessible to community members and project contractors—ideally with involvement of the Ministry of Justice and Ministry of Women Affairs and Social Development to facilitate the discrete ▪ Provision of information to communities on the levels of GRM uptake and how to leverage of the system for redress at no cost to the complainant; ▪ Monitoring and taking appropriate actions to ensure ESMP provisions are met; ▪ Inclusion of relevant provisions in the ESMP; ▪ Inclusion of relevant provisions in the SPIU contract. 	<ul style="list-style-type: none"> ▪ Supportive 	<ul style="list-style-type: none"> • Inclusion of relevant provisions in the ESMP and Legal Agreement; • Provision of advice on expected or likely issues based on Bank experience; • Implementation support to verify compliance with the ESMP; • Monitoring of GRM resolution rates and identification of recurring issues to discuss with SPIU
<i>Risk of social conflict</i>	<ul style="list-style-type: none"> ▪ Awareness of historical and cultural nature of the project area when dealing with affected communities, ▪ Ensure that communication tools portray correct and concise information ▪ Provision of information regarding Worker Code of Conduct ▪ Provision of cultural sensitization training for workers regarding engagement with local community. ▪ Provision of a one-paragraph Harassment Policy, as an addendum to the Contractor workers' contract, to be signed as a commitment to adhere to Worker Code of Conduct and GBV prevention. ▪ Commitment to prioritizing the hiring of competent locals to the maximum extent to avoid inter or intra-community tension with migrant workers. 	<ul style="list-style-type: none"> ▪ Consultations with and involvement of local communities in project planning and implementation processes; ▪ Awareness-raising among local community and workers. ▪ Ensure the Contractor adheres to Workers code of conduct and local tradition, 		

Final ESMP for Spot Improvement of 119km Rural Roads under RAMP in Niger State

<i>Expected Adverse Impact</i>	<i>Potential Mitigation Measures</i>		
	<i>Contractor</i>	<i>FPMU/SPIU</i>	<i>World Bank</i>
<i>Increased risk of illicit behavior and crime (including prostitution, theft and substance abuse)</i>	<ul style="list-style-type: none"> ▪ Paying adequate salaries for workers to reduce incentive for theft; ▪ Hiring of local workforce; ▪ Creation of supervised recreation areas in workers' camp as well as temporary rest areas at work sites; ▪ Cooperation with local law enforcement; ▪ Introduction of sanctions (e.g., dismissal) for workers involved in criminal activities; ▪ Provision of substance (drug and alcohol) abuse prevention and management programs for workers involved in the project site ▪ Hiring of young women in the project areas to mitigate the risk of prostitution and sexual transactions. ▪ pay wage equal to men and women on the basis of equal job performed and merit. 	<ul style="list-style-type: none"> ▪ Ensure assignment of adequate enforcement staff; ▪ Enforcement of laws on drug abuse and traffic; ▪ Police monitoring to prevent drugs trafficking; ▪ Sensitization campaigns for both workers and local communities. 	
<i>Adverse impacts on community dynamics</i>	<ul style="list-style-type: none"> • Provision of services in the workers' camp to reduce the need for workers to use local community facilities; • Provision of entertainment and events for workers within camp to reduce incentives for mixing with local community (Satellite Television, diner, bar). • Restriction of public access to camps and construction areas to be managed by <ul style="list-style-type: none"> ○ assigning security personnel to manage access, ○ fencing of camps, ○ installation of appropriate signage 	<ul style="list-style-type: none"> ▪ Liaison with civil society organizations to create integrative action plans; ▪ Provision of upfront information on potentially detrimental impacts on local communities. 	<ul style="list-style-type: none"> ▪ Investment in community participation and engagement programs.
<i>Impact on Community Cultural Traditions</i>	<ul style="list-style-type: none"> • Contractor is to ensure the strict implementation of Labor Management Plan to minimize engagement with the locals and to ensure workers are educated on the local traditions and proper interactions. Actions disapproved by the communities or by their traditions must be corrected, improved and proper consultation must be held with the leaders to ensure satisfaction of redress mechanism. 	<ul style="list-style-type: none"> ▪ Provision of upfront information on potentially detrimental cultural impacts on local communities ▪ Liaise with community-based organizations to create integrative action plans. 	
<i>Influx of Additional Population ("Followers")</i>	<ul style="list-style-type: none"> ▪ Contractor to hire workers through a systematic process managed by the HR office and avoid hiring "at the gate" to discourage spontaneous influx of job seekers and migrant workers. ▪ Development of a detailed and site- specific labor influx management plan. ▪ Prioritize the hiring of the locals for qualified skilled and unskilled work ▪ Train women in variety of skilled and non-skilled jobs such as operating construction equipment, involving them in supervisory jobs, inform communities of all hiring opportunities in construction areas. 	<ul style="list-style-type: none"> ▪ Communications campaign to manage expectations and discourage spontaneous influx of job seekers; ▪ Coordinate with Local government to address this additional influx of the "followers" to ensure that no illegal and unsafe settlements develop; ▪ Review and ensure adherence to labor influx management plan. 	

Final ESMP for Spot Improvement of 119km Rural Roads under RAMP in Niger State

<i>Expected Adverse Impact</i>	<i>Potential Mitigation Measures</i>		
	<i>Contractor</i>	<i>FPMU/SPIU</i>	<i>World Bank</i>
<i>Increased communicable diseases (including STDs and HIV/AIDS)</i>	<ul style="list-style-type: none"> ▪ Vaccinating workers against common and locally prevalent diseases; ▪ In association with the National AIDs Control Program -contract a HIV service provider to be available on-site; ▪ Implementation of HIV/AIDS education program; ▪ Information campaigns on STDs among the workers and local community in collaboration WITH Niger State Agency for Control of AIDS (NISACA). 	<ul style="list-style-type: none"> ▪ Establishment of upgrade of health centers at camp and construction sites. This should be included in contractor’s contract. The clinic should be approved by MoH; <ul style="list-style-type: none"> ○ Free testing facilities; ○ Provision of condoms; ○ Monitoring of local population health data, in particular for transmissible diseases. 	<ul style="list-style-type: none"> ▪ Awareness raising about public health impacts from labor influx.
<i>Gender-based violence, including sexual harassment, child abuse and exploitation</i>	<ul style="list-style-type: none"> ▪ Mandatory and regular training for workers on required lawful conduct in the project areas and legal consequences for failure to comply with laws; ▪ Commitment / policy to cooperate with law enforcement agencies investigating perpetrators of gender-based violence; ▪ Creation of partnership with local offices of the Ministry of Women Affairs and Social Development, NGOs and community women groups to report workers’ misconduct and complaints/reports on gender-based violence or harassment through the GBV GRM; ▪ Provision of opportunities for workers to regularly return to their families; ▪ Provision of opportunities for workers to take advantage of entertainment opportunities away from rural host communities. ▪ Commitment to providing alternative work schedules or shifts to accommodate the hiring of more local female workers. This ensures they can carry out their domestic duties and avoid potential domestic abuse for reasons justified in the ESMP. 	<ul style="list-style-type: none"> ▪ Capacity building for local law enforcement and the Ministry of Women Affairs and Social Development to act on GBV complaints; ▪ Information and awareness raising campaigns for community members, specifically women and girls; ▪ Provision of information to the stakeholders including intervention communities about the contractor’s policies and Worker Code of Conduct (where applicable). 	<ul style="list-style-type: none"> ▪ Increased security presence in nearby communities; ▪ Reinforcement of police force where needed; ▪ Deployment of female police officers in project area; ▪ Application of long-term community-based approaches to address the issue; ▪ Enforcement of laws on sexual violence and human trafficking.
<i>Child labor and school drop out</i>	<ul style="list-style-type: none"> ▪ Ensuring that children and minors are not employed directly or indirectly on the project. 	<ul style="list-style-type: none"> ▪ Communication on hiring criteria, minimum age of 18, and applicable laws. 	<ul style="list-style-type: none"> ▪ Enforcement of legislation on child labor.
<i>Risk of marginalizing Vulnerable Groups</i>	<ul style="list-style-type: none"> ▪ In order to mitigate impact associated with age vulnerably, the contractor or social protection consultant (SPC) when conducting the assessment under Performance Standard 1 (PS-1) shall identify disadvantaged or vulnerable individuals or groups that will be directly or indirectly affected in the project area, and a process whereby differentiated measures will be developed to address particular circumstances or needs of such individuals or groups. 		

CHAPTER EIGHT: ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN

8.1 Introduction

This chapter presents the Environmental and Social Management Plan (ESMP) for the proposed spot rehabilitation of roads under RAMP-2 in Niger state. The ESMP is a proactive tool that will ensure seamless integration of action plans and programmes for overall management of all identified (and unidentified) impacts of the proposed project. The overarching objective of the ESMP is to ensure that all impacts of the project are contained and brought to an acceptable level to guarantee economic, environmental and social sustainability of the project. The ESMP has been developed to meet international and national standards on E&S performance. It details the mitigation measures the SPIU and their contractors will be committed to implement throughout project implementation including timing for actions, monitoring and responsibilities.

The SPIU will have principal responsibility for all measures outlined in this ESMP but will delegate certain responsibilities to its contractors and supervising consultant. Such delegation of responsibility shall be documented as part of contractual agreements to guarantee compliance and commitment on the part of the supervising consultant to supervise and on the part of the contractors to implement the ESMP. As most of the mitigation measures are the obligations of the Contractor during project implementation, the contractor shall prepare the Contractor's ESMP (C-ESMP) taking into account the measures in this ESMP and the detailed general environmental management conditions during civil works included as Appendix 5.

8.2 Environmental and Social Impact Management and Monitoring Programme

As part of this ESMP, a project specific E&S management and monitoring plan has been designed. This plan establishes E&S action plans with well-defined desired outcomes and actions to address all potential impacts identified for the Niger RAMP. The plan also includes elements such as parameters to be measured, methods of measurement, location of measurement, performance indicators (targets or acceptance criteria) that can be tracked over defined time periods, and with estimates of the resources and responsibilities for monitoring. The plan is presented in Table 8.1.

Table 8.1: Environmental and Social Management & Monitoring Plan

	Associated & Potential Impacts	Mitigation Measures	Responsibility For Mitigation	Cost of Mitigation (Naira)	Parameters to be Measured	Method of Measurement	Performance Indicator	Sampling Location	Frequency of Monitoring	Responsibility for Monitoring	Cost of Monitoring (Naira)
A	PRECONSTRUCTION PHASE										
INSTALLATION OF SITE STRUCTURES AND FACILITIES											
A1	Security risks	<ul style="list-style-type: none"> Deploy competent security personnel to secure project site. Provide adequate training of security personnel. Disclose site security arrangements to the Police and host communities 	Contractor	1,200,000	No of security personnel engaged	Records and Interviews	No of security incidents	Construction site	Daily	LGAs Police	500,000
A2	Risks of occupational accident and injuries to workers	<ul style="list-style-type: none"> Develop a project specific Occupational Health and Safety Plan (OHSP) (See Appendix 7) commensurate to construction activities. OHSP to include but not limited to: <ul style="list-style-type: none"> Prohibition of drug and alcohol use by workers while on the job. Provision of adequate first aid, first aiders, PPE, signages (English and Local languages), engineering barriers e.g fencing Restrict unauthorized access to all areas of high risk activities Implementation of specific personnel training on worksite OHS management Ensure that staging areas for contractor equipment are adequately delineated and cordoned off with reflective tapes and barriers -Any uncovered work pits should have appropriate signage and protection around them -Workers should get a daily induction/toolbox before going on the 	Contractor	250,000	OHSP developed No of trained first Aiders Usage of appropriate PPE Usage of signages and demarcations	Visual observation	Compliance with Factory Act, 1990	Construction Site	Weekly	SSO – RAMP Niger SME Niger State Ministry of Health (NSMoH)	150,000

	Associated & Potential Impacts	Mitigation Measures	Responsibility For Mitigation	Cost of Mitigation (Naira)	Parameters to be Measured	Method of Measurement	Performance Indicator	Sampling Location	Frequency of Monitoring	Responsibility for Monitoring	Cost of Monitoring (Naira)
		site and a refresher of what happened on site a day before - Adequate safety signage on construction sites should be installed to alert community/drivers/pedestrians - lighting and/or reflective tapes and signages integrated in all worksites for safety at night - appropriate security measures in place to prevent harassment or kidnapping of workers									
MOBILIZATION OF PERSONNEL, EQUIPMENT AND MATERIALS TO SITE											
A3	Increase traffic situation, Risk of injuries, accidents and deaths	<ul style="list-style-type: none"> Develop a traffic management plan (See Appendix 8) 	contractor	250,000	Use of trained traffic personnel	observation			Daily during construction	SSO	A2 applies
A4	Increased security risks due to storage of materials and equipment on site	<ul style="list-style-type: none"> Same as A1 		See A1							-
A5	Threat to community culture, safety and security due to presence of workers and business opportunists.	<ul style="list-style-type: none"> Develop an induction program including a code of conduct for all workers. Code of conduct to address the following: Respect for local residents; No hunting or unauthorized taking of products or livestock; Zero tolerance of illegal activities such as child sexual exploitation and underage sex, prostitution, harassment of women, GBV, purchase or use of illegal drugs, Disciplinary measures and sanctions (e.g. dismissal) for infringement of the code of conduct and/or company rules; Commitment / policy to cooperate with law enforcement agencies investigating perpetrators of gender-based violence. Provide cultural sensitization training to improve awareness of and 	Contractor	300,000	Workers manual, employment codes etc Level of awareness of local culture by migrant workers. Grievance Redress System Ratio of migrant to local workers Presence of security personnel	Visual observation and interviews	Community perception and level of satisfaction.	Construction site	Weekly	SSO – RAMP LGA Local Vigilante Police	-

Final ESMP for Spot Improvement of 119km Rural Roads under RAMP in Niger State

	Associated & Potential Impacts	Mitigation Measures	Responsibility For Mitigation	Cost of Mitigation (Naira)	Parameters to be Measured	Method of Measurement	Performance Indicator	Sampling Location	Frequency of Monitoring	Responsibility for Monitoring	Cost of Monitoring (Naira)
		sensitivity of workers to local cultures, traditions and lifestyles. • Prohibit child and forced labour. • Implement community-based GRM • Limit the number of migrant workers by engaging local workers • Engage competent security personnel.		500,000 for GRM							
A6	Increase demand on community health and sanitation infrastructure due to influx of workers and camp followers.	• Develop a CSR program to support infrastructural development in host communities. • Establish worker's camp and provide basic amenities (water, sanitation).	SPIU - RAMP Contractor	1,000,000 1,000,000	CSR Programme Availability of amenities in workers' camp	Visual inspection	Public perception	Affected communities	Weekly	SSO – RAMP LGA	See A2
A7	Occupational related accidents and injuries	Same as A2		See A2							See A2
SITE CLEARING											
A8	Increase traffic situation, Risk of injuries, accidents and deaths	• Same as A3	contractor	See A3	Same as A3	Visual inspection				SSO	See A2
A9	Deterioration of local air quality due to the emission of dusts & gases	• Use water to wet ground for dust suppression. • Conduct regular visual inspection of dust pollution and ensure appropriate intervention if dust levels are high.	Contractor	300,000	Air quality parameters (CO, NO ₂ , SO ₂ , CO ₂ , SPM) Maintenance records Driver's training records	<i>In-situ</i> measurement.	FMEnv permissible limit	Along road corridor	Monthly	Environmental Safeguard Officer (ESO) – RAMP NSME	250,000 (for air quality and noise level measuring equipment)
	Respiratory and eye related problems for workers due to exposure to fugitive dusts and gaseous emissions.	• Train drivers/ workers on proper operation of vehicles & equipment to include fuel efficiency and anti-idling techniques. • Provide and enforce the usage of appropriate PPE.	Contractor			Visual observation of records & interviews		Along road corridor and adjoining communities			
A10	Noise and vibration disturbances from operation of heavy duty vehicles.	• Select and use vehicles/ equipment with lower sound power levels. • Install suitable mufflers on engine exhausts and compressors. • Enforce appropriate speed limit to reduce vehicle noise levels. • Respond promptly to noise complaints • Provide & enforce the usage of hearing protection devices (ear plugs/	Contractor	300,000	Noise level	<i>In situ</i> measurement	Noise level at sensitive receptors not to exceed FMEnv recommended level (90 dBA) for an 8 hour period	Construction site and nearby communities	Monthly	SSO & ESO – RAMP NSME	S A1

Final ESMP for Spot Improvement of 119km Rural Roads under RAMP in Niger State

	Associated & Potential Impacts	Mitigation Measures	Responsibility For Mitigation	Cost of Mitigation (Naira)	Parameters to be Measured	Method of Measurement	Performance Indicator	Sampling Location	Frequency of Monitoring	Responsibility for Monitoring	Cost of Monitoring (Naira)
		muffs) for workers as part of OHSP.									
A11	Loss of vegetation and biodiversity	<ul style="list-style-type: none"> Restrict removal of vegetation and trees to the boundary of project only. Schedule vegetation clearing to occur in phases so that the entire area is not cleared at once. Protect all vegetation not required to be removed against damage; Undertake quick re-vegetation of exposed soils with indigenous plant species in areas where active construction is completed. Construct drainage system and use erosion protection structures such as sediment traps, riprap, gabions. 	Contractor	-	Clearly defined boundaries of protected areas	Visual observation; and Biodiversity survey	Available number and diversity of plant species within baseline conditions Erosion menace	Construction areas	Monthly	ESO – RAMP NSME	See A2
A12	Wildlife disturbances and destruction										
A13	Loss of ecosystem provisions such as fuel wood & economic trees										
A14	Predisposition to soil erosion due to the removal of vegetal cover										
A15	Siltation of surface water from eroded top soil										
A16	Occupational accidents and injuries to workers	• Same as A2	Contractor	See A2							
B CONSTRUCTION PHASE											
<ul style="list-style-type: none"> EARTHWORKS AND GRADING CONSTRUCTION OF BRIDGES AND CULVERTS 											
B1	Deterioration of local air quality due to the release of dust & exhaust gases.	• Same as A2 above	Contractor	See A2							500,000 monitoring during construction phase
B2	Noise and vibration disturbances from operation of heavy duty vehicles and equipment.	• Same as A10 above	Contractor	See A10							
B3	Predisposition of soil to erosion.	Ensure construction of effective drainage system and use erosion protection structures such as sediment traps, riprap, gabions etc.	Contractor	See A10	Evidence of erosion protection structures	Visual observation	Erosion incidents	Project site	Weekly	ESO – RAMP NSME	
B4	Surface water contamination as a result of pollutants run off from project site.										
B5	Soil contamination from leakage/spillage of fuel or oil from equipment and vehicles.	<ul style="list-style-type: none"> Prepare and implement an Emergency Response Plan to respond to incident of spillage. Ensure fuel storage tanks are installed in a bunded area and 	Contractor	250,000	Emergency Response Plan developed Soil quality	Visual observation Laboratory	FMEnv Soil Quality Standards	Project site	Weekly	ESO – RAMP NSME	Same as B1

Final ESMP for Spot Improvement of 119km Rural Roads under RAMP in Niger State

	Associated & Potential Impacts	Mitigation Measures	Responsibility For Mitigation	Cost of Mitigation (Naira)	Parameters to be Measured	Method of Measurement	Performance Indicator	Sampling Location	Frequency of Monitoring	Responsibility for Monitoring	Cost of Monitoring (Naira)
		<p>checked daily.</p> <ul style="list-style-type: none"> • Ensure regular maintenance of vehicles to avoid leaks of oil. • Prevent unregulated dumping of fuel waste 			parameters	testing					
B6	Generation of spoils and other excavated materials	<ul style="list-style-type: none"> • Ensure stockpile and disposal areas are stable and protected against erosion and not interfere with run off or subsequent construction activities. Stockpile to be covered and stored in a sealed and bonded area in order to divert storm water away. • Reuse stockpile as fill materials on the site or another construction site 	Contractor	Same as B7	<p>Evidence of stockpile protection</p> <p>Evidence of spoil reuse</p>	Visual observation	Compliance with Mitigation	Project site	Weekly	<p>ESO – RAMP NSME</p> <p>NISEPA</p>	See B1
B7	Generation of construction waste and debris	<ul style="list-style-type: none"> • Ensure waste is evacuated from site by approved waste contractors to prevent unregulated dumping. • See Appendix 6 for Waste Management Plan (WMP) 	Contractor	400,000	<p>Waste vendor licenses</p> <p>Waste documentation</p>	Visual observation	Management of Solid and Hazardous Wastes) Regulation 1991.	Construction route	Weekly	<p>ESO – RAMP</p> <p>NSME</p> <p>NISEPA</p>	See B1
B8	Land degradation and increased susceptibility to erosion due to excavation of earth materials in borrow pit	<ul style="list-style-type: none"> • Ensure sourcing of earth materials from registered quarries with appropriate quarry lease to prevent illegal sand mining. • Avoid the production of excess spoil material and reduce the need for borrow pit materials. • Develop and implement Site Reclamation Plan to ensure that site is rehabilitated and restored to a safe and stable state. Plan should include measures to: 	Contractor	Same as B7	<p>Quarry Lease of quarry sites</p> <p>Spoil management</p> <p>Developed site Reclamation Plan</p> <p>Number of borrow pits</p>	Visual observation	<p>Compliance</p> <p>Evidence of spoil management/ Spoil stockpiling for reclamation</p> <p>Site reclamation after construction</p>	<p>Material borrow site</p> <p>Project site</p>	Monthly	<p>ESO – RAMP</p> <p>NSME</p>	See B1
B9	Improperly managed/ abandoned borrow pits	<ul style="list-style-type: none"> • Re-contour/grade site to blend with natural topography • Reuse excess stockpile to back fill pits during grading • Revegetate with appropriate plant species 									

Final ESMP for Spot Improvement of 119km Rural Roads under RAMP in Niger State

	Associated & Potential Impacts	Mitigation Measures	Responsibility For Mitigation	Cost of Mitigation (Naira)	Parameters to be Measured	Method of Measurement	Performance Indicator	Sampling Location	Frequency of Monitoring	Responsibility for Monitoring	Cost of Monitoring (Naira)
B10	Risk of communicable diseases such as sexually transmitted diseases (STDs) including HIV/AIDS from influx of temporary construction workers.	<ul style="list-style-type: none"> Institute HIV prevention programs (peer education etc.) Liaise with appropriate health focused NGOs to undertake health awareness and education initiatives on STDs amongst workers and in nearby communities. Provide opportunities for workers to regularly return to their families. Implement community-based GRM 	SPIU – RAMP Contractor	500,000 -	Evidence of awareness among construction workers and members of affected communities GRM	Interview	No of incidents/cases	Construction route and adjoining communities	Monthly	SSO – RAMP NSME LGA	See B1
B11	Risks of occupational accidents and injuries to workers.	<ul style="list-style-type: none"> Same as A2 	Contractor	See A2							
SURFACING AND PAVING											
B12	Noise and vibration disturbances in the adjoining settlements from use of machineries and motorized equipment.	<ul style="list-style-type: none"> Restrict all noise generating activities to working hours during the day Install suitable mufflers on engine exhausts and compressor components. Enforce appropriate speed limit to reduce vehicle noise levels. Provide and enforce the usage of hearing protection devices for workers. 	Contractor	See A9	Noise level	<i>In situ</i> measurement	Noise level at sensitive receptors not to exceed FME _{env} recommended level (90 dBA) for an 8 hour period	Construction site and nearby communities	Daily	ESO – RAMP SSO - RAMP NSME	See B1
B13	Risk to community health and safety	<ul style="list-style-type: none"> Provide adequate first aid, first aiders, PPE, signages (English and local languages), engineering barriers e.g fencing Restrict unauthorized access to all areas of high risk activities 	Contractor	300,000	Appropriate signages in local languages Restrictions	Visual observation	Zero injuries to community members	Project site	Monthly	SSO & ESO – RAMP NSME LGA	See B1
B14	Loss of employment for temporary workers after construction	<ul style="list-style-type: none"> Ensure compliance with all legal and contractual agreement with workers. Ensure all workers receive notice of dismissal and severance payments 	Contractor	--	Compliance with workers contract of employment	Records and Interviews	Nigerian Labour Law	Site Office	Once	SSO – RAMP LGA	See B1

Final ESMP for Spot Improvement of 119km Rural Roads under RAMP in Niger State

	Associated & Potential Impacts	Mitigation Measures	Responsibility For Mitigation	Cost of Mitigation (Naira)	Parameters to be Measured	Method of Measurement	Performance Indicator	Sampling Location	Frequency of Monitoring	Responsibility for Monitoring	Cost of Monitoring (Naira)
		mandated by law and collective agreements in a timely manner. • Provide a grievance mechanism for workers to raise workplace concerns.		--	Timely payment of workers dues		No of grievances				
C	OPERATION AND MAINTENANCE PHASE										
C1	Increased traffic & risk of road traffic accidents and injuries.	Ensure installation of appropriate traffic signs & markings to warn drivers.	Contractor	300,000	Traffic signs and markings	Visual observation	No of accidents	Along proposed road	Periodic	SPIU FRSC Police	500,000
C2	Generation of maintenance waste and debris	• Ensure usage of approved waste vendor for waste evacuation, processing & disposal.	SPIU – RAMP Maintenance Cooperative	See B7	Waste vendor licenses Waste documentation	Visual observation	Mgt of Solid and Hazardous Wastes Regulations of 1991.	Project site	Daily during maintenance works	SPIU NSME NISEPA	Same as in C1
C3	Risks of occupational accidents and injuries to workers.	• Same as A2		See B13							Same as in C1
	Total Cost			6,850,000							1,900,000

8.3 Environmental and Social Monitoring Organization & Institutional Arrangement

The successful implementation of the monitoring program will depend on the commitment and capacity of the SPIU, E&S safeguards unit, consultants and other third parties/institutions (see Table 8.2) to implement the program effectively. The roles and responsibilities of those that will be involved in the implementation and monitoring of this ESMP are discussed in Table 8.2 while the institutional arrangement is shown in Figure 8.1.

Table 8.2: Roles and Responsibility of Institutions

S/N	Category	Roles & Responsibilities
1.	Niger State Ministry of Environment	<ul style="list-style-type: none"> • Environmental monitoring and compliance overseer at the State level • Review of draft ESMP report (in liaison with Federal Ministry of Environment) • Site assessment and monitoring of ESMP implementation.
2.	Federal Ministry of Environment	<ul style="list-style-type: none"> • Lead role - provision of advice on screening, scoping, review of draft ESMP report (in liaison with State Ministry of Environment and Water Resources), receiving comments from stakeholders, public hearing of the project proposals and social liability investigations, monitoring and evaluation process and criteria.
3.	SPIU	<ul style="list-style-type: none"> • Liaise closely with Niger SME in preparing a coordinated response on E&S aspects of project development. • Safeguards due diligence.
4.	E&S Consultant	<ul style="list-style-type: none"> • Development of ESMP • Training of relevant SPIU/RAMP staff, regulators, MDAs and contractor on ESMP implementation and monitoring.
5.	Contractor	<ul style="list-style-type: none"> • Compliance to BOQ specification in procurement of material and construction • Implement ESMP during project implementation
6.	Safeguard Unit, RAMP (Environmental & Social)	<p>Environmental Safeguards</p> <ul style="list-style-type: none"> • Collate environmental baseline data on relevant environmental characteristics of the selected project sites; • Analyze potential community/individual sub-projects and their environmental impacts; • Ensure that project activities are implemented in accordance to best practices and guidelines set out in the ESMP; • Identify and liaise with all stakeholders involved in environment related issues in the project; and be responsible for the overall monitoring of mitigation measures and the impacts of the project during implementation. <p>Social Safeguards</p> <ul style="list-style-type: none"> • Develop, coordinate and ensures the implementation of the social aspects of the ESMP • Identify and liaise with all stakeholders involved in social related issues in the project; • Conduct impact evaluation and beneficiary's assessment; and • Establish partnerships & liaise with organizations, CBOs and CSOs.
7.	Supervising Engineer	<ul style="list-style-type: none"> • Preparation of the engineering designs for the project. • Provides an independent oversight ensuring contractor adhere strictly to the engineering specifications
8.	State Government MDAs	<ul style="list-style-type: none"> • Other MDAs come in as and when relevant areas or resources under their jurisdiction are likely to be affected by projects. • Participate in the EA processes and project decision-making that helps prevent or minimize impacts and to mitigate them. MDAs may also be required to issue a consent/approval for an aspect of a project; allow an area to be included; or allow impact to a certain extent or impose restrictions/conditions, monitoring responsibility or supervisory oversight.
9.	NISEPA	<ul style="list-style-type: none"> • Inspection of project premises to ensure strict compliance with state sanitation and waste management standards. • Collaboration with other MDAs at the State and Federal level, NGOs and Donor Agencies in environmental protection and management especially in areas of waste management etc.
10.	LGAs	<ul style="list-style-type: none"> • Provision of oversight function across project within its jurisdiction for ESMP compliance. • Monitoring of activities related to public health, sanitation, waste management amongst others.
11.	Affected Community	<ul style="list-style-type: none"> • Promote environmental awareness. • Review environmental and social performance report made available by PIU. • Provide comments, advice and/or complaints on issues of nonconformity. • Attend public meetings organized by the SPIU to disseminate information and receive feedback.
12.	CDA	<ul style="list-style-type: none"> • Ensure community participation by mobilizing, sensitizing community members;
13.	NGOs/CSOs	<ul style="list-style-type: none"> • Assisting in their respective ways to ensure effective response actions, conducting scientific researches alongside government groups to evolve and devise sustainable environmental strategies and techniques.
14.	World Bank / AFD	<ul style="list-style-type: none"> • Overall supervision and provision of technical support and guidance. • Recommend additional measures for strengthening management framework and implementation performance; • Supervising the application and recommendations of sub- project ESMPs.
15.	General Public	<ul style="list-style-type: none"> • Identify issues that could derail the project and support project impacts and mitigation measures, Awareness campaigns.

Keys

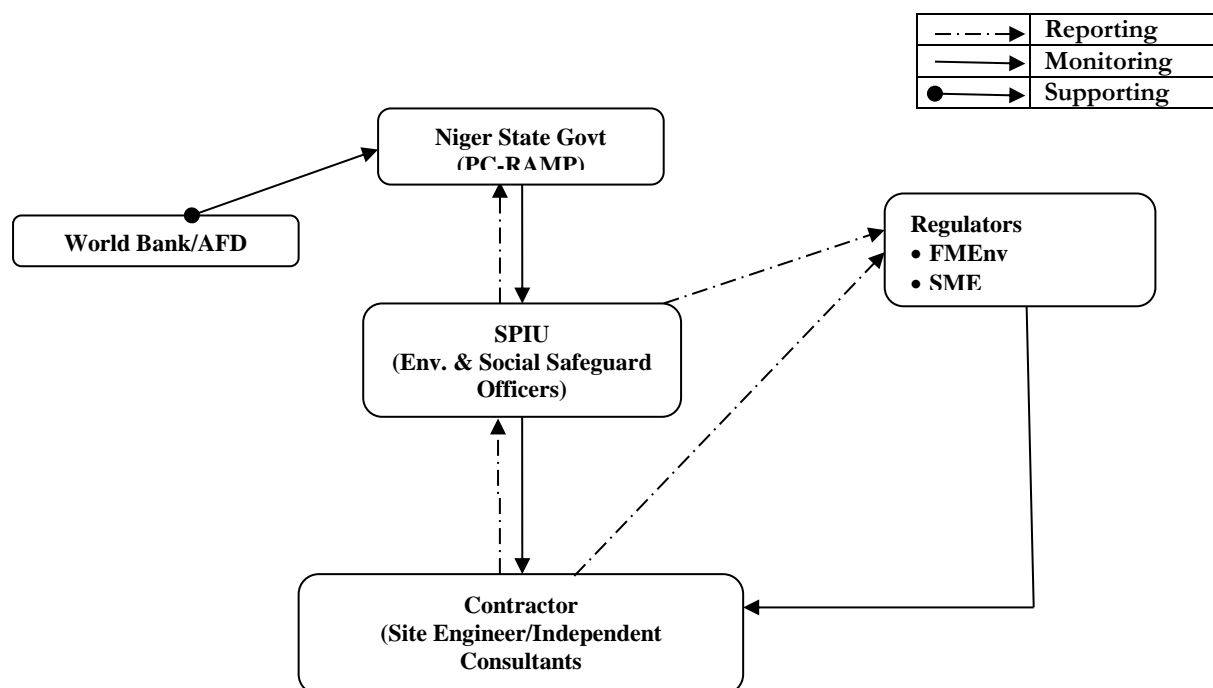


Figure 8.1: Institutional Arrangement for ESMP Implementation

8.4 Training, Awareness and Competence

Training is essential for ensuring that the ESMP provisions are implemented efficiently and effectively. The SPIU shall therefore ensure that all persons (listed in Table 8.3) that have roles to play in the implementation of the ESMP are competent with appropriate education, training or experience. Similarly, the contractors shall be required to undertake general HSE awareness for their project workforce and specific training for those whose work may significantly have impact on the environment. This is to ensure that they are fully aware of the relevant aspects of the ESMP and are able to fulfill their roles and functions. As a minimum, the contractors shall ensure they provide the training in Table 8.3 to their personnel. The contractor is required to forward internal HSE training and procedures to the SPIU for approval before commencement of civil works.

Table 8.3: Contractor’s Training Programme

S/N	Training Programme	Courses
1	General Awareness Health, Safety and Environment (HSE)	HSE Induction/Orientation Course (site safety rules, PPE requirements, Emergency Preparedness and Response); Daily tool box talk for workers at the start of each day’s job; Refresher HSE Courses as at when required
2	Project Specific Occupational Health and Safety (OHS)	Manual Handling Techniques; First Aid Training (for Site First Aiders); Safe Driving Techniques (for drivers)

Based on the assessment of the institutional capacities of the different agencies that will be involved in the implementation of the ESMP, two broad areas of capacity building have already been identified and recommended for effective implementation of the ESMP. It is instructive to note that the SPIU has the capacity to implement this ESMP as they have successfully implemented several previous ESMPs. However, the training programmes are essentially for the other institutions including state and federal MDAs involved in the ESMP implementation to enhance their capacity. It was observed that the Niger SME, NISEPA, relevant LGA departments are not conversant with World Bank safeguard policies and some components of the ESMP implementation with regards to gender-based issues, labour influx and grievance redress mechanisms. Based on the observed gaps, the proposed training program, course content and estimated costs are shown in Table 8.4.

Table 8.4: Proposed Training Program for the Implementation of ESMP

Capacity Building Activity	Proposed Topics	Objectives	Target Audience	Duration	Estimated Budget (Naira)
Module 1: World Bank Safeguard Policies & Standards and Nigeria Extant Laws on Environmental Protection	<ul style="list-style-type: none"> • Introduction to E&S policies and laws in Nigeria • World Bank safeguard Policies • Safeguard policies/Standards triggered by RAMP activities • The roles and responsibilities of World Bank and other regulators during RAMP implementation 	To enhance awareness of World Bank safeguard policies & standards and applicable national regulatory requirements for RAMP activities	Safeguard unit of the SPIU, M&E Officers, relevant staff of FMEnv (EA Dept), Relevant staff of Niger State Ministry of Environment, NISEPA other relevant MDAs, LGA departments, Contractors	1 day	500,000
Module 2: Training on Environmental and Social Management Plan Implementation	<ul style="list-style-type: none"> • Overview of ESIA • Potential Impacts of Project • Pollution & Control Measures • ESMP • Environmental Management • Labour influx, GBV, vulnerable people etc. • Environmental Performance Monitoring Environmental Reporting 	To enhance competence in environmental sustainability and regulatory practice	Safeguard unit of the SPIU, M&E Officers, relevant staff of FMEnv (EA Dept), Relevant staff of Niger State Ministry of Environment, NISEPA, other relevant MDAs, LGA departments, Contractors, Maintenance Cooperative, NGOs, CBOs.	1 day	500,000
Module 3: Training on Construction HSE	<ul style="list-style-type: none"> • Introduction to Construction HSE • Overview of Health and Safety Hazards in Construction • Incidents: Causation, Investigation & Reporting • Excavation Safety • Site Specific OHS • Construction Site Inspection • Personal Protective Equipment 	To ensure completion of project with zero fatalities, zero Lost Time Injuries (LTI) or occupational illness by promoting safe & healthy working conditions as well as the health of workers and those that will be involved in monitoring.	Safeguard unit of the SPIU, M&E Officers and Project Engineers from SPIU, relevant staff of FMEnv (EA Dept), Relevant staff of Niger State Ministry of Environment, NISEPA, other relevant MDAs, LGA departments, Contractors, Maintenance Cooperative, NGOs, CBOs.	1 day	800,000
TOTAL				3 days	1,800,000

8.5 Monitoring and Reporting

8.5.1 Monitoring Activities

The monitoring plan (Internal and External Monitoring) for the ESMP is presented in Table 8.5. Monitoring results shall be documented with preventive/corrective actions to be implemented.

Table 8.5: Internal and External Monitoring

Monitoring	Action	Responsibility	When	Deliverables
Internal Monitoring	Regular site visit (Frequency is defined in Table 7.10) to ensure that the mitigation measures and actions specified in the monitoring plan and as bound by the contract is satisfactorily implemented.	E&S Safeguard Officers from SPIU.	During Preconstruction, Construction and Operation Phases	Monitoring Reports and documentation as described in Sub-section 7.5.2
	Site visit for monitoring and inspection to ensure contractor adhere strictly to the engineering designs and specifications for the project	Independent Supervising Engineer	During Construction Phase	Observations and Monitoring Reports to be compiled and presented to the SPIU.
External Monitoring	Regular site visit to ensure project is implemented in an environmentally & socially sustainable manner using the monitoring indicators specified in the monitoring plan and other national and international environmental &	FMEnv, Niger State Ministry of Environment, Representatives of affected communities, and other relevant	During Preconstruction, Construction and Operation Phases	Inspect monitoring reports from Safeguard units and provide feedback on observations. Enforce corrective actions where necessary.

	social requirements	MDAs.		
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8.5.2 Reporting Procedures

The reporting procedures presented in Table 8.6 have been developed in order to ensure that the SPIU is able to receive feedback from the implementation of the ESMP on an on-going basis and to take rapid corrective actions if there are issues of non-conformance.

Table 8.6: Reporting Procedures

Phase	Responsibility	Deliverables	Frequency	Accountability
Preconstruction	Safeguard Unit	Report of monitoring activities including any specific events	Once	SPIU, also NSME & FMEnv on request
Construction	Safeguard Unit	Two (2) monitoring Reports. First to be prepared mid way into the civil works and the other upon completion of all construction activities.	Twice	SPIU, also NSME & FMEnv on request
	Safeguard Unit	Additional Reports according to specific conditions e.g. Accidents, serious environmental/social impacts	Once	SPIU, also NSME & FMEnv on request
Completion of construction and demobilization of contractor from site	Safeguard Unit	Final Monitoring Report including all monitoring activities throughout project implementation	Once	SPIU. Report to be archived and made available to the World Bank, NSME & FMEnv on request

8.5.3 Record Keeping and Control

The contractor is required to keep records providing evidence of ongoing mitigation activities. Such records may include site monitoring plan, HSE Policy, Site Specific HSE Plan, Waste Management Plan, Traffic Control Plan, Emergency response and preparedness procedures, site instructions, training records, complaints records, incident report, Inspection, maintenance and equipment calibration records. These documents should be made available to the Safeguard Unit upon request.

The Safeguard Unit is also required to keep records to provide evidence of monitoring activities and effectiveness of the monitoring plan. The site monitoring Plan identified problems/corrective actions and monitoring Reports highlighted in sub-section 8.5.1 are to be kept by the Safeguard unit and be made available to relevant regulators upon request. In addition, all significant communications with FMEnv, NSME and other relevant authorities should be documented and kept. These documents are required to track performance in order to achieve and demonstrate compliance with the monitoring plan and applicable regulatory requirements.

8.6 Implementation Schedule

The activities related to environmental management and monitoring have to be integrated in the overall construction schedule. The project implementation phase is estimated to be completed in 15 months. The implementation schedule is presented in Table 8.7.

Table 8.7: Tentative ESMP Implementation Schedule

S/N	Activity Description	Responsible	Preconstruction (Month)					Constructiuon (Month)									Operation		
			1	2	3	4	5	1	2	3	4	5	6	7	8	9			
1.	Clearance and Formal Disclosure of ESMP	SPIU																	
2.	Inclusion of Environmental & Social Requirements in Bid Docs	SPIU																	
3.	Allocating Budget for ESMP	SPIU																	
4.	Appointing Support Staff for ESMP	SPIU																	
5.	Review & Approval of Contractor's ESMP, Waste & Safety Plan	SPIU																	
6.	Finalization of Engineering Designs	SPIU/Engineering Design Consultant																	
7.	Environmental and Social Training	E&S Consultant																	
8.	Mobilization to site	Contractor																	
9.	Site Clearing	Contractor																	
10.	Construction Phase	Contractor																	
11.	Implementation of Mitigation	Contractor																	
12.	Supervising ESMP Implementation	SPIU																	
13.	Monitoring & Reporting on ESMP Implementation	SPIU/Relevant MDAs																	
14.	Environmental and Social Auditing	SPIU/NSME/E&S Consultant																	

8.7 Contractual Measures

Most of the mitigation measures are the obligation of the Contractor during all phases of the project. Consequently, the potential contractor will have to prepare their proposals taking into account the measures in Table 8.8 as well as the detailed general environmental management conditions during civil works attached as Appendix 5.

Table 8.8: Contractual Measures

Action	Remarks
The measures as described in this ESMP shall be included in the tender documents with appropriate flexibility to adjust these measures to site circumstances, and that the potential contractor will have to prepare their proposals taking into account these measures.	The non-inclusion of these measures in the proposal will lead to a disqualification of the proponent; The contract with the successful bidder should contain these environmental and social management measures as firm conditions to be complied with.
Specifically, the measures should be translated into a suite of environmental specification that are written in the same language style and format as the rest of the contract document	This approach will ensure that the environmental and social controls integrate seamlessly into the tender document and are presented in a familiar form to the Contractor
Cost of mitigation measures be added to the cost of the contractual document	The contractor must take into account and put the cost for the environmental and social requirements specified in the ESMP.

8.8 Cost Estimates for ESMP Implementation

To effectively implement the mitigation and monitoring measures recommended in this ESMP, necessary provision will have to be made. The cost of these measures has been estimated and included in the ESMP and presented in Table 8.9. The cost of mitigation by the Contractor will be included in the contract as part of the implementation cost by the Contractor. The total estimated cost for the ESMP implementation and monitoring is **N11,550,000 (US\$ 37,869)**.

Table 8.9: Estimated Budget for the Implementation of ESMP

Item	Responsibility	Cost Estimate in Nigerian Naira (N)	Cost Estimate in US Dollars (US\$)*
Mitigation	Contractor	5,300,000	17,377
	RAMP – SPIU	1,500,000	4,918
Monitoring	SPIU, MDAs	1,900,000	6230
Capacity Building	SPIU, Niger State Ministry of Environment and other relevant MDAs	1,800,000	5,902
Sub- Total		10,500,000	34,426
GRM Operation	RAMP – SPIU: 5% of Sub-Total	525,000	1,721
Contingency	5% of Sub- Total	525,000	1,721
Total		11,550,000	37,869

*1 US\$ =N305

8.9 ESMP Disclosures

After the ESMP review and clearance by the World Bank, the following below in Table 8.10 describes the process of disclosure.

Table 8.10: Disclosure procedure

s/n	Action	Remarks
1	Disclosure on 2 national newspapers	The SPIU will disclose the ESMP as required by the Nigeria EIA public notice and review procedures. This entails advert in 2 newspapers; one national and one local (state) newspaper
2	Disclosure at the Niger State Ministry of Environment	The SPIU will disclose the ESMP as required by the Nigeria EIA public notice and review procedures
3	Disclosure at the RAMP office	The SPIU will display the ESMP as required by the Nigeria EIA public notice and review procedures
4	Disclosure at respective LGA office & the host communities	The purpose will be to inform stakeholders about the project activities; environmental and social impacts anticipated and proposed environmental and social mitigation measures.
5	Disclosure at the World Bank Info Shop	The ESMP will be disclosed according to the World Bank Disclosure Policy- OP/BP 17.50/ ESS 10

CHAPTER NINE: PUBLIC CONSULTATION

9.1 Introduction

As part of the ESMP, and in line with FMEnv and World Bank ESS 10 requirements, extensive consultations were held with the SPIU and communities along the affected roads. The consultations served as platforms to elicit information, questions and concerns relevant to the project. It was also a platform to ascertain the nature of impacts of the project from the community perspective and livelihood-based issues that might be supported by the project or other future RAMP activities. Participants at the community meeting comprised of the traditional rulers, community leaders, women and youths. The socioeconomic assessment instrument for focus group discussions (FGD) and Key Informant Interviews (KII) as well as the attendance at various consultations are attached as Appendixes 3.

9.2 Approach for Public consultation

The following considerations guided the public consultations:

- Site visit of each of the proposed road route for upgrade/construction;
- Identification of the administrative leadership in the project areas, and visits to the community leadership;
- Interview with clusters of persons met along the communities, and
- Public forum with stakeholders on the project matter

9.3 How Stakeholders were Categorized and Identified

This ESMP categorized stakeholders into primary and secondary categories. Primary stakeholders are those that are directly affected by the adverse impacts of the proposed works and those who are to benefit from use of the feeder roads to be constructed, example are community members, farmers and transporters. On the other hand, secondary stakeholders are those with some form of interest and influence on the project such as local NGOs and local and state governments, State Ministry of Environment. However, No Local NGO or partners with the project were identified during the field visit.

Consultations were held in two folds: Stakeholders converged at central venues for community wide consultations and subsequently in smaller common groups. Meeting with common groups such as vulnerable groups and women was helpful in determining the need, voice and concerns that may not have been fully expressed during the general community consultations.

9.4 Summary of Consultations

The following Sections present summary of the proceedings and outcome of the consultations held with the SPIU and project affected communities including Galuwi, Gunudna, Nyela, Mukugi, Napankuchi, Madaki, Bangalaye, Gangare, Makera-Beji, and Emigimanzhi communities. Tables 9.1 - 9.2 present summary of the proceedings and outcome of the consultations with the SPIU and affected communities.

Table 9.1: Summary of Consultation with SPIU

Venue of Meeting	Niger State RAMP Office, Minna, Niger State.
Date of Meeting	9 January 2019
Participation	<ol style="list-style-type: none"> 1. PC 2. ESO 3. SSO 4. Consultant and his team
Introduction	<p>The Project Coordinator welcomed the Consultancy team and assured them of adequate cooperation throughout the process of environmental and social assessment of the proposed road construction project. The PC introduced his Safeguard Unit (environmental and social safeguard officers) and gave an overview of the RAMP activities in Niger State leading to the selection of the roads for rehabilitation.</p> <p>The Consultant introduced his team and explained the objectives of the ESMP as well as the World Bank and Federal Government policies on environmental and social safeguards as it relates to RAMP. He admonished the PC and his team to ensure implementation of the ESMP especially during road construction in order to ensure adverse environmental and social impacts on the environment and members of adjoining communities are avoided or reduced to acceptable levels. The consultant stressed the need for active engagement with the communities and presented his plan to the SPIU for their considerations and input.</p>
Questions and Concerns	<p>The Consultant raised the following issues with the SPIU</p> <ol style="list-style-type: none"> 1. The Consultant sought to understand the proposed project activities/implementation design; 2. To know if the affected communities are aware of the proposed construction and if there has been any previous consultations 3. Concern was also raised about potential affected farmlands and economic trees. 4. He also asked about the perception and concerns of affected communities
How questions and concerns were resolved	<p>The concerns and questions were addressed by the SPIU in the following manner:</p> <ol style="list-style-type: none"> 1. Having constructed the river crossings in about 20 locations, it was discovered that access roads leading to 16 of the new bridges are in very poor conditions. The SPIU has received a no objection from the World Bank to undertake improvement/rehabilitation of bad portions and not the entire road stretch. The rehabilitation plan/design will be made available to the consultant. 2. The Safeguard Unit of the SPIU has been to all affected communities to sensitize them on the proposed road project and to assess farmlands, economic trees and other assets likely to be affected. Extensive discussions have been held and consultation is ongoing. 3. About potential affected farmlands and economic trees, the project will avoid farmlands as much as possible by sticking to the corridor size stipulated in the design. However, ARAP will be prepared and implemented (if necessary) to ensure that project affected people are duly compensated and everyone is happy at the end of the project. 4. The project is highly desired by the people of the benefitting communities. The current condition of the road is bad and not passable during the rainy season causing serious hardship and economic losses as there is difficulty in conveying farm produce to the market. There is also poor access to hospitals and schools in the area.
Commitment and recommendations	<ol style="list-style-type: none"> a. The Consultant encouraged RAMP to continue to carry affected communities along before and during project implementation and to effectively implement this ESMP. b. The Consultants informed RAMP that further awareness on ESMP & ARAP including trainings will be recommended for effective project implementation. c. They were also informed that outcome of this meeting will be helpful in addressing frequently asked questions in the project community, and encouraged SPIU to ensure adequate implementation and monitoring of mitigation measures.

Table 9.2(a): Summary of consultations with affected communities

COMMUNITY/ LGA	GALUWI, Munya LGA	GUNUDNA, Shiroro LGA	NYELA, Gurara LGA	MUKUGI, Lapai LGA,	NAPANKUCHI, Bosso LGA
Affected Road	Sarkin Pawa Road	Shakwatu – Gunudna Road	Lambata – Nyela Road	Makugi – Adako Road	Napankuchi Road
Date & Time	09/01/2019 (2:05-3:30pm)	09/01/2019 (2:05-3:30pm)	10/01/2019 (12 - 1:30pm)	10/01/2019 (3 -4:15pm)	11/01/2019 (11am-12:30pm)
Tribe/Language	Gbagyi	Gbagyi	Gbagyi	Nupe	Gbagyi
Attendance	The meeting was attended by the traditional ruler (Village Head), Community leaders, community men and women and members of SPIU (Safeguard Unit) and the Consultancy Team. (Attendance attached in Appendix 4)				
Preamble	The SSO (SPIU) introduced the Safeguard Unit of RAMP and the Consultancy team and gave a brief overview of RAMP and the proposed road rehabilitation project. He stressed that the visit is part of the ongoing consultations regarding the proposed spot rehabilitation of the road which traverses their community. The Consultant told the community that the State government in partnership with the World Bank after the construction of the bridge (river crossing) along the road is concerned with the hardship being experienced due to the poor condition of the road. The essence of the intervention is to rehabilitate the bad portions of the road in order to make life easier for them. He also informed participants of the ongoing ESMP which is being undertaken to ensure the Contractors take environmental and social issues into considerations during construction in order to protect the environment and interest of the affected communities, especially the poor and vulnerable. He further highlighted the scope of the ESMP study and the need for a robust public/community consultation.				
Major livelihood of the people	Farming and trading in agro-produce	Farming and trading in agro-produce	Farming and trading in agro-produce	Farming and trading in agro-produce	Farming and trading in agro-produce
Major farm produce, livestock and nearest market(s)	The major produce includes maize, millet, rice, beans, soya-beans, sugarcane etc. Livestock include ram, cattle, sheep. The nearest market is the Sarkin Pawa market.	The major produce includes yam, maize, guinea corn, rice etc. Livestock include ram, cattle, sheep. The nearest markets are Shakwatu and Gunu markets.	Yam, maize, millet. The nearest market is Lambata.	Yam, soya-beans, groundnut, millet. The nearest market is Lapai market but they also go to other markets including Takoti and as far as Lambata (they make more profit at Lambata as there are more people to buy produce)	Maize, rice, yam, millet, sorghum, tomatoes and pepper. Cattle, sheep, goat and poultry. The nearest market is Zingeru.
Mode of transportation and cost	Vehicles (limited access during wet season), motorcycle. It costs about N500 to Sarkin Pawa by bike.	Vehicles (limited access during wet season), motorcycle. It costs about N800 to transport a bag of produce to the market by car.	Vehicles and motorcycle. Cost of transporting 100 tubers of yam to market was N2,000 before bridge construction but now N1,500.	Vehicles and motorcycle. It costs about N3,000 & N8,000 to transport a full load of yam to Lapai and Lambata markets respectively.	Vehicles (especially pick up van) and motorcycle. Cost of transportation is about N8,000 to convey one truck load of yam to the market.
Effects of the new bridge on transportation and further challenges	Before the construction of the bridge, vehicular movement was impossible, vehicles used to stop at Sarkin Pawa and community members usually trek home from there during wet season. Many pregnant women in labour have delivered their babies by the river as there is no access for motorcycle to take them across to hospital in Sarkin Pawa. Also, students stay at home during the raining season as there was no bridge to cross	The community members applauded the government on the construction of the bridge and stress that the standard of their lives has improved tremendously. Their children can now go to school, their women to the hospital and they can transport their produce to the market. As more vehicles can now access their communities, transport costs have reduced. They however called on the government to help address bad	The village head expressed delight and appreciation about the new bridge. He stressed the challenges of difficulty of movement of community members and produce during the wet season have been alleviated.	The community expressed gratitude over the construction of the new bridge. He stated that before the bridge was constructed, community member used to remain in the community throughout raining season whilst others who were away could not return home as there was no access to go anywhere until dry season. They also expressed satisfaction with the contractor who constructed the bridge as he engaged a lot of their teeming youths to work during	They expressed gratitude to the government for providing the new bridge. They stressed that their produce usually perish during wet season as there was absolutely no access to take them to the market during the wet seasons. They have spent a lot of money and precious time trying to fix the river crossing over the years just to create access. Despite their efforts, vehicles struggle and sometimes get stuck. On many occasions, people were paid to help push the vehicles. They claimed this has contributed to the

Final ESMP for Spot Improvement of 119km Rural Roads under RAMP in Niger State

COMMUNITY/ LGA	GALUWI, Munya LGA	GUNUDNA, Shiroro LGA	NYELA, Gurara LGA	MUKUGI, Lapai LGA,	NAPANKUCHI, Bosso LGA
	the river to attend school in Sarkin Pawa. Movement has improved since the construction of the bridge. Despite the bridge, the access road is still in bad condition.	portions of the road so that they can derive the maximum benefits from the bridge.		construction.	high cost of transportation.
Community needs, concerns and questions.	<ul style="list-style-type: none"> The access road condition is very bad, so the new bridge is having very little impacts. Vehicular access is limited, and transport costs are still high. Government should ensure the rehabilitation of the road as promised The road to be tarred after rehabilitation to protect the road from erosion. Government to provide them with potable water as the river they depend upon dries up during the dry season creating severe water shortage 	<ul style="list-style-type: none"> Rehabilitation of the access road before the bridge. Electricity 	<ul style="list-style-type: none"> Another river crossing just about 2km form the village recently collapsed during the wet season of 2018. (the village head took the team to the location of the bridge). He appealed to the government to help reconstruct the bridge as part of the road project. Electricity poles have been installed in their communities, but they are yet to be connected to the grid. He appealed to the government to complete the project. 	<ul style="list-style-type: none"> The community members called the attention of the SPIU to the incident of overflowing which occurred by the bridge during heavy downpours. They linked the cause to the fact that the bridge rings may be too small for the volume of water during prolonged rainfall. Government to rehabilitate the bad portions of the road. The community appealed to the potential contractor to engage their youth during construction. Government should do something about their electricity as the light is never bright due to low voltage supply. 	<ul style="list-style-type: none"> The community used to have 6 boreholes but now only 3 are functional. They appealed to the government to support them in rehabilitating the boreholes as communal efforts have proven abortive. Electricity They are happy about the proposed rehabilitation of the access road and encouraged the government to follow through on the promise.
How concerns were addressed	<p>Response by the ESO/SSO:</p> <ul style="list-style-type: none"> The road has been designed and construction work commence soon. Tarring the road may not apply under this project, however, their concerns regarding dust and erosion will be taking into considerations during project planning and implementation. Once the road is constructed other development will follow. 	<p>Response by ESO/SSO:</p> <ol style="list-style-type: none"> Community members were assured the road will be rehabilitated promptly. Community members were assured that other amenities will be provided in the near future once the road is constructed. 	<p>Response by ESO/SSO:</p> <ol style="list-style-type: none"> The community members were reassured that the information regarding the recently collapsed bridge will be passed to the authority and there is possibility of intervention during the road rehabilitation project. The community members were told to be patient with the government as other amenities will come to them in due course. 	<p>Response by ESO/SSO:</p> <ol style="list-style-type: none"> The concern about the new bridge was noted and will be communicate to project engineer. Assurance was given that the road project will soon commence and will be completed as scheduled. They were assured that once the road project is completed, other government projects will follow. They were assured that their youths will be engaged by the contractor during project 	<p>Response by ESO/SSO:</p> <ul style="list-style-type: none"> Community members were assured the road will be rehabilitated promptly. Community members were assured that other amenities will be provided in the near future once the road is constructed.

COMMUNITY/ LGA	GALUWI, Munya LGA	GUNUDNA, Shiroro LGA	NYELA, Gurara LGA	MUKUGI, Lapai LGA,	NAPANKUCHI, Bosso LGA
				implementation to improve local economy and alleviate poverty in the community.	

Table 9.2(b): Summary of consultations with affected communities (continued)

COMMUNITY/ LGA	MADAKI, Rafi LGA	BANGALAYE, Magama LGA	GANGARE, Kontagora LGA	MAKERA, Wushishi LGA,	EMIGHIMAZHI, Gbako LGA
Affected Road	Maikujeri - Madaki Road	Ibeto – Gyengi Road	Lambata – Nyela Road	Makera-Beji – Labuder Road	Sonkpata - Emigimazhi Road
Date & Time	11/01/2019 (2:05-3:30pm)	11/01/2019 (2:05-3:30pm)	11/01/2019 (12 - 1:30pm)	12/01/2019 (3 -4:15pm)	12/01/2019 (11am-12:30pm)
Tribe/Language	Gbagyi	Kambari	Dakari Kari/ Zuru	Nupe	Nupe
Attendance	The meeting was attended by the traditional ruler (Village Head), Community leaders, community men and women and members of SPIU (Safeguard Unit) and the Consultancy Team. (Attendance attached in Appendix 4)				
Preamble	The SSO (SPIU) introduced the Safeguard Unit of RAMP and the Consultancy team and gave a brief overview of RAMP and the proposed road rehabilitation project. He stressed that the visit is part of the ongoing consultations regarding the proposed spot rehabilitation of the road which traverses their community. The Consultant told the community that the State government in partnership with the World Bank after the construction of the bridge (river crossing) along the road is concerned with the hardship being experienced due to the poor condition of the road. The essence of the intervention is to rehabilitate the bad portions of the road in order to make life easier for them. He also informed participants of the ongoing ESMP which is being undertaking to ensure the Contractors take environmental and social issues into considerations during construction in order to protect the environment and interest of the affected communities, especially the poor and vulnerable. He further highlighted the scope of the ESMP study and the need for a robust public/community consultation.				
Major livelihood of the people	Farming and trading in agro-produce	Farming and trading in agro-produce	Farming and trading in agro-produce	Farming and trading in agro-produce	Farming and trading in agro-produce
Major farm produce, livestock and nearest market(s)	The major produce includes maize, yam, millet, rice, beans, soya-beans etc. Livestock include ram, cattle, sheep. The nearest market is the Meikujeri market. Other markets include Kagara & Mariga	The major produce includes millet, maize, groundnut etc. Livestock include ram, cattle, sheep. The nearest market is the Ibeto market.	Maize, millet and beans. Livestock include cattle and sheep. The nearest market is Kontagora	Melon, Yam, beans. The nearest market is Beji Market.	Cassava, beans, yam, rice, guinea corn. Cattle, sheep, goat. They have a local market in their community where people come to buy their produce.
Mode of transportation and cost	Vehicles (limited access during wet season), motorcycle. It costs about N400 to Kagara, 150 to Meikujeri by bike.	Vehicles (limited access during wet season), motorcycle. It costs about N300 to transport a bag of produce to the market by bike.	Vehicles and motorcycle. Cost of transporting a bag of grain was N250 before the bridge was constructed and now N200 by bike.	Vehicles (especially pick up van) and motorcycle. It costs about N2,000 to transport a bag of grains from neighboring village of Pai to market.	Over the years, people stopped coming to their market as there was no access during the wet season.
Effects of the new bridge on transportation and further challenges	The community expressed gratitude over the construction of the new bridge as it has provided access especially during the wet season. They lamented that before the bridge was constructed, community members carry their farm produce on their	The community members applauded the government on the construction of the bridge and stress that the standard of their lives has improved tremendously. Their children can now go to school, their women to the hospital and they can transport their produce to the	They expressed delight and appreciation about the new bridge and stressed the challenges of difficulty of movement of community members and produce during the wet season have been alleviated. They stated that prior to the	The community expressed gratitude over the construction of the new bridge. They were delighted so much so that they volunteered to provide security for construction personnel and equipment. They stated that before the bridge was constructed, community member used to carry their produce on their head to cross to	They expressed gratitude to the government for providing the new bridge. They stressed that their produce usually perish during wet season as there was absolutely no access for buyers to come and buy from them. They have spent a lot of money and precious time trying to construct a local bridge for river

Final ESMP for Spot Improvement of 119km Rural Roads under RAMP in Niger State

COMMUNITY/ LGA	MADAKI, Rafi LGA	BANGALAYE, Magama LGA	GANGARE, Kontagora LGA	MAKERA, Wushishi LGA,	EMIGHIMAZHI, Gbako LGA
	<p>head to cross the river when water volume is low but they sometimes had to wait 2-3 days when there is heavy downpours. Their children do not go to school during the wet season as there was no access to cross to Meikujeri where the school is located.</p>	<p>market. They lamented that they used to go through a longer route to get to the market before the bridge was constructed. They however called on the government to help address bad portions of the road so that they can derive the maximum benefits from the bridge.</p>	<p>construction of the bridge, their children could not go school and their women could not visit hospitals at Kontagora due to poor access at river crossings.</p>	<p>Pai village from where they can get access to vehicles as vehicles have no access to their community during the wet season. There are now numerous vehicles accessing their community due to the bridge construction. They also stated that transport costs have not reduced as access roads to the bridge are still in bad condition.</p>	<p>crossing over the years just to create access for people to be able to come to their local markets.</p>
<p>Community needs, concerns and questions.</p>	<ul style="list-style-type: none"> • The access road condition is very bad, so the new bridge is having very little impacts. Vehicular access is limited, and transport costs are still high. The government should help rehabilitate the road • Government to provide them with potable water as the stream they depend upon dries up during the dry season creating severe water shortage in their community. • Other major concerns include school and electricity. 	<ul style="list-style-type: none"> • Rehabilitation of the access road before the bridge. • They want basic amenities in their community as they currently lack schools, hospitals, electricity and potable water. Their women usually trek up to 1km to fetch water for domestic use from Ibeto. 	<ul style="list-style-type: none"> • They want the government to rehabilitate access road as promised. • They also appealed to the government to provide access to potable water (boreholes). • Other major needs include hospital, electricity and schools 	<ul style="list-style-type: none"> • The community members appealed to the government to promptly rehabilitate the access roads so that the benefits of the bridge can be enhanced. • The community appealed to the potential contractor to engage their youth during construction. • The community wants the government to provide them with more water sources as they rely on only 1 borehole which cannot serve the entire village. Other nearby communities also depend on this one borehole. 	<ul style="list-style-type: none"> • They are happy about the proposed rehabilitation of the access road and encouraged the government to follow through on the promise. This is because the road is being damaged by rain every wet season. • They are also appealing to the government to tar the road surface in order to protect the road and reduce dust during dry seasons. • Potable water (boreholes)

Final ESMP for Spot Improvement of 119km Rural Roads under RAMP in Niger State

COMMUNITY/ LGA	MADAKI, Rafi LGA	BANGALAYE, Magama LGA	GANGARE, Kontagora LGA	MAKERA, Wushishi LGA,	EMIGHIMAZHI, Gbako LGA
How concerns were addressed	<p>Response by the ESO/SSO:</p> <ul style="list-style-type: none"> • The community was informed that the road has been designed and construction work will soon commence. • As concerning other amenities, the SPIU maintained that once the road is constructed other development will follow as the government is mindful of their situation. 	<p>Response by ESO/SSO:</p> <ul style="list-style-type: none"> • Community members were assured the road will be rehabilitated promptly. • Community members were assured that other amenities will be provided in the near future once the road is constructed. 	<p>Response by ESO/SSO:</p> <ul style="list-style-type: none"> • Community members were assured the road will be rehabilitated promptly. • Community members were assured that other amenities will be provided in the near future once the road is constructed. 	<p>Response by ESO/SSO:</p> <ul style="list-style-type: none"> • Community members were assured the road will be rehabilitated promptly. • Community members were assured that other amenities will be provided in the near future once the road is constructed. 	<p>Response by ESO/SSO:</p> <ul style="list-style-type: none"> • Community members were assured the road will be rehabilitated promptly. • The SPIU responded that tarring the road may not apply under this project, however, their concerns regarding dust and erosion will be taking into considerations during project planning and implementation. • Community members were assured that other amenities will be provided in the near future once the road is constructed.



Plate 8.1: Consultation at Napankuchi Community



Plate 8.2: Consultation at Gangare Community



Plate 8.3: Consultation with members of Makera Village



Plate 8.4: Consultation at Emighimanzhi Village



Plate 8.5: Consultation with women at Galuwi Village



Plate 8.6: Consultations at Nyela Village



Plate 8.7: Consultation at Makugi Village



Plate 8.8: Consultations at Galuwi

9.5 Summary and Recommendations

The proposed spot improvement of rural roads across Niger State will have highly beneficial impacts on the rural adjoining communities and respective LGA and the state at large as it will promote integration and improve accessibility to communities, markets, farms and agro-processing centres in the project areas.

Below are some of the recommendations that will enhance the overall sustainability of the proposed project especially during the implementation phase of the project:

- In the event that economic trees/crops along the road corridors cannot be avoided during construction, Niger RAMP will ensure that ARAP is developed and implemented so that affected farmers are adequately compensated for loss of assets and economic crops. Issues relating to compensation should be handled in a transparent, consistent and equitable manner.
- Priority should be given to local workers during project implementation in order to limit the number of migrant workers. This will reduce threats to community culture, health, safety and security as well as stimulate local socioeconomic activities, improve livelihood and reduce poverty in the affected communities.
- Affected communities should be informed in good time about the commencement of civil works. In addition, ongoing consultation with members of the affected communities especially during construction should be maintained to allow them freely to express their views/concerns and make valuable contributions.
- Water should be used for dust suppression during civil works especially those involving excavations and other dust generating activities in order to protect nearby communities from respiratory and eyes problems and other health related challenges of dust.
- All bare and exposed soils should be re-vegetated with native vegetation immediately after construction to prevent erosion.
- Develop Codes of Conduct for contractors with prohibitions against GBV/SEA.
- Community-based Grievance Redress Mechanism should be developed and implemented to promptly and effectively resolve grievances from affected persons.
- Construction works should be carried out in an environmentally sustainable and socially responsible and inclusive manner.
- The Safeguard Unit of SPIU should ensure active monitoring to ensure the contractor adhere strictly to the requirements of this ESMP especially in the application of mitigation measures during project implementation.
- Adequate efforts should be made by all stakeholders, especially the government in ensuring provision of adequate infrastructures and social facilities in the rural communities in order to improve the standard of living of the rural dwellers.
- Ensure measures to prevent dust and erosion on the road surface are taking into consideration during road design, construction planning and implementation in order to prevent erosion and reduce dust impacts on communities during the dry seasons.
- Ensure that staging areas for contractor equipment are adequately delineated and cordoned off with reflective tapes and barriers

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ANNEXES

Appendix 1: Terms of Reference

For Engagement of Individual Consultant for Environmental and Social Management Plan (ESMP) for 104km spot improvement of rural roads under RAMP-2 in Niger State.

AUGUST, 2018

1.0 BACKGROUND

The Second Rural Access and Mobility Project (RAMP-2) supports the implementation of the Federal Government of Nigeria's Rural Travel and Transport Policy (RTTP) in the States of Adamawa, Enugu, Niger, and Osun. The Project is implemented in each of the four States by the respective State Project Implementation Unit (SPIU). In addition to the states' counterpart funds, the Project is co-financed by the World Bank and French Development Agency.

The Project is domiciled in the Federal Ministry of Agriculture and Rural Development (FMARD) and is being coordinated at Federal level by Federal Project Management Unit (FPMU). The implementation of the project will be carried out at the state level by the State Project Implementation Units (SPIUs).

PROJECT DEVELOPMENT OBJECTIVES

The main objective of the Project is to improve transport conditions and bring sustained access to the rural population, through rehabilitating and maintaining key rural transport infrastructure in a sustainable manner in the selected Nigerian states.

PROJECT COMPONENTS

The project includes the following components:

Component 1 – Upgrading and Rehabilitation of Rural Transport Infrastructure (This component will finance: Upgrading and rehabilitation of approximately 579 km of selected existing rural and state roads in Niger State, and carrying out related design studies and supervision activities. This involves the upgrading and/or rehabilitation of selected rural roads (or state roads on a case by case basis with connectivity purposes), as well as river-crossings in order to ensure minimal access at locations selected for their importance for agricultural productivity or to give access to social services. This component will also finance mechanized maintenance works for the first year, while Niger State will continue financing maintenance expenditures for the remaining design life of the rehabilitated roads. The related design studies and supervision activities include supervision services for the upgrading/rehabilitation works, economic viability studies, design and bidding document preparation, Environmental and Social Impact Assessment (ESIA), technical audits and other services required for quality assurance. Any funds not applied on the pre-selected roads, including part of the contingencies will be used to rehabilitate additional road links identified in the priority list.

Sub-component 1.2 Upgrading and rehabilitation of river crossings in Niger State, and carrying out related design studies and supervision activities. This involves upgrading and rehabilitation of causeways, fords, box culverts as well as small bridges on rural roads in Niger State. This component will finance critical medium size bridges on exceptional basis, to ensure connectivity of communities and/or farm areas to market.

Component 2 – Community-based road maintenance and mechanized

This component will finance: Sub component pilot program for community based and mechanized maintenance on approximately 579 km of selected existing rural and state roads in Niger State, as well as micro-enterprises and community based maintenance contracts for the roads rehabilitated under sub component 1.1 for the first year after completion of rehabilitation, and carrying out related supervision

activities. Niger State will continue financing the micro-enterprises and community based contracts for the remaining design life of the rehabilitated roads.

Sub component 2.2 technical assistance for the preparation of maintenance plan, bidding documents for mechanized and community based maintenance contracts; organizing and training Local Community Groups (LCGs) and micro-enterprises, and support to maintenance contracts tendering. This sub component includes providing support to: (i) the pilot community based and mechanized maintenance contracts; (ii) community based maintenance contracts for all the pilot roads after completion of the pilot maintenance contracts; (iii) follow-on mechanized annual maintenance for the roads upgraded and rehabilitated under this Project; and (iv) follow-on community based maintenance contracts the roads upgraded and rehabilitated under this Project. Micro enterprises that will engage local labor could also compete with LCGs and undertake maintenance contracts.

Component 3 – Project management and strengthening of Niger State road sector institutional, policy and regulatory framework

1. This component will finance: Sub component support to build the institutional capacity of Niger State for rural roads management and maintenance and project implementation , including: (a) reform of state road sector institutions, including institutionalization of the SPIU within states' organizational chart for rural roads' management and coordination with eventual objective of creating/strengthening the state and/or rural roads agency; (b) support to the establishment of a mechanism for reliable and stable flow of maintenance financing by conducting a study on alternative sources for maintenance funds and legislating the establishment of a State Road Maintenance Fund; (c) establishing a database for rural roads based on Global Information System (GIS)-based on road inventories and introducing a simplified road asset management system for the prioritization of maintenance and investment interventions for the core rural roads network in the State; and (d) adoption and mainstreaming of sound rural transport policies (axle load control, ownership, etc.).

2. Sub component 3.2 support to Niger State in project management and road policy development , including: (a) strengthening the financial management, procurement, safeguards monitoring and engineering capabilities of the SPIU by providing qualified local consultants while the State provides the core project management staff, including the Coordinator; (b) provision of vehicles, office equipment and rentals; (c) day to day administration, financial management, procurement, environmental and social safeguards management, and monitoring and evaluation of Project activities at the state level; (d) institutional support and training to local governments (e.g. on safeguards enforcement, fiduciary management, governance and accountability, infrastructure planning); and (e) technical assistance for ensuring stakeholders and civil society participation in processes that assure road quality, efficiency of works, transparency and social inclusion; and (f) monitoring and evaluation; baseline and impact evaluation surveys; citizen engagement surveys, preparatory activities for scaling up; and technical audits. The Federal Project Management Unit (FPMU) will continue playing the coordination role.

GOAL OF THE ASSIGNMENT

Based on the anticipated environmental and social impacts associated with the project RAMP 2 has been categorized as B under the World Bank's Operational Policies and category II under the FMEEnv categorization. Proposed activities in Component 1 trigger the following World Bank Safeguards Policies: OP/BP 4.01, OP/BP 4.11 and OP/BP 4.12. Prior to the approval of the RAMP 2 project an Environmental and Social Management Framework (ESMF) and a Resettlement Policy Framework (RPF) were prepared and disclosed on May 2008 and May 2013. Niger State being one of the RAMP-2 participating States has already initiated, under a first phase of the rehabilitation/reconstruction of 176.6km of rural roads. The project under sub-component 1.2 has also constructed 20 number River Crossings across the State shown in table below:

1.0 BRIEF DESCRIPTION OF CIVIL WORKS AND CONSULTING SERVICES

Most of the River Crossings do not have defined access roads, the World Bank has given the SPIU no-objection to engage contractors to undertake spot improvement of the Roads leading to the River crossings:

1.6 Niger State has commissioned under the project, a consultant with satisfactory experience on assignments similar in size and nature to that described in this terms of reference to carry out the detail engineering design for the spot improvement of 119 km rural roads. The assignment has since been completed.

The spot improvement of the access roads to the 20.No. river crossings is about 119km scattered across the state. The design for the civil work has already been prepared. The list of roads, their tentative lengths, and LGA are shown in table 1 below.

S/N	ROAD NAME	ROAD LENGTH	LGA
1	KABOJI-ADOGON MALLAM	19KM	MASHEGU
2	ADOGON MALLAM-MAZAKUKA	11,6KM	MASHEGU
3	IBETO-GYENGI	0.792KM	MAGAMA
4	KONTAGORA-GANGAREN SAGI	2.87KM	KONTAGORA
5	MUKUGI-ADAKO	7.412KM	LAPAI
6	TAKUTI-KUTIRKO	12.874KM	AGAIE
7	KUTIRKO-EYANGI LIMAN	16.548KM	AGAIE
8	GBADAFU-EMIGIMANZHI	3.146KM	GBAKO
9	DABAN-NDARUKA	5.0KM	LAVUN
10	NAPANKUCHI	2.607KM	BOSSO
11	MAKERA-BEJI-LABUDA	15.95KM	WUSHISHI
12	MAI KUJERI-MADAKI	3.075KM	RAFI
13	SHAKWATU-GUDNA	2.585KM	SHIRORO
14	SARKIN PAWA	1.595KM	MUNYA
15	LAMBATA-NYELLA-BAJI	7.0KM	GURARA
16	MAIKUNKELE-JANGARU	6.9KM	BOSSO
	TOTAL	118.932	

2.1 OBJECTIVE

The objective of the assignment is to prepare an Environmental and Social Management Plan (ESMP) for spot improvement of 119km rural roads rehabilitation/construction.

2.2 SPECIFIC OBJECTIVES

- i. Identify sub-project activities that may have negative environmental and social impact on the environment and society.
- ii. Detail mitigation measures with relevant cost implication that will need to be achieved during and after sub-project implementation
- iii. Specify responsibilities and institutional arrangement that will be put in place to ensure that the mitigation measures are implemented, and
- iv. Provide implementation and monitoring schedule.

2.0 SCOPE OF WORK

The objective of the consulting services is to prepare an environmental and social management plans (ESMPs) for the proposed construction at the priority sites itemized above. The ESMP should consist of a well-documented set of mitigation measures, monitoring, and institutional actions to be taken before and during implementation to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels. It should also include the measures required to implement these actions, addressing the adequacy of the monitoring and institutional arrangements at upstream and downstream in the intervention site.

The consultant is expected to work in close collaboration with the engineering design consultants and RAMP 2 Project Implementation Unit (PIU) safeguard team, and with other actors and consultants as directed by the PIU. The consultant will obtain a copy of the Engineering design in order to take into account the technical variants of the proposed activities and also in return, inform the technical design consultants of any major constraint that may arise due to the social and environmental situation on the ground. The consultant will take into consideration the proposed civil engineering designs, vegetative land

management measures and other activities aimed at reducing or managing runoff that would be carried out within the sub-watershed. The consultant will assess natural resources and infrastructures potentially affected during project implementation and operation and select the management strategies needed to ensure that environmental and social risks are appropriately mitigated. The scope of work for the assignment is as follows:

- i. Review existing documentation of the RAMP 2 all relevant safeguards documents and the PAD, PIM, and ESMPs prepared for the project;
- ii. Review Environmental Assessment procedures of the World Bank safeguards policies especially Environmental Assessment (OP 4.01);
- iii. Align the ESMP with the design of the roads so as to ensure that there are no discrepancies between the technical specifications of the work to be implemented and the ones used for the development of the ESMP according to the width (6m) along the entire length of the road.
- iv. To review the existing Federal and State and Environmental laws/legal framework.
- v. Environmental and Social Baseline: Describe and evaluate the current/existing status of the environmental and social situation
- vi. Assess the potential environmental and social impacts related to project activities
- vii. Determine the mitigation measures that will need to be taken and the procedures during pre-construction, construction, operation and maintenance phases.
- viii. Define the institutional arrangements for implementing activities to mitigate adverse Environmental and Social impacts, suppressing or reducing them to acceptable level
- ix. Identify responsibilities and actors for the implementation of proposed mitigation measures.
- x. Assess the capacity available to implement the proposed mitigation measures, and suggest recommendation in terms of training and capacity building, and estimate their costs.
- xi. Development of an Environmental and Social Management Plan (ESMP) with indicative cost for implementation and sources of funding

The ESMP should capture:

- a. The potential environmental and social impacts resulting from project activities
- b. The proposed mitigation measures;
- c. The institutional responsibilities for implementation;
- d. The monitoring indicators;
- e. The institutional responsibilities for monitoring and implementation of mitigation measures;
- f. The costs of activities; and
- g. A calendar for implementation.
- h. Public consultations: The ESMP results and the proposed mitigation measures will be discussed with relevant stakeholders, NGOs, local administration and other organizations mainly involved by the project activities. Recommendations from this public consultation will be include in the final ESMP report.
- i. Grievance Redress Mechanisms
- j. ESMP Disclosures
- k. Summary and Recommendations

3.0 DELIVERABLES

The following table shows the proposed report schedule and deliverables:

Activity	Schedule Report	No of Hard Copies	No of electronic copies
Contract Signing	Week 25th September, 2018	5	
Inception Report	One(1) Week after Contract Signing	5	1
Draft Report	Two(2)Weeksafter Inception report	5	1
Draft Final Report	One (1) Week after Draft report	5	1
Final Report	One (1) Week after Draft Final report	5	1

5.0 RESPONSIBILITIES OF THE SPIU

In addition to the supervision and other responsibilities needed for the success of the assignment, the SPIU shall provide the Safeguards Officer with the following documents:

- Project Implementation Manual (PIM)
- The existing ESMP prepared for Niger State phase 1 Roads.
- All information collected in the past as well as road design.

QUALIFICATION AND EXPERIENCE OF THE CONSULTANT

- The requisite qualifications of the Environmental and Social Safeguards Consultant shall include the following: The consultant should possess a Bachelor degree (BSc) and Master's Degree (MSc) qualification in Social Sciences, Environmental Science, Environmental Management, Environmental Economics, Environmental Engineering or related field
- At least 5 years practical experience in safeguards assessment, planning and conducting of Environmental and social issues;
- Provide adequate knowledge of World Bank Safeguards Policies.
- Possession of relevant professional qualifications in Social/Environmental issues and evidence of similar jobs undertaken will be an added advantage
- Good communication skills ability to work under pressure and in a multi-skilled setting;

7.0 DURATION

The assignment is to be carried out within a period of five (5) weeks from the date of signing the contract agreement.

Appendix 2: Summary of the triggered World Bank Environmental and Social Safeguard Policies

Environmental Assessment OP/BP 4.01

This outlines Bank policy and procedure for the environmental assessment of Bank lending operations. The Bank undertakes environmental screening of each proposed project to determine the appropriate extent and type of EA process. The project is categorized as a category B and OP 4.01 is triggered because the proposed project is essentially a civil engineering work entailing rehabilitation and spot improvement of existing rural roads. As such, some project activities such as site clearing, grading, excavation, concrete works etc. may trigger some minor environmental and social impacts. This ESMP has been prepared to address the triggered policies.

Natural Habitats OP/BP 4.04

Some of the activities of the road rehabilitation project especially site clearing may lead to vegetation clearing along road corridors. This may have impacts on the natural habitats thereby triggering OP4.04. In order to mitigate such as adverse impacts, this ESMP contains sections detailing the mitigation measures for eliminating or minimizing potential negative impacts on natural habitats.

Appendix 3: Socio-Economic Assessment Instrument (FGD/KII Interview)

1. Are you aware of the proposed road construction project?.....
2. Who will be the major beneficiaries of the road construction project?.....
3. What are the major farm produce in this area?
4. How has the existing condition of the road affected you in this area?.....
5. What is the current transport cost to the closest market (with or without goods)?
.....
6. Will the new road reduce the cost of transportation?.....
7. Do you have any agro-storage facilities in this area?.....
8. Do you have any agro-processing centres in this area?.....
9. What is the name of the nearest market for your farm produce?.....
10. What is your perception on the proposed road project?.....
11. What are your expectations about the project?.....
12. What are your concerns about the proposed project?.....
13. What are the sources of water for domestic use?.....
14. What are the sources of energy for Lighting?(a).....
(b) Cooking.....
15. How do you manage your household waste?.....
16. Where do you defecate?.....
17. What are the social amenities and infrastructures in the community.....
18. Where do your children go to school and distance of the school to the
community?.....
19. What are the prevalence diseases in the community.....
20. Where do you go for treatment and why?.....

Appendix 4: Attendance at Public Consultation

EMIGIMANZHI (GSAKO LGA) 12/01/19

NIGER STATE RURAL ACCESS AND MOBILITY PROJECT (NGRAMP-2)
ESMP of the 104km Spot Road Improvement: Attendance Record/List of Contacts

S/N	NAME	SEX	COMMUNITY	PHONE	SIGN
1	Muhammadu Taluadi	M	Emigimanzhi	08068644846	
2	Alhaji Isah Zubairu	M	"	08179524746	
3	Alhaji Ibrahim Maigari	M	"	08168785376	
4	Alfa A Usman	M	"	08135717532	
5	Alhaji Usman Emigi	M	"	08069772094	
6	Alhaji Ibrahim	M	"	07067796320	
7	Alhaji Muhammadu	M	"	07062289086	
8	Alhaji Isah	M	"		
9	Ibrahim Muhammadu	M	"	08169868258	
10	Salihu Baba	M	"	07035876812	
11	Alhassan Alfa	M	"	08069778094	

GANGARE SAGI 11/01/19

NIGER STATE RURAL ACCESS AND MOBILITY PROJECT (NGRAMP-2)
ESMP of the 104km Spot Road Improvement: Attendance Record/List of Contacts

S/N	NAME	SEX	COMMUNITY	PHONE	SIGN
1	Mr Andrew Kwendo	M	Gangare Sagi	08054044765	
2	Joshua Dazi	M	"	08070634285	
3	Timothy Tadi	M	"		
4	Ayuba Andrew	M	"	09051727740	
5	Ishaya John	M	"		
6	Koko Isreal	M	"	07068910655	
7	John Mathew	M	"	07067426436	
8	Nashon Dan Baba	M	"	05162094185	
9	Domnic Sani	M	"	09854079947	
10	Bulus Andrew	M	"	08054044765	
11	Rebecca Andrew	F	"		
12	Hannatu Micheal	F	"		

MAKERA-BEJI (NUSSHISHI LGA) 12/01/19

NIGER STATE RURAL ACCESS AND MOBILITY PROJECT (NGRAMP-2)
ESMP of the 104km Spot Road Improvement: Attendance Record/List of Contacts

S/N	NAME	SEX	COMMUNITY	PHONE	SIGN
1	Jibrin Usman	M	Makera	09036674240	
2	Abubakar Isah	M	"	09066001501	
3	Usman Muhammed Makera	M	"		
4	Ndako Aliya Usman	M	"	08149287861	
5	Danlamin Isah	M	"	08132911895	
6	Aliyu Isah	M	"		
7	Umaru Jibrin	M	"		
8	Alhaji Isah	M	"		
9	Alhaji Shaba	M	"		
10	Shehu Usman	M	"	09033836514	
11	Garba Saba	M	"		
12	Abdullahi Isah	M	"	08108622185	
13	Muhammed Usman				
14	Muhammed Yahaya			09037440248	
15	Muhammed Ndatsu				
16	Aliyu Mohammed			0903417603	
17	Muhammed Mohammed	M		09068672228	
18	Abdullahi Shaba				
19	Baba Jibrin			08104891077	
20	Salihu Ali Ndagi			07060543688	
21	Isyaka Jibrin			08169263616	
22	Abubakar Jibrin				
23	Muhammed Jibrin				
24	Ahmadu Saba				
25	Babe Aliyu				
26	Muhammed Abubakar				
27	Alhaji Bida				
28	Mairi				
29	Abdullahi Jibrin				
30	Muhammed Saba				

15ETO (WATA) - Gyengy 11/01/19

NIGER STATE RURAL ACCESS AND MOBILITY PROJECT (NGRAMP-2)
ESMP of the 104km Spot Road Improvement: Attendance Record/List of Contacts

S/N	NAME	SEX	COMMUNITY	PHONE	SIGN
1	Fatima Abdulmalik	F	Gyengy		
2	Fauida Hussaini	W	"		
3	Hannatu Yunusa	W	"		
4	Rabi Yusuf	W	"		
5	Salamatu Hassan	W	"		
6	Jummai Shehu	W	"		
7	Binta Yunusa	W	"		
8	Rabangida Abdulmalik-Male	W	"		

NAPANIKUCHI VILLAGE 11/01/19

NIGER STATE RURAL ACCESS AND MOBILITY PROJECT (NGRAMP-2)
ESMP of the 104km Spot Road Improvement: Attendance Record/List of Contacts

S/N	NAME	SEX	COMMUNITY	PHONE	SIGN
1	Athayi Yusuf	M	Napanikuchi	0818227443	
2	Mallam Yaku bu	W	"	07051242556	
3	Nuhu Shehu	W	"	0909851554	
4	Salah Danjuma	W	"	08177608975	
5	Sadiq Sami	W	"	"	
6	Hassan Yusuf	W	"	68162817367	
7	Abubakar Yusuf	W	"	68881697445	
8	Yakubu Sabo	W	"	09064152960	
9	Faruq Abubakar	W	"	0811122610	
10	Naziru Mohammed	W	"	08148811470	
11	Gambo Yusuf	W	"	09080180710	
12	Abdullahi Mayaki	W	"	08189248873	
13	Sayedee Abdullahi	W	"	68078439450	
14	Musa Yusuf	W	"	07062093274	
15	Mohammed Yusuf	W	"	08069768247	
16	Nasiru Yakubu	W	"	09081421502	
17	Adamu pada	W	"	09023144539	
18	Yauza Mohammed	W	"	08074666338	
19	Faiza Mohammed	Female	"	68187292727	
20	Garba Mayaki	M	"	07081865459	
21	Haruna Bello	W	"	09064448854	
22	Hadiqa Yusuf	F	"	08162028051	
23	Rahmatu Mai Angua	W	"		
24	Aisha Hussaini	W	"	08077296915	
25	Lamin Ibrahim	W	"		
26	Nafisa Yusuf	W	"		
27	Nafiu Yusuf	Male	"	09082461120	
28	Mudancir Mohammed	W	"	07051487112	
29	Ibrahim Yahaya	W	"	08036922778	

Appendix 5: General environmental management conditions for construction contracts

General

1. In addition to these general conditions, the Contractor shall comply with any specific Environmental Management Plan (EMP) or Environmental and Social Management Plan (ESMP) for the works he is responsible for. The Contractor shall inform himself about such an EMP, and prepare his work strategy and plan to fully take into account relevant provisions of that EMP. If the Contractor fails to implement the approved EMP after written instruction by the Supervising Engineer (SE) to fulfil his obligation within the requested time, the Owner reserves the right to arrange through the SE for execution of the missing action by a third party on account of the Contractor.

2. Notwithstanding the Contractor's obligation under the above clause, the Contractor shall implement all measures necessary to avoid undesirable adverse environmental and social impacts wherever possible, restore work sites to acceptable standards, and abide by any environmental performance requirements specified in an EMP. In general these measures shall include but not be limited to:

(a) Minimize the effect of dust on the surrounding environment resulting from earth mixing sites, asphalt mixing sites, dispersing coal ashes, vibrating equipment, temporary access roads, etc. to ensure safety, health and the protection of workers and communities living in the vicinity dust producing activities.

(b) Ensure that noise levels emanating from machinery, vehicles and noisy construction activities (e.g. excavation, blasting) are kept at a minimum for the safety, health and protection of workers within the vicinity of high noise levels and nearby communities.

(c) Ensure that existing water flow regimes in rivers, streams and other natural or irrigation channels is maintained and/or re-established where they are disrupted due to works being carried out.

(d) Prevent bitumen, oils, lubricants and waste water used or produced during the execution of works from entering into rivers, streams, irrigation channels and other natural water bodies/reservoirs, and also ensure that stagnant water in uncovered borrow pits is treated in the best way to avoid creating possible breeding grounds for mosquitoes.

(e) Prevent and minimize the impacts of quarrying, earth borrowing, piling and building of temporary construction camps and access roads on the biophysical environment including protected areas and arable lands; local communities and their settlements. In as much as possible restore/rehabilitate all sites to acceptable standards.

(f) Upon discovery of ancient heritage, relics or anything that might or believed to be of archaeological or historical importance during the execution of works, immediately report such findings to the SE so that the appropriate authorities may be expeditiously contacted for fulfilment of the measures aimed at protecting such historical or archaeological resources.

(g) Discourage construction workers from engaging in the exploitation of natural resources such as hunting, fishing, collection of forest products or any other activity that might have a negative impact on the social and economic welfare of the local communities.

(h) Implement soil erosion control measures in order to avoid surface run off and prevents siltation, etc. (i) Ensure that garbage, sanitation and drinking water facilities are provided in construction workers camps.

(j) Ensure that, in as much as possible, local materials are used to avoid importation of foreign material and long distance transportation.

(k) Ensure public safety, and meet traffic safety requirements for the operation of work to avoid accidents.

3. The Contractor shall indicate the period within which he/she shall maintain status on site after completion of civil works to ensure that significant adverse impacts arising from such works have been appropriately addressed.

4. The Contractor shall adhere to the proposed activity implementation schedule and the monitoring plan / strategy to ensure effective feedback of monitoring information to project management so that impact management can be implemented properly, and if necessary, adapt to changing and unforeseen conditions.

5. Besides the regular inspection of the sites by the SE for adherence to the contract conditions and specifications, the Owner may appoint an Inspector to oversee the compliance with these environmental conditions and any proposed mitigation measures. State environmental authorities may carry out similar inspection duties. In all cases, as directed by the SE, the Contractor shall comply with directives from such inspectors to implement measures required to ensure the adequacy rehabilitation measures carried out on the bio-physical environment and compensation for socio-economic disruption resulting from implementation of any works.

Worksite/Campsite Waste Management

6. All vessels (drums, containers, bags, etc.) containing oil/fuel/surfacing materials and other hazardous chemicals shall be banded in order to contain spillage. All waste containers, litter and any other waste generated during the construction shall be collected and disposed off at designated disposal sites in line with applicable government waste management regulations.

7. All drainage and effluent from storage areas, workshops and camp sites shall be captured and treated before being discharged into the drainage system in line with applicable government water pollution control regulations.

8. Used oil from maintenance shall be collected and disposed off appropriately at designated sites or be re-used or sold for re-use locally.

9. Entry of runoff to the site shall be restricted by constructing diversion channels or holding structures such as banks, drains, dams, etc. to reduce the potential of soil erosion and water pollution.

10. Construction waste shall not be left in stockpiles along the road, but removed and reused or disposed of on a daily basis.

11. If disposal sites for clean spoil are necessary, they shall be located in areas, approved by the SE, of low land use value and where they will not result in material being easily washed into drainage channels. Whenever possible, spoil materials should be placed in low-lying areas and should be compacted and planted with species indigenous to the locality.

Material Excavation and Deposit

12. The Contractor shall obtain appropriate licenses/permits from relevant authorities to operate quarries or borrow areas.

13. The location of quarries and borrow areas shall be subject to approval by relevant local and national authorities, including traditional authorities if the land on which the quarry or borrow areas fall in traditional land.

14. New extraction sites:

- a) Shall not be located in the vicinity of settlement areas, cultural sites, wetlands or any other valued ecosystem component, or on high or steep ground or in areas of high scenic value, and shall not be located less than 1km from such areas.
- b) Shall not be located adjacent to stream channels wherever possible to avoid siltation of river channels. Where they are located near water sources, borrow pits and perimeter drains shall surround quarry sites.
- c) Shall not be located in archaeological areas. Excavations in the vicinity of such areas shall proceed with great care and shall be done in the presence of government authorities having a mandate for their protection.
- d) Shall not be located in forest reserves. However, where there are no other alternatives, permission shall be obtained from the appropriate authorities and an environmental impact study shall be conducted.
- e) Shall be easily rehabilitated. Areas with minimal vegetation cover such as flat and bare ground, or areas covered with grass only or covered with shrubs less than 1.5m in height, are preferred.
- f) Shall have clearly demarcated and marked boundaries to minimize vegetation clearing.

15. Vegetation clearing shall be restricted to the area required for safe operation of construction work. Vegetation clearing shall not be done more than two months in advance of operations.

16. Stockpile areas shall be located in areas where trees can act as buffers to prevent dust pollution. Perimeter drains shall be built around stockpile areas. Sediment and other pollutant traps shall be located at drainage exits from workings.

17. The Contractor shall deposit any excess material in accordance with the principles of the general conditions, and any applicable EMP, in areas approved by local authorities and/or the SE.

18. Areas for depositing hazardous materials such as contaminated liquid and solid materials shall be approved by the SE and appropriate local and/or national authorities before the commencement of work. Use of existing, approved sites shall be preferred over the establishment of new sites.

Rehabilitation and Soil Erosion Prevention

19. To the extent practicable, the Contractor shall rehabilitate the site progressively so that the rate of rehabilitation is similar to the rate of construction.

20. Always remove and retain topsoil for subsequent rehabilitation. Soils shall not be stripped when they are wet as this can lead to soil compaction and loss of structure.

21. Topsoil shall not be stored in large heaps. Low mounds of no more than 1 to 2m high are recommended.

22. Re-vegetate stockpiles to protect the soil from erosion, discourage weeds and maintain an active population of beneficial soil microbes.

23. Locate stockpiles where they will not be disturbed by future construction activities.

24. To the extent practicable, reinstate natural drainage patterns where they have been altered or impaired.

25. Remove toxic materials and dispose of them in designated sites. Backfill excavated areas with soils or overburden that is free of foreign material that could pollute groundwater and soil.

26. Identify potentially toxic overburden and screen with suitable material to prevent mobilization of toxins.

27. Ensure reshaped land is formed so as to be inherently stable, adequately drained and suitable for the desired long-term land use, and allow natural regeneration of vegetation.

28. Minimize the long-term visual impact by creating landforms that are compatible with the adjacent landscape.

29. Minimize erosion by wind and water both during and after the process of reinstatement.

30. Compacted surfaces shall be deep ripped to relieve compaction unless subsurface conditions dictate otherwise.

31. Revegetate with plant species that will control erosion, provide vegetative diversity and, through succession, contribute to a resilient ecosystem. The choice of plant species for rehabilitation shall be done in consultation with local research institutions, forest department and the local people.

Water Resources Management

32. The Contractor shall at all costs avoid conflicting with water demands of local communities.

33. Abstraction of both surface and underground water shall only be done with the consultation of the local community and after obtaining a permit from the relevant Water Authority.

34. Abstraction of water from wetlands shall be avoided. Where necessary, authority has to be obtained from relevant authorities.

35. Temporary damming of streams and rivers shall be done in such a way avoids disrupting water supplies to communities down stream, and maintains the ecological balance of the river system.

36. No construction water containing spoils or site effluent, especially cement and oil, shall be allowed to flow into natural water drainage courses.

37. Wash water from washing out of equipment shall not be discharged into water courses or road drains.

38. Site spoils and temporary stockpiles shall be located away from the drainage system, and surface run off shall be directed away from stockpiles to prevent erosion.

Traffic Management

39. Location of access roads/detours shall be done in consultation with the local community especially in important or sensitive environments. Access roads shall not traverse wetland areas.

40. Upon the completion of civil works, all access roads shall be ripped and rehabilitated.

41. Access roads shall be sprinkled with water at least five times a day in settled areas, and three times in unsettled areas, to suppress dust emissions.

Blasting

42. Blasting activities shall not take place less than 2km from settlement areas, cultural sites, or wetlands without the permission of the SE.

43. Blasting activities shall be done during working hours, and local communities shall be consulted on the proposed blasting times.

44. Noise levels reaching the communities from blasting activities shall not exceed 90 decibels.

Disposal of Unusable Elements

45. Unusable materials and construction elements such as electro-mechanical equipment, pipes, accessories and demolished structures will be disposed of in a manner approved by the SE. The Contractor has to agree with the SE which elements are to be surrendered to the Client's premises, which will be recycled or reused, and which will be disposed of at approved landfill sites.

46. As far as possible, abandoned pipelines shall remain in place. Where for any reason no alternative alignment for the new pipeline is possible, the old pipes shall be safely removed and stored at a safe place to be agreed upon with the SE and the local authorities concerned.

47. AC-pipes as well as broken parts thereof have to be treated as hazardous material and disposed of as specified above.

48. Unsuitable and demolished elements shall be dismantled to a size fitting on ordinary trucks for transport.

Health and Safety

49. In advance of the construction work, the Contractor shall mount an awareness and hygiene campaign. Workers and local residents shall be sensitized on health risks particularly of AIDS.

50. Adequate road signs to warn pedestrians and motorists of construction activities, diversions, etc. shall be provided at appropriate points.

51. Construction vehicles shall not exceed maximum speed limit of 40km per hour.

Repair of Private Property

52. Should the Contractor, deliberately or accidentally, damage private property, he shall repair the property to the owner's satisfaction and at his own cost. For each repair, the Contractor shall obtain from the owner a certificate that the damage has been made good satisfactorily in order to indemnify the Client from subsequent claims.

53. In cases where compensation for inconveniences, damage of crops etc. are claimed by the owner, the Client has to be informed by the Contractor through the SE. This compensation is in general settled under the responsibility of the Client before signing the Contract. In unforeseeable cases, the respective administrative entities of the Client will take care of compensation.

Contractor's Environment, Health and Safety Management Plan (EHS-MP)

54. Within 6 weeks of signing the Contract, the Contractor shall prepare an EHS-MP to ensure the adequate management of the health, safety, environmental and social aspects of the works, including implementation of the requirements of these general conditions and any specific requirements of an EMP for the works. The Contractor's EHS-MP will serve two main purposes:

- For the Contractor, for internal purposes, to ensure that all measures are in place for adequate EHS management, and as an operational manual for his staff.
- For the Client, supported where necessary by a SE, to ensure that the Contractor is fully prepared for the adequate management of the EHS aspects of the project, and as a basis for monitoring of the Contractor's EHS performance.

55. The Contractor's EHS-MP shall provide at least:

- a description of procedures and methods for complying with these general environmental management conditions, and any specific conditions specified in an EMP;
- a description of specific mitigation measures that will be implemented in order to minimize adverse impacts;
- a description of all planned monitoring activities (e.g. sediment discharges from borrow areas) and the reporting thereof; and
- the internal organizational, management and reporting mechanisms put in place for such.

56. The Contractor's EHS-MP will be reviewed and approved by the Client before start of the works. This review should demonstrate if the Contractor's EHS-MP covers all of the identified impacts, and has defined appropriate measures to counteract any potential impacts.

EHS Reporting

57. The Contractor shall prepare bi-weekly progress reports to the SE on compliance with these general conditions, the project EMP if any, and his own EHS-MP. An example format for a Contractor EHS report is portrayed below. It is expected that the Contractor's reports will include information on:

- EHS management actions/measures taken, including approvals sought from local or national authorities;
- Problems encountered in relation to EHS aspects (incidents, including delays, cost consequences, etc. as a result thereof);
- Lack of compliance with contract requirements on the part of the Contractor;
- Changes of assumptions, conditions, measures, designs and actual works in relation to EHS aspects; and
- Observations, concerns raised and/or decisions taken with regard to EHS management during site meetings.

58. It is advisable that reporting of significant EHS incidents be done "as soon as practicable". Such incident reporting shall therefore be done individually. Also, it is advisable that the Contractor keep his own records on health, safety and welfare of persons, and damage to property. It is advisable to include such records, as well as copies of incident reports, as appendices to the bi-weekly reports. A sample format for an incident notification is shown below. Details of EHS performance will be reported to the Client through the SE's reports to the Client.

Training of Contractor’s Personnel

59. The Contractor shall provide sufficient training to his own personnel to ensure that they are all aware of the relevant aspects of these general conditions, any project EMP, and his own EHS-MP, and are able to fulfil their expected roles and functions. Specific training should be provided to those employees that have particular responsibilities associated with the implementation of the EHS-MP. General topics should be:

- EHS in general (working procedures);
- emergency procedures; and
- social and cultural aspects (awareness raising on social issues).

Cost of Compliance

60. It is expected that compliance with these conditions is already part of standard good workmanship and state of art as generally required under this Contract. The item “Compliance with Environmental Management Conditions” in the Bill of Quantities covers this cost. No other payments will be made to the Contractor for compliance with any request to avoid and/or mitigate an avoidable EHS impact.

3. Example Format: EHS Report

Contract:

Period of reporting:

EHS management actions/measures:

Summarize EHS management actions/measures taken during period of reporting, including planning and management activities (e.g. risk and impact assessments), EHS training, specific design and work measures taken, etc.

EHS incidents:

Report on any problems encountered in relation to EHS aspects, including its consequences (delays, costs) and corrective measures taken. Include relevant incident reports.

EHS compliance:

Report on compliance with Contract EHS conditions, including any cases of non-compliance.

Changes:

Report on any changes of assumptions, conditions, measures, designs and actual works in relation to EHS aspects.

Concerns and observations:

Report on any observations, concerns raised and/or decisions taken with regard to EHS management during site meetings and visits.

Signature (Name, Title Date):

Contractor Representative

4. Example Format: EHS Incident Notification

EHS Incident Notification

Provide within 24 hrs to the Supervising Engineer

Originators Reference No:.....

Date of Incident:..... **Time:**.....

Location of incident:.....

Name of Person(s) involved:.....

Employing Company:.....

Type of Incident:.....

Description of Incident:

Where, when, what, how, who, operation in progress at the time (only factual)

Immediate Action:

Immediate remedial action and actions taken to prevent reoccurrence or escalation

Signature (Name, Title, Date):.....

Contractor Representative

Appendix 6: Waste Management Plan

S/N	Potential Source	Waste Type	Waste Streams	Management	Cost
A PRECONSTRUCTION					
1	Movement of vehicles on unpaved surface and engine exhaust	Emission	COx, SOx, NOx, CO, Dust	Use water suppression to prevent dust emission Maintain vehicles and machineries to reduce emission Maintain low speed to reduce dust and gaseous emission Allow aerial dispersal over a large area.	N600,000 Mitigation (N400,000)
2	Site Clearing and Installation of temporary workers camp and offices and workshops	Non-Hazardous	<ul style="list-style-type: none"> Vegetal Waste Industrial Waste: Metal scraps, packaging waste 	Vegetal waste shall be supplied to farmers for use as compost. Woody vegetal shall be supplied to host communities for domestic uses including as fuel wood for cooking. Segregated and stored on site to be collected at least once a week for reuse or recycle through licensed third party facilities.	Monitoring (N200,000)
3	Workers' camp	Domestic and Sanitary	<ul style="list-style-type: none"> Food remnant, kitchen wastes. Food packaging etc Domestic Sewage 	To be transferred to locals for use as compost and animal feed. Plastic and other packaging to be recycled through licensed recycling third parties. Temporary stored and transferred to licensed carrier for disposal	
B CONSTRUCTION					
1	Movement of vehicles on unpaved surface and engine exhaust	Emission	COx, SOx, NOx, CO, Dust	See A1	See A
2	Civil works Workers' camp/offices	Non-Hazardous /Industrial	<ul style="list-style-type: none"> Spoils Waste Packaging and Dunnage such as scrap wood, scrap metal, steel, glass, plastic, paper and cardboard, empty metal containers, excess concrete, broken equipment, or components Domestic-type waste: wastepaper and food scraps, metal cans 	Reuse spoils as fill materials as much as possible Segregated and kept securely in closed containers on site. To be transferred to approved recycling third parties for reuse/recycling. Non-recyclables to be removed by approved waste contractor for onward disposal at approved sites. To be transferred to locals for use as compost and animal feed. Plastic and other packaging to be recycled through licensed recycling third parties.	
3	Civil Works	Hazardous Waste	Solid Wastes: used batteries, chemical containers, concrete etc	Store on site in closed containers with secondary containment and transferred to a registered waste contractor with off-site permitted hazardous waste treatment, storage, or disposal facilities	
			Liquid Waste: spent lubricating oils, hydraulic fluids, brake fluids, battery electrolyte, and dielectric fluids, chemical cleaning agents, paints, primers, thinners, and corrosion control coatings; sealants and adhesives etc		
	Civil works	Waste Water	Waste water from equipment washing and concrete production	Discharged to the ground as only very small quantity is envisaged at this stage.	
4	Workers' camp	Domestic and Sanitary	<ul style="list-style-type: none"> Food remnant, kitchen wastes. Food packaging etc Domestic Sewage 	See A3	
C OPERATION					
1	Movement of vehicles	Emission	COx, SOx, NOx, CO, Dust	See A1	See A

2	Maintenance of bridge and other infrastructures Workers' camp/offices	Non-Hazardous /Industrial	<ul style="list-style-type: none"> Packaging waste, scrap metals, plastic, paper and cardboard, empty metal containers, broken equipment, or components Domestic-type waste: wastepaper and food scraps, metal cans 	<p>Segregated and kept securely in closed containers on site. To be transferred to approved recycling third parties for reuse/recycling.</p> <p>Non-recyclables to be removed by approved waste contractor for onward disposal at approved sites.</p> <p>To be transferred to locals for use as compost and animal feed. Plastic and other packaging to be recycled through licensed recycling third parties.</p>	
3	Maintenance of bridge and other infrastructures	Hazardous	Same as B3 but smaller quantity may be expected.	See B3	
	Total Cost				N600,000

Appendix 7: Project Occupational Health and Safety (OHS) Plan

PROJECT OCCUPATIONAL HEALTH AND SAFETY (OHS) PLAN

INTRODUCTION

Every project poses its HSE risks including the Niger 2 RAMP. This plan was necessitated to meet up with OHS standards and to achieve the objectives set for the proposed project. The OHS will be applicable to the entire Niger-2 project phases and has been allotted a budget of **N300,000** in the ESMP implementation budget. The project team shall undertake to ensure high performance standards and conformity with contract requirements by managing the works in a systematic and thorough manner.

Key components of the OHS plan	Description
Competency	All personnel required to operate or work with any equipment or machine must be tested for each equipment he/ she must be operating. All personnel who as part of their profession require licensing or certification must obtain the necessary certification before he/she shall be allowed to work on the site.
Fitness	All personnel working on site shall be required to be certified medically fit to do so by an approved medical facility or Medical Doctor (pre-employment medical examination)
HSE Training : Induction/ Orientation	<p>Every new or rehire employee and subcontractors employees must undergo mandatory OHS orientation/ induction. The purpose of the induction is to educate workers and make them aware of the major potential hazards he or she shall come into contact with while working on the site; also, it is one more opportunity to stress the importance of HSE being the first priority in the operation. The content of the HSE orientation/ induction shall cover the following subjects:</p> <ul style="list-style-type: none"> Site safety rules Personnel protective equipment requirements (PPE) Environmental sensitivity and protection Preparation and planning of the job (Daily Pre-tasks talk) Emergency plan and muster points.
Project specific training	<p>In addition to the HSE orientation/induction, there shall be specific HSE trainings which shall cover the following topics</p> <ul style="list-style-type: none"> Manual handling Electrical safety Emergency prevention, preparedness and response Work at height training First Aid training (for site First Aiders) Lifting and rigging Safe driving techniques (for drivers)

Hazard identification & HSE risk assessment	The project HSE risk assessment shall be developed and recorded. The project's HSE risk assessment shall be conducted by a team consisting of the HSE Manager/ Supervisor and technical managers/ supervisors. It must be approved by the project manager.
Fire Risk Assessment	A fire risk assessment shall be developed and recorded. A fire safety plan shall be in place in the site
Job Hazard Analysis	Job hazard analysis is required when the hazards and risks associated with a specific task is to be identified so as to implement control measures. The HSE department together with the technical managers/supervisors shall develop a job hazard analysis when applicable
Emergency Preparedness And Response	Emergency procedures and evacuation plan shall be developed by the HSE Department and displayed on the notice board. These procedures shall be communicated to all staff. Also each section/department shall have at least a trained first aider at all times.
HSE IMPLEMENTATION AND PERFORMANCE MONITORING	
HSE Meetings	HSE management meetings shall be held once a month. The meeting is to help identify safety problems, develop solutions, review incident reports, provide training and evaluate the effectiveness of our safety program. Some of the meetings shall be: <ul style="list-style-type: none"> • Project/Site Management HSE Meeting for management and supervision (Monthly). • Tool box talk meetings for all workforce (Weekly). • Pre-task briefing for all workforces (Daily). Special situation meeting (As required).
HSE Reporting	All incidents and illnesses must be reported to site supervisor after which investigation shall commence and recorded so that appropriate corrective actions shall be implemented to prevent any re-occurrence and report findings shall be forwarded to management for review. Reporting requirements shall include notification of incident, investigation report, and monthly report. Notification of Incident form shall be developed which shall be filled and submitted to HSE department for investigation.
HSE Inspection and Audits	For continual improvement of HSE management system, HSE inspection and audit shall be conducted. An inspection checklist shall be developed. This is to ensure that the HSE management system is being adhered to. The inspection shall be conducted by the HSE department together with site management.
Corrective and Preventive Actions and Non Conformities	During the course of inspections, concerns raised shall be addressed and closed out. It is expected that in a period of two weeks, a close out inspection shall take place to verify that the corrective actions have been closed.
Project HSE Rules	The project HSE rules shall be developed and supervision shall develop specific rules and procedures when necessary. The following site rules shall be implemented at all times. The Site Manager shall draw these rules to the attention of their own workmen or staff. All sub-contractors must ensure that these rules are drawn to the attention of their workmen and staff. The Principal Contractor may implement additional site rules during the contract programme. Any such additional rules shall be notified to all personnel engaged on the project prior to their implementation. The HSE rules shall include but not limited to: <ol style="list-style-type: none"> 1. Personal Protective Equipment must be worn at all times. 2. All instructions issued by the Site Manager regarding the storage, handling or cleaning of materials, plant and equipment must be followed. 3. All vehicles must be parked in the designated areas. 4. Any workman suffering from a medical condition that might affect his work and/or that could require specific Medical treatment must inform the supervisor before commencing work.

	<ol style="list-style-type: none"> 5. All site tools shall either be battery operated or 110 volts. 6. No one shall be permitted on site if it is believed that they are under the influence of alcohol or drugs. 7. Vehicles must not reverse without a banksman in attendance. 8. All visitors to site must undergo a site-specific induction and operative Identity badges must be worn at all times. 9. All excavations must be secured. 10. Smoking and eating shall only be permitted in the designated area. This area shall be identified during induction. 11. No hot works operations are permitted without a hot work permit in place. 12. There shall be no radios or other music playing devices on site. 13. Good housekeeping practices to be adopted. 14. Compliance with all Ethical Power Permit to Work systems 15. The site keyed access procedure must be strictly adhered to. 16. All Contractors must comply with Site Health & Safety Guidelines / Site Safety Method Statement 17. No untrained worker shall be permitted to operate heavy machineries.
SAFE WORK PRACTICES	
Personal Protective Equipment (PPE)	<p>The basic PPE required for the project shall be Safety Glasses, Safety Boots, Hand Gloves, Hard Hat and Coverall. Any other PPE shall be used as applicable. Management is responsible for the provision of PPE and usage shall be enforced at all time.</p> <p>PPE shall be provided in circumstances where exposure to hazards cannot be avoided by other means or to supplement existing control measures identified by a risk assessment. An assessment shall be made to ensure that the PPE is suitable for purpose and is appropriate to the risk involved.</p> <p>Information, instruction & training shall be given to all employees on safe use, maintenance and storage of PPE.</p> <p>Employees shall, in accordance with instructions given, make full use of all PPE provided and maintain it in a serviceable condition and report its loss or defect immediately to the maintenance department where it shall be replaced.</p> <p>PPE shall be replaced when it is no longer serviceable and returned on a new for old basis. Employees shall sign to state that they have received PPE when issued.</p>
Welfare Facilities	<p>The provision of welfare facilities on the site shall be communicated to all operatives at site induction.</p> <p>A cleaning regime shall be implemented and maintained for the duration of the construction phase to ensure the site welfare facilities remain in a clean and tidy condition.</p> <p>If mains drinking water becomes unavailable during the construction phase bottled water shall be brought to site for all operatives for the necessary period.</p>
Signage	Adequate provision for warning and directional signs shall be made.
Project HSE Procedures	<p>OHS procedures shall be developed. Project activities shall generally be controlled in accordance with OHS Procedures. These procedures shall include:</p> <ul style="list-style-type: none"> • Lifting and Rigging Procedure • HSE Reporting Procedure • Working at Height Procedure. • Emergency Procedure.

Key roles	Responsibilities
Project manager	<ul style="list-style-type: none"> • Set good example in HSE issues. • Ensure the availability of resources essential to establish, implement, maintain and improve

	<p>the OHS Management System.</p> <ul style="list-style-type: none"> • Define, document and communicate roles, allocate responsibilities and accountabilities, delegating authorities, to facilitate effective OHS management. • Ensure that all of the activities undertaken in the Project conform to Nigerian legislation, client requirements or international standards when applicable. • Review objectives achievements throughout the year
Project supervisors	<ul style="list-style-type: none"> • Enforcing all phases of the established HSE plan. • Set good example in HSE issues. • Preparing Job Hazard Analysis when required. • Ensuring the safety of all workers associated with the site. • Conducting HSE inspections. • Ensuring workers are competent for their allocated tasks. • Attending and participating in HSE meetings. • Participating in accident investigations.
HSE Manager/ Supervisor	<ul style="list-style-type: none"> • Prepare relevant OHS documentation and procedures. • Monitor the efficient implementation of OHS requirements. • Participate and organize the OHS risk assessments. • Advise management of compliance and of conditions requiring attention. • Conduct regular HSE inspections. • Make thorough analysis of statistical data and inspections; delineates problem areas; and makes recommendation for solutions. • Take part in the review of all OHS incidents and assist in investigating incident. • Monitor the efficient implementation of the Project's OHS requirements. • Organize the Project's OHS risk assessment exercises. • Check on the use of all types of personal protective equipment specifies the use of appropriate PPE for the various work activities. Evaluates their effectiveness and suggests improvements where indicate
HSE Advisor	<ul style="list-style-type: none"> • Check on the use of all types of personal protective equipment specifies the use of appropriate PPE for the various work activities. Evaluates their effectiveness and suggests improvements. • Conduct independent inspections to observe conformance with established OHS Plan and determines the effectiveness of individual elements of the plan (pre-task briefing, weekly toolbox talk, etc) • Establish contact with Subcontractors with the objective of maintaining good relations and coordination of accident prevention activities and compliance with the established OHS plan. • Correct unsafe acts and unsafe conditions. • Deliver HSE induction/orientation course to all employees, including subcontractors. • Deliver HSE awareness course and toolbox talk. • Advise employees on OHS matters.
Employees	<ul style="list-style-type: none"> • Take all reasonable and practical steps to care for their own health and safety and avoid affecting the health and safety of co-workers and the general public. • Follow all instructions and use the equipment properly • Not interfere with any safety arrangements. • Report any circumstances which may not comply with the project's OHS management system.

Appendix 8: Traffic Management Plan

Name of Contractor:.....

Name of Traffic Manager:.....

Phone Number of Traffic Manager.....

<p>1.1 Description of the project activities: A detailed description of the activities of the road that warrant traffic management plan is captured under section 3.3 of the main report. These activities include vegetation clearing, excavation, construction of culverts, construction of earth drainage infrastructures, etc. These activities entail the use and movement of heavy duty machines and equipment in and out of the site, movement of workers and the public including hawkers, school children, farmers and women. These activities will occur during the 3 project phases:</p> <ol style="list-style-type: none"> i. Pre-Construction ii. Construction iii. Operation/maintenance 	<p>1.2 Justification of Traffic Management Plan Based on the activities enumerated in section 1.1 above, a traffic management plan is essential because it will help to ensure that traffic risk (traffic jam, accidents, injuries and death) associated with road users is avoided or minimized.</p> <p>1.3 Objectives of TMP The primary objectives of the TMP are to:</p> <ol style="list-style-type: none"> I. Protect site workers and the road users which includes the farmers, traders, school children, women and transporters from traffic hazards that may arise as a result of the construction work II. Manage potential adverse impact on traffic flow and ensure that pedestrian movement is maintained at an acceptable level III. Minimize adverse impact of the road construction work on the road users towards accessing their facilities
<p>1.4 Socioeconomic Infrastructures and volume of traffic Sensitive features of traffic consideration along the route of the 119km rural road in Niger state include rural farms, markets, schools and health centres. The baseline volume of traffic observed during the preparation of this ESM was 75-100 vehicular count per/day and is expected to increase to 200 counts per/day when the road condition is improved.</p>	
<p>1.5 Target stakeholders of TMP (Beneficiaries) The target stakeholders are the site workers who operate construction machineries and road users who will be impacted during the construction work as a result of temporal restriction on the access roads to their various facilities.</p>	
<p>1.6 Requirement for traffic control The following are required for effective traffic management:</p> <ol style="list-style-type: none"> i. Speed limit bump ii. Cones and barriers iii. Road caution tape iv. Reflective safety vest v. Diversion signs vi. Caution signage and Trained traffic control personnel 	
<p>1.7 Safety Precaution taken when using signage The contractor will ensure adherence to the following:</p> <ul style="list-style-type: none"> ➤ Check that signs cannot divert traffic into wrong or dangerous paths. ➤ Place signs correctly and safely. Exact locations shall be in accordance with the TMP and shall be agreed with the Road Authority two days before set up. ➤ All signs shall be placed at least 1m clear of traffic paths. ➤ Ensure that all signs are within drivers and/or users line of sight – not blocked by trees, grass, works vehicles, machinery or other obstructions. ➤ Do not allow any sign to obscure a driver/users view of another sign. 	

1.8 KEY RESPONSIBILITIES

Responsibility for coordination of traffic management plan is vested in the contractor’s traffic manager who shall report to the RAMP Social Safeguard Officer. Activities and responsibilities for TM are as stated below:

ACTIVITIES	RESPONSIBILITIES	ACTION PARTY	Cost
Installation of TM Equipment and mobilization of materials (signages, caution warning, speed limit, diversion barriers)	<ul style="list-style-type: none"> • Ensure that all signs are placed at least 1m clear of traffic paths. • Ensure that machinery, vehicles, stock piles of gravel, sand, or steel bars or any other materials are not stored inside the “safety buffer zone” at the work zone. • Ensure that the roadway is kept clear of sand, mud and gravel so as to minimise the risk of a vehicle skidding or sliding. 	Contractor	250,000
Traffic control services	<ul style="list-style-type: none"> • Ensure the presence of trained traffic personnel on the road during work hours • Traffic control personnel must wear reflective jackets and hand gloves 	Traffic manager	300,000
Monitoring of TM activities at all 3 phases of the project	<ul style="list-style-type: none"> • Check the availability of personnel and mitigation equipment • Check the availability of traffic control personnel during work time and their use of PPEs 	SSO	300,000

Note: cost of TMP has been embedded into the ESMP Table