ENUGU STATE SECOND RURAL ACCESS & MOBILITY PROJECT (RAMP-2)

Final

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

for

49.8km Community Based and Mechanized Road Maintenance of 5 Pilot Roads in Enugu State

August 2019
Table of Content

List of Figures ......................................................................................................................... iv
List of Tables .......................................................................................................................... 23
Acronyms and Abbreviations .................................................................................................. vii
Executive Summary ................................................................................................................ viii

CHAPTER ONE: Introduction ............................................................................................... 1
  1.0 Background ....................................................................................................................... 1
  1.1 Objectives/Purpose of the ESMP ..................................................................................... 1
  1.2 Rationale for the Study/ESMP ....................................................................................... 1
  1.3 Scope of ESMP ............................................................................................................... 2
  1.4 Methodology ................................................................................................................... 2
  1.4.1 Literature review ........................................................................................................ 2
  1.4.2 Review of Engineering Designs ................................................................................. 2
  1.4.3 Stakeholder Consultations ......................................................................................... 2
  1.4.4 Data Gathering/ Baseline Assessment ....................................................................... 2

CHAPTER TWO: DESCRIPTION OF PROJECT .................................................................. 3
  2.0 Project Description ......................................................................................................... 3

CHAPTER THREE: RELEVANT POLICIES, LEGAL AND ADMINISTRATIVE ................... 5

FRAMEWORK .................................................................................................................... 5
  3.1 Introduction .................................................................................................................... 5
  3.2 Policy and Legal Framework ........................................................................................ 5
  3.3 Administrative Framework .......................................................................................... 6
  3.3.1 Federal MDAs ........................................................................................................... 6
  3.3.2 State MDAs .............................................................................................................. 6
  3.4 Relevant International Treaties and Conventions on Environment ............................. 6
  3.5 International Treaties Relevant to Social Protection .................................................... 7
  3.6 Regional Treaties Relevant to GBV .............................................................................. 8
  3.7 National polices ............................................................................................................ 8
  3.8 World Bank Safeguard Policies .................................................................................... 8

CHAPTER FOUR: BASELINE ENVIRONMENTAL AND SOCIAL CONDITIONS ............. 10
  4.1 Overview of the Project Environment ......................................................................... 10
  4.2 Description of the Physical Environment .................................................................. 10
  4.3 Socioeconomic environment of Enugu State ............................................................... 11
  4.4 Baseline Conditions of Specific Project Locations ...................................................... 12
  4.5 Socioeconomic assessment of the Project Locations ................................................... 14
  4.5.1 Socio-economic Conditions ..................................................................................... 14
  4.6 Summary of Environmental & Social Baseline Conditions ...................................... 17

CHAPTER FIVE: DESCRIPTION OF ENVIRONMENTAL AND SOCIAL IMPACTS .......... 20
  5.1 Background ................................................................................................................... 20
  5.2.1 Physical Environmental & Social Media Influence .................................................. 20
  5.3 Project Activities of Environmental and Social Concern ............................................ 20
  5.4 Potential Positive Impacts ............................................................................................ 21

CHAPTER SIX: ENVIRONMENTAL AND SOCIAL MITIGATION AND MANAGEMENT PLAN ...................................................................................................................... 23
  6.0 Introduction .................................................................................................................... 23
  6.1 Mitigation/Action Plan .................................................................................................. 23
6.2 Additional Mitigation Measures for Social Impacts ................................................................. 57
6.2.1 Labour Influx .......................................................................................................................... 57
6.2.2 Gender Based Violence ............................................................................................................ 57
6.4 Capacity Building for Implementation of ESMP and Permit Conditions .................................... 58
6.5 Monitoring and Reporting .......................................................................................................... 58
6.5.1 Reporting Procedures ............................................................................................................. 59
6.5.2. Record Keeping and Control ................................................................................................. 59
6.6 Estimated Budget for ESMP Implementation ............................................................................... 61
6.7 ESMP Disclosures ...................................................................................................................... 61

CHAPTER SEVEN: GRIEVANCE REDRESS MECHANISM (GRM) .................................................. 62
7.0 Introduction ................................................................................................................................. 62
7.1 Grievance Redress Committee .................................................................................................. 62
7.2 Grievance Redress Process ....................................................................................................... 62
7.3 Expectation When Grievances Arise .......................................................................................... 63
7.4 Grievance Log ............................................................................................................................ 64

CHAPTER EIGHT: STAKEHOLDER CONSULTATIONS ................................................................. 65
8.1 Introduction ................................................................................................................................. 65
8.2 Objectives of Consultation ......................................................................................................... 65
8.3 Stakeholder Consultation Strategy and Plan ............................................................................... 65
8.4 Stakeholders Consulted .............................................................................................................. 68
8.5 Outcome of Stakeholder Consultations carried out during ESMP Preparation ............................ 68

CHAPTER NINE: SUMMARY AND RECOMMENDATIONS ......................................................... 71
9.0 Summary & Recommendations ................................................................................................. 71
9.1 Summary ..................................................................................................................................... 71
9.2 Recommendations ..................................................................................................................... 71

References ........................................................................................................................................ 72
Annex 1 Terms of Reference ............................................................................................................ 73
Annex 2 Sample Questionnaire ......................................................................................................... 76
Annex 3 Sample Company Code of Conduct .................................................................................. 78
Annex 4 Summary of World Bank Environmental and Social Safeguard Policies triggered by ramp2 .... 84
Annex 5 General Environmental Management Conditions for Maintenance/Maintenance Contracts 85
Annex 6 Consultation Meetings ....................................................................................................... 92
Annex 7 Cultural Heritage Management / Chance Find Procedure ............................................... 99
Annex 8 Waste Management Plan .................................................................................................. 102
Annex 9 Occupational Health & Safety Plan ................................................................................... 103
Annex 10 Project Traffic Management Plan (Sample) ..................................................................... 104
Annex 11 Contingency and Emergency Response Plan (Sample) .................................................. 106
Annex 12: Labour Influx Plan .......................................................................................................... 109
Annex 13: Borrow Pit Remediation Plan .......................................................................................... 110
Annex 14: Workers Camp Site Management Plan ........................................................................... 111
List of Tables

TABLE 1: 5-PILOR ROADS SELECTED FOR COMMUNITY BASED & MECHANISED MAINTENANCE UNDER ENUGU RAMP2 .......................... 3
TABLE 2: ACTIVITIES FOR ROAD MAINTENANCE INTERVENTION WORK ......................................................................................................................... 3
TABLE 3: RELEVANT FEDERAL/STATE POLICIES, LEGISLATIONS, REGULATIONS & GUIDELINES ................................................. 5
TABLE 4: INTERNATIONAL TREATIES AND CONVENTIONS ON ENVIRONMENT TO WHICH NIGERIA IS A PARTY ............................ 6
TABLE 5: SAFEGUARD POLICIES TRIGGERED BY RAMP2 ........................................................................................................................ 8
TABLE 6: SOCIOECONOMIC CHARACTERISTICS OF PROJECT AREA .................................................................................................................... 14
TABLE 7: POPULATION IN THE 5 PROJECT LGA’S ........................................................................................................................................ 17
TABLE 8: ENVIRONMENTAL & SOCIAL SENSITIVITIES IN THE PROJECT LOCATIONS ............................................................................................ 18
TABLE 9: PROJECT PHASES & ACTIVITIES .................................................................................................................................................... 20
TABLE 10: EVALUATION OF POTENTIAL POSITIVE IMPACTS ............................................................................................................................. 21
TABLE 11: POTENTIAL ADVERSE IMPACTS .................................................................................................................................................. 22
TABLE 12: ENVIRONMENTAL & SOCIAL IMPACT MITIGATION AND MONITORING PLAN FOR NGWURU JUNCTION – LEEJA ROAD ...... 26
TABLE 13: ENVIRONMENTAL & SOCIAL IMPACT MITIGATION AND MONITORING PLAN FOR UNN GREEN HOUSE – OWERRRE EZEORB – ORIE ORBA MARKET road with spur to NKWO ORBA UMUAFA – AGBAMERE road ROAD (TABLE B) .................................................. 33
TABLE 14: ENVIRONMENTAL & SOCIAL IMPACT MITIGATION AND MONITORING PLAN FOR OGBUGBUAGU IWOL – IMEZE OLO – AMADIM O O ROAD with spur to UKWUAGBA OPOGHO BOREHOLE CENTER Road (Road C) .......................................................................................................................... 39
TABLE 15: ENVIRONMENTAL & SOCIAL IMPACT MITIGATION AND MONITORING PLAN FOR AMAOGWU – OHEBE UMUNA with spur to tarred road (TABLE D) ............................................................................................................. 44
TABLE 16: ENVIRONMENTAL & SOCIAL IMPACT MITIGATION AND MONITORING PLAN FOR AMTU ISUBE – AGULUIZONE – COMMUNITY SECONDARY SCHOOL NZE ROAD (TABLE E) ............................................................................................................. 50
TABLE 17: SUMMARY OF MITIGATION AND MONITORING COSTS ........................................................................................................................ 56
TABLE 18: ROLES AND RESPONSIBILITY OF INSTITUTIONS TO IMPLEMENT THE ESMP ......................................................... ERROR! BOOKMARK NOT DEFINED.
TABLE 19: CAPACITY BUILDING PLAN FOR IMPLEMENTATION OF THE ESMP & PERMIT CONDITIONS .................................................. 58
TABLE 20: INTERNAL AND EXTERNAL MONITORING ..................................................................................................................................... 59
TABLE 21: REPORTING PROCEDURES ......................................................................................................................................................... 59
TABLE 22: TENTATIVE ESMP IMPLEMENTATION SCHEDULE ........................................................................................................................... 60
TABLE 23: CONTRACTUAL MEASURES .................................................................................................................................................... 61
TABLE 24: ESMP BUDGET .................................................................................................................................................................................. 61
TABLE 25: ESMP DISCLOSURE ......................................................................................................................................................................... 61
TABLE 26: STAKEHOLDER ENGAGEMENT PROGRAMME .................................................................................................................................. 66
TABLE 27: PUBLIC CONSULTATION TABLE .................................................................................................................................................. 69
List of Figures

FIGURE 1: MAP OF ENUGU STATE .................................................................................................................. 10
FIGURE 2: MAP SHOWING UNN GREEN HOUSE – OWERRE EZORBA – ORIE ORBA MARKET ROAD WITH SPUR TO NKWO ORBA UMUAFIA – AGBAMERE ROAD .................................................................................................................. 12
FIGURE 3: MAP SHOWING NGWURU JUNCTION-LEJIA ROAD ........................................................................... 12
FIGURE 4: MAP SHOWING OGBUGBUAGU IWOLO – IMEZI OLO – AMADIM OO ROAD WITH SPUR TO UKWUAGBA OKPOGHO BORE HOLE CENTER .......................................................................................................................... 13
FIGURE 5: MAP SHOWING AMAOGWU – OHEBE UMUNA WITH SPUR TO TARRED ROAD .................................... 13
FIGURE 6: MAP SHOWING AMTU ISUBE – AGULUIZONE – COMMUNITY SECONDARY SCHOOL NZE .................... 13
FIGURE 7: GENDER DISTRIBUTION IN PROJECT AREA .................................................................................... 16
FIGURE 8: AGE DISTRIBUTION IN PROJECT AREA ........................................................................................... 16
FIGURE 9: OCCUPATION IN PROJECT AREA .................................................................................................... 16
FIGURE 10: INCOME DISTRIBUTION IN PROJECT AREA .................................................................................... 17
FIGURE 11: FLOW CHART DEPICTION OF ENUGU RAMP-2 PROJECT BASED GRM PROCESS .................................. 63
Acronyms and Abbreviations

BoQ  Bill of Quantities
CBOs  Community Based Organizations
EA  Environmental Assessment
ESMF  Environmental and Social Management Framework
ESMP  Environmental and Social Management Plan
FMARD  Federal Ministry of Agriculture and Rural Development
FMEnv  Federal Ministry of Environment
FPMU  Federal Project Implementation Unit
FMP  Facilities Management Plan
KII  Key Informant Interview
LGA  Local Government Authority
MDAs  Ministries, Departments and Agencies
NESREA  National Environmental Standards and Regulatory Agency
NGOs  Non-Governmental Organizations
O&M  Operation and Maintenance
OHS  Occupational, Health and Safety
PAD  Project Appraisal Document
PAPs  Project Affected Persons
PIE  Project Implementation Entity
PIU  Project Implementation Unit
PPE  Personal Protective Equipment
PTA  Parents Teachers Association
RAMP-2  Second Rural Access & Mobility Project
SBMC  School Based Management Committee
SEPA  State Environmental Protection Agency
SMMPs  Schools, Markets and Motor Parks
SPIU  State Project Implementation Unit
ToR  Terms of Reference
WASH  Water, Sanitation and Hygiene
WB  World Bank
Executive Summary

ES 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 Adamawa, Enugu, Imo, Niger and Osun States. Component 2 of the project finances road maintenance activities on rehabilitated roads, and support state mechanisms for maintenance funding. The model to be used in the maintenance mechanism involves a community-based approach to the road maintenance. Enugu State intends to apply part of the proceeds for the preparation of an Environmental and Social Management Plan (ESMP) for the 5 rural pilot roads measuring 49.8km already prioritized for community-based road maintenance and annual mechanized maintenance under Enugu RAMP-2. The ESMP identifies the environmental and social impacts of the proposed works to be carried out under the community based road maintenance and annual mechanized maintenance, mitigation measures for adverse impacts, and defines roles and responsibilities of all stakeholders throughout project life cycle in order to ensure that mitigation measures are implemented, and overall sustainability of the project is assured.

ES 2: Project Description and Scope of Works
Five (5) pilot roads have been selected under Enugu State RAMP-2 for the community-based road maintenance and annual mechanized maintenance. The roads are located in Nsukka, Udenu, Ezeagu and Igbo Etiti/Udi LGAs of Enugu State, covering a total length of 46.8km, while the road clearing width is 10m (6m in built up areas). Details of each road location is shown in table ES1

<table>
<thead>
<tr>
<th>Lots</th>
<th>Name of Road</th>
<th>Distance</th>
<th>Local Government Areas (LGAs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot1</td>
<td>Ngwuru Junction – Lejja Road</td>
<td>10km</td>
<td>Nsukka/Udenu</td>
</tr>
<tr>
<td></td>
<td>UNN Green House – Owerre Ezeorba – Otie Orha Market road with spur to Nkwo Orha Umuafia – Agbamere road</td>
<td>6.6km</td>
<td>Nsukka/Udenu</td>
</tr>
<tr>
<td>Lot 2</td>
<td>Ogbuguagu Iwodo – Imezi Olo – Amadim Oo Road with spur to Ukwuagba Okpogho Bore hole Center</td>
<td>14km</td>
<td>Ezeagu</td>
</tr>
<tr>
<td>Lot 3</td>
<td>Amaogwu – Ohebe Umuna with spur to tarred road</td>
<td>8.6km</td>
<td>Igbo Etiti/Udi</td>
</tr>
<tr>
<td></td>
<td>Amatu Isube – Aguluihonze – Community Secondary School Nze</td>
<td>7.6km</td>
<td>Igbo Etiti/Udi</td>
</tr>
</tbody>
</table>

The proposed maintenance works will entail the following activities:
- Preparation of staging area;
- Mobilization of plant, equipment & personnel to site;
- Clearing of culverts and trenches of solid waste and silt;
- Routine inspection of drainage structures and road (pavement) surface;
- Scheduled & unscheduled integrity checks for culvert structural components (foundation, joins etc.);
- Maintenance of erosion control structures, fencing walls screens and other environmental barriers;
- Routine maintenance and replacement of wearing/faulty/damaged parts (e.g. binder); and
- Maintenance of road traffic controls.

ES3: Policy, Institutional & Regulatory Framework
The implementation of the sub-project activities will be guided by applicable Federal and State policies and regulatory framework, and the World Bank operational safeguard policies. The sub-project will comply with the National Policy on Environment, which provides a framework for environmental protection and sustainable development. Federal Ministry of Environment (FMEnv) provides procedures for conducting Environmental Assessments for development projects in line with the Environmental Impact Assessment Act No. 86, 1992 and the Enugu State Ministry of Environment Policies. Emerging social matters in this ESMP have been considered under the following:
- National Gender Policy
- International & regional treaties on Gender Based Violence (GBV)
The activities of the RAMP2 project have triggered four of the World Bank environmental & social safeguard polices: Environmental Assessment (OP/BP4.01), Involuntary Resettlement (OP 4.12), Project on Physical Cultural Resources OP/BP 4.11 & Natural Habitats OP/BP 4.04. An Environmental and Social Management Framework (ESMF) has been prepared and disclosed in August 2016 as a standalone document to provide a clear process to integrate environmental and social considerations into the project. This ESMF has been guided by the applicable policies, legal and institutional frameworks as provided in Chapter 2 on Policy, Legal and Institutional Framework of the ESMF.

ES 4: Environmental & Social Baseline Description

The sub-project roads selected for pilot maintenance are part of the roads rehabilitated under the RAMP2 Phase 1 works. Thus, existing environmental and social baseline conditions of the sub-project areas, and the project adverse impacts and associated mitigation measures associated with the rehabilitated roads were duly considered in the ESIA preparation and subsequently its implementation. Most of the issues identified are not envisaged during the maintenance phase. However, some key baseline information noted during the field visits include:

- All the sub-project roads are erosion prone. Notably, Ngwuru Junction – Lejja Road has gully formation, drainage - run off issues as depicted in table 8 Amtu Isube – Aguluilonze has a collapsed box culvert.
- Electricity poles were noticed along the Ngwuru Junction – Lejja Road
- Markets were noted in close proximity to the Ngwuru Junction – Lejja Road and UNN Green House – Owerre Ezeorba – Orie Orba Market road.
- About 44% of people in the project locations are traders while about 22% are farmers which form the highest percentages for occupation in the project areas.

ES 5: Potential Environmental & Social Impacts

Table ES 2: Summary of potential environmental & social impact associated with the proposed sub-project activities

<table>
<thead>
<tr>
<th>Environmental Impacts</th>
<th>Social Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive Impacts</strong></td>
<td></td>
</tr>
<tr>
<td>• Improved stability of road surface, embankments and slopes to prevent erosion.</td>
<td>• Sustained access to rural communities by enhancing transport conditions.</td>
</tr>
<tr>
<td>• Protect the project investment</td>
<td>• Employment of local labour during maintenance</td>
</tr>
<tr>
<td>• Contribute to a more efficient road transportation system</td>
<td>• Stimulation of socioeconomic activities from direct and indirect employment</td>
</tr>
<tr>
<td>• Reduction in pollution and siltation of downstream areas due to reduction in erosion of topsoil from project areas.</td>
<td>• Improved livelihood &amp; poverty reduction</td>
</tr>
<tr>
<td>• Reduction in the risk of flooding especially during the wet seasons.</td>
<td>• Protect RAMP project investment and sustainability of the project</td>
</tr>
<tr>
<td>• Reduction in travel time and transport operating cost due to improvement in the quality of the road</td>
<td>• Promote good perception of the RAMP intervention</td>
</tr>
<tr>
<td><strong>Adverse Impacts</strong></td>
<td></td>
</tr>
<tr>
<td>• Deterioration of local air quality due to the emission of dusts &amp; gases</td>
<td>• Increase in security risks due to storage of materials and equipment on site</td>
</tr>
<tr>
<td>• Noise and vibration disturbances from operation of heavy-duty vehicles</td>
<td>• Threat to community culture, safety and security due to presence of workers.</td>
</tr>
<tr>
<td>• Surface water contamination from sediment-laden runoffs</td>
<td>• Increase in the demand on existing community health and sanitation infrastructure</td>
</tr>
</tbody>
</table>
• Soil degradation may result from spillage of fuels, lubricants and other toxic materials.
• Loss of vegetation and fauna habitat destruction
• Predisposition to soil erosion due to the removal of vegetal cover.
• Landscape disruption and visual intrusion
• Increase in waste burden from waste generation which could also become breeding grounds for disease vectors and cause contamination of soil and water
• Occupational accidents and injuries to workers
• Community health and safety risks
• Poorly managed and un-reclaimed borrow pits and staging areas could become hazards
• Public utilities like electric poles may be affected during annual mechanized activities
• Increase in movement of cars and motorbikes within the communities, with potential to increase the rate of traffic accidents and injuries.
• Increase in risk of communicable diseases such as HIV/AIDS and other STIs: due to workers, hawkers etc.
• Gender-based violence risk: Exploitation, molestation and violence against women and the girl child may occur given the potential increase in population and mix of group of people from different backgrounds.
• Increase in number of persons with respiratory and eye problems from exposure to dusts and gaseous gases during operation of phase of the roads
• Increase in number of persons with hearing impairments due to noise exposure

ES 6: Environmental & Social Management Plan
This ESMP outlines mitigation measures for the identified adverse environmental and social impacts, responsibility for mitigation and mitigation costs, which will be included in the contractor’s bill of quantities. A monitoring program itemising parameter to be monitored, frequency, responsibility and monitoring costs has also been provided in the ESMP. This report provides specific ESMP mitigation and monitoring table for each road. This is contained in tables 13-17 of Chapter 6.

Institutional Arrangement
The Environmental and Social Safeguards Unit of the PIU shall coordinate the ESMP implementation and monitoring activities. Table 12 presents detailed roles and responsibilities matrix for monitoring the environmental and social impacts and the implementation of the ESMP.

Capacity Building
Based on the capacity assessment of institutions involved in the implementation of the ESMP, capacity building measures have been outlined in section 7.3 at an estimated cost of ₦1350,000.00 to include:
• Training workshop and sensitization programmes for the institutions/stakeholders involved in the ESMP implementation, including trainings on GBV prevention and understanding the Code of Conduct for Contractors and workers;
• Community health and safety for the community based/annual mechanised maintenance workers; and
• Monitoring, supervision and reporting

ES 7: Grievance Redress Mechanism
A grievance redress mechanism has been included in this ESMP to manage complaints and grievances, which cannot be foreseen now with a view to ensuring successful project development and implementation. Experience has revealed that open dialogue and collaborative grievance resolution represent the best practice at resolving conflicts.

ES 8: Stakeholder Consultations
Stakeholder consultations involving focus group discussions, key informant interviews & public forum have been carried out with key stakeholders in communities along the project roads to obtain their comments and concerns on the proposed project with respect to the potential environmental and socio-economic issues. Table ES 3 shows issues raised and how they were addressed.
Table ES 3: Issues & Concerns raised & how they were addressed

<table>
<thead>
<tr>
<th>Clarifications, Questions and concerns</th>
<th>How they were addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the different locations, the stakeholders and other community representatives all expressed appreciation for the project and sought clarification on the following:</td>
<td></td>
</tr>
<tr>
<td>a) Some expressed concern about the likelihood of their homes or property being demolished for the road project.</td>
<td></td>
</tr>
<tr>
<td>b) They encouraged the engagement of their youth/local workers in project activities for employment.</td>
<td></td>
</tr>
<tr>
<td>c) Political interference with ethnic or religious undertones for projects thereby leading to project abandonment. The project should distinct itself from other failed interventions carried out by other organizations.</td>
<td></td>
</tr>
<tr>
<td>d) Level of involvement of community leaders in project development and implementation processes.</td>
<td></td>
</tr>
<tr>
<td>Note that most communities visited had health centres in case of medical emergency on site.</td>
<td></td>
</tr>
<tr>
<td>The issues that were raised were addressed as follows:</td>
<td></td>
</tr>
<tr>
<td>a. Assuring the people that there is no likelihood of property being demolished for the road project as civil works will just involve maintenance of already rehabilitated roads. Any grievance can be channeled through the community’s grievance redress committees (GRCs) that will be constituted.</td>
<td></td>
</tr>
<tr>
<td>b. The community-based maintenance groups will be formed by community members with special consideration to women and youth. Also, consideration will be given to indigenous contractors for the annual mechanized maintenance.</td>
<td></td>
</tr>
<tr>
<td>c. The team explained that this project will be carried out and will not be abandoned. This ESMP is essential for ensuring there are no negative impacts on people and the environment during project.</td>
<td></td>
</tr>
<tr>
<td>d. This has been included in the composition of first level GRCs (as contained in chapter eight) of this ESMP. Consultations with community members will be ongoing throughout the life cycle of this sub-project implementation.</td>
<td></td>
</tr>
</tbody>
</table>

The stakeholders welcomed the idea of establishing the Grievances Redress Committees, as this would encourage a sense of ownership of the project among the benefitting communities.

ES 9 ESMP Disclosure

Disclosure of this ESMP shall be carried out in accordance with the Environmental Impact Assessment (EIA) Act Cap E12 LFN 2004, with a twenty-one (21) days Public Notice for information and comments and the World Bank disclosure procedures.

ES 10 ESMP Budget

The environmental and social management actions is estimated at Seven Million Nine Hundred and Six Thousand Five Hundred Naira Only (₦7,906,500.00), or, Twenty-One Thousand Nine Hundred and Sixty Two Thousand ($21,962.00) as shown in table ES 4.

Table ES 4: ESMP Budget

<table>
<thead>
<tr>
<th>#</th>
<th>Item</th>
<th>Unit Cost</th>
<th>Source of financing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Unit</td>
<td>Local</td>
</tr>
<tr>
<td>1</td>
<td>Mitigation</td>
<td>Sum</td>
<td>5,480,000</td>
</tr>
<tr>
<td>2</td>
<td>Capacity Building</td>
<td>Sum</td>
<td>750,000.0</td>
</tr>
<tr>
<td>3</td>
<td>Monitoring &amp; Audit</td>
<td>Sum</td>
<td>1,300,000.0</td>
</tr>
<tr>
<td>4</td>
<td>Contingency (5% of 1+2+3)</td>
<td>376,500</td>
<td>1045.8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>7,906,500</td>
</tr>
</tbody>
</table>

ES 10 Summary and Recommendations
Road maintenance activities will have highly beneficial impact on the immediate communities, as it will help maintain the rehabilitated roads and protect the investment, contribute to a more efficient road transportation system, reduce travel time, promote trade activities, reduce road accidents amongst other benefits.

Although, the civil works that will be implemented during the maintenance phase of the project will lead to some limited environmental and social impacts, these adverse impacts will largely be localized in spatial extent, short term and occurring within less sensitive environmental areas. These will be managed through the application of the appropriate mitigation measures stated in the ESMP matrix tables for each Lot, inclusion in the contractor’s agreement, good practices, adequate supervision and enforcement during project implementation.

In consideration of the above therefore, there is no major environmental or social issue to impede the implementation of the proposed project. Some of the recommendations to be undertaken by the SPIU that will enhance the overall sustainability of the project have been included in Section 10.1 of this ESMP.
CHAPTER ONE: INTRODUCTION

1.0 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) currently in the States of Adamawa, Enugu, Imo, Niger and Osun. The Enugu State Project Implementation Unit (SPIU) has applied part of the proceeds for the preparation of this Environmental and Social Management Plan (ESMP) for the community-based road maintenance and annual mechanized maintenance of five (5) rural pilot roads measuring 49.8m.

Project Development Objective
The project development Objective (PDO) is to improve the transport conditions and bring sustained access to the rural population, through rehabilitating and maintaining key rural transport infrastructure in a sustainable manner in selected Nigerian States.

Project Components
The RAMP 2 project has three primary components:

- Component 1: Rehabilitation of Rural and State Roads -
- Component 2: Roads Maintenance and Local Development – This component would finance road maintenance activities on rehabilitated roads and support state mechanisms for maintenance funding. The model to be used in the maintenance mechanism involves community-based approach to among others.
- Component 3: Capacity Building and Project Administration – This component would finance Institutional Strengthening activities at state level as well as project administration costs.

1.1 Objectives/Purpose of the ESMP

The main objective of this assignment is to prepare an Environmental and Social Management Plan (ESMP) for the five (5) pilot roads selected for community based and mechanised road maintenance. Specific objectives include the following:

(i) Identify potential environmental and social impacts that may occur during the mechanised maintenance of the (5) pilot roads within the project areas;
(ii) Develop detailed mitigation measures with relevant costs implication that will need to be achieved during and after sub-project implementation;
(iii) Specify responsibilities and institutional arrangements that will be in place to ensure that the mitigation and monitoring measures are implemented; and
(iv) Provide implementation and monitoring schedule with suitable indicators.

1.2 Rationale for the Study/ESMP

The activities of the RAMP2 project have triggered four of the World Bank operational safeguard polices: Environmental Assessment (OP/BP4.01), Involuntary Resettlement (OP 4.12), Physical Cultural Resources OP/BP 4.11 and Natural Habitats OP/BP 4.04. An ESMP is thus required to identify the potential environmental and social impacts of project activities, and proffer mitigation measures for adverse impacts.
1.3 Scope of ESMP

This ESMP is to be utilized by potential contractors that would be commissioned by the Project for the community based and mechanized road maintenance works, and will form the basis of site-specific management plans that will be prepared by the contractors as part of their road maintenance methodology prior to works commencing. It is expected that the estimated mitigation costs are captured in the BOQ/works contract.

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.

1.4 Methodology

The methodology for preparing this ESMP includes:

1.4.1 Literature review

This was carried out by undertaking the following:

- A review of the projects ESMF, project appraisal document (PAD) and other Phase 1 safeguard instruments including the ESIA;
- Review of the Environmental Assessment procedures of the World Bank safeguards policies especially Environmental Assessment (OP 4.01); and
- Reviewed measures required to implement contract related international best practices, and approval conditions stipulated by the World Bank Safeguard Policies, Enugu State Environmental and Social laws and Policies, Nigeria’s Federal Ministry of Environment and National Environmental Safety Research Agency (NESREA) requirements;

1.4.2 Review of Engineering Designs

The draft engineering designs were obtained from the SPIU and reviewed vis-à-vis the baseline situation of the project areas, taking into consideration the potential impacts to environmental and social sensitivities in the project locations.

1.4.3 Stakeholder Consultations

Consultations with stakeholders to get their views on the proposed intervention were held between 21st – 23rd of November 2018, while additional consultations were held from 13th – 15th March 2019. Among the stakeholders consulted were; the Enugu SPIU, communities along the pilot roads of Amagogwu-Ohebe-Umuna with spur to the tarred road, Amutu-Isube-Aguluilonze-Community Secondary School Nze Road, Nguru Junction- Leija Road, Ogbuiguagu-Iwollo Imeziole-Omanimble road with spur to Ukwuagba Okpogho bore hole centre and the UNN Green House-Owerre Ezeorba-Orie Orba Market road with spur to Nkwo Orba- Umuafia- Agbamere road.

1.4.4 Data Gathering/ Baseline Assessment

Data gathering and baseline assessments were conducted between 21st – 23rd of November 2018, while additional assessments were held from 13th – 15th March 2019 to facilitate identification of the environmental and social challenges associated with road maintenance works in the different pilot road locations.

The social baseline assessment was carried out by gathering information from field surveys and secondary data sources (interviews, structured questionnaires, in-depth interviews and focus group discussions).
CHAPTER TWO: DESCRIPTION OF PROJECT

2.0 Project Description

The RAMP-2 includes the three (3) components as shown in section 1.0, however, this ESMP has been prepared for: **Component 2: Roads Maintenance and Local Development.** This component would finance road maintenance activities on rehabilitated roads and support state mechanisms for maintenance funding. The model to be used in the maintenance mechanism involves annual mechanized and community-based approach maintenance.

A total number of five (5) pilot roads have been selected under Enugu State RAMP-2 for community-based road maintenance and annual mechanized maintenance. The selected pilot roads are a total length of 49.8km and intervention would be to give a clearance width of 10m. The selected roads are shown in table 1.

<table>
<thead>
<tr>
<th>Lots</th>
<th>Name of Road</th>
<th>Distance</th>
<th>Local Government Areas (LGAs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot1</td>
<td>Ngwuru Junction – Lejja Road</td>
<td>10km</td>
<td>Nsukka/Udenu</td>
</tr>
<tr>
<td></td>
<td>UNN Green House – Owerre Ezeorba – Orile Orba Market road with spur to Nkwo Orba Umuafia – Agbamere road</td>
<td>6.6km</td>
<td>Nsukka/Udenu</td>
</tr>
<tr>
<td>Lot 2</td>
<td>Ogbuguagu Iwolo – Imezi Olo – Amadim Oo Road with spur to Ukwuagba Okpogbo Bore hole Center</td>
<td>14km</td>
<td>Ezeagu</td>
</tr>
<tr>
<td>Lot 3</td>
<td>Amaogwu – Ohebe Umuna with spur to tarred road</td>
<td>8.6km</td>
<td>Igbo Etiti/Udi</td>
</tr>
<tr>
<td></td>
<td>Amutu Isube – Aguluilonze – Community Secondary School Nze</td>
<td>7.6km</td>
<td>Igbo Etiti/Udi</td>
</tr>
</tbody>
</table>

The activities involved in the community-based road and annual mechanized maintenance of 5-pilot roads intervention work are as shown in table 2:

<table>
<thead>
<tr>
<th>Project Phase</th>
<th>Proposed Intervention Work</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Maintenance</td>
<td>Marking</td>
<td>• Marking of road right of way (ROW)</td>
</tr>
<tr>
<td></td>
<td>Clearing</td>
<td>• Preparation of staging area</td>
</tr>
<tr>
<td></td>
<td>Mobilization</td>
<td>• Mobilization of plant, equipment &amp; personnel to site</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Creation/Utilization of borrow pits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Routine inspection of drainage structures and road (pavement) surface</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Scheduled &amp; unscheduled integrity checks for culvert structural components (foundation, joins etc.)</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Road, culverts &amp; river</td>
<td>• Maintenance of erosion control structures, fencing walls screens and other environmental barriers</td>
</tr>
<tr>
<td>Phase</td>
<td>crossing/bridge maintenance works</td>
<td>• Sub-grade preparation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Phase</td>
<td>Proposed Intervention Work</td>
<td>Activities</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
|               |                             | • Routine maintenance and replacement of wearing/faulty/damaged parts (e.g. binder)  
|               |                             | • Transportation and handling of materials and equipment  
|               |                             | • Maintenance of road traffic controls  |
| Demobilization| Site demobilization activities | • Landscape restoration and rehabilitation  
|               |                             | • Decommissioning and reclaimation of borrow pit  
|               |                             | • Removal of maintenance equipment;  
|               |                             | • Disposal of construction spoil and waste in general;  
|               |                             | • Dismantling of temporary work camp of the contractor |
CHAPTER THREE: RELEVANT POLICIES, LEGAL AND ADMINISTRATIVE FRAMEWORK

3.1 Introduction

The relevant national and sector policies, regulations and institutional frameworks, and World Bank safeguards policies applicable to this project have been extensively captured in Section 2 of the project’s ESMF and summarized in this chapter as a guide for the community based and mechanized road maintenance works, to ensure sustainable development and compliance with national and international regulations.

3.2 Policy and Legal Framework

The act establishing the Federal Ministry of Environment places on it the responsibility of ensuring that all development activities, operations and emissions are within the limits prescribed in the National Guidelines and Standards, and comply with relevant regulations for environmental pollution management in Nigeria as may be released by the Ministry. Environmental management in Nigeria is based on the National Policy on the Environment and various environmental legislations, regulations and guidelines as summarized in Table 3.

Table 3: Relevant Federal/State Policies, Legislations, Regulations & Guidelines

|-----|-------------------|------|------------|

**Legal/Regulatory Instrument**

2. Environmental Impact Assessment (EIA) Act No. 86 | 1992 | Provide guidelines for activities of developmental projects for which EIA is mandatory in Nigeria. The Act also stipulates the minimum content of an EIA as well as a schedule of projects, which require mandatory EIAs. |

3. Land Use Act | 1978 modified 1990 | The Act vests all land comprised in the territory of each state in the Federation in the Governor of the state and requires that such land shall be held in trust and administered for the use and common benefit of all Nigerians in accordance with the provisions of the Act. |

4. Endangered Species Act | 1985 | Provides for the conservation and management of Nigeria’s wildlife and the protection of some of her endangered species in danger of extinction as a result of over-exploitation |

5. FEPA/FMEnv EIA Procedural Guidelines | 1995 | The Procedural Guidelines indicate the steps to be followed in the EIA process from project conception to commissioning in order to ensure that the project is implemented with maximum consideration for the environment. |

6. National Guideline and Standard for Environmental Pollution Control | 1991 | Provide guidelines for management of pollution control measures |

9. S.I.15 National Environmental Protection (Management of Solid and Hazardous Wastes) Regulations | 1991 | Regulates the legal framework for the effective control of the disposal of toxic and hazardous waste into any environment within the confines of Nigeria. |

10. Urban and Regional Planning Decree No. 88 | 1993 | Planned development of urban areas (to include and manage waste sites). |
3.3 Administrative Framework

3.3.1 Federal MDAs

The federal MDAs responsible for regulating and monitoring environmental issues at the federal level include the Federal Ministry of Environment (FMEnv) and the National Environmental Standards and Regulations Enforcement Agency (NESREA).

3.3.2 State MDAs

**Enugu State Ministry of Environment and Mineral Resources**

The Ministry has the mandate to pursue the attainment of environmental sustainability. Their major functions which is relevant to this project include:

- To carry out activities that would uplift the environmental status of the state
- To prosecute sanitation offenders
- To ensure house collection of wastes among others

Thus, the Ministry will have a key role to play in monitoring of mitigation measures listed in the ESMP matrix table in table 12 – 16 of this report.

**Enugu State Ministry of Works & Housing**

The Ministry has the mandate to coordinate all road maintenance /rehabilitation activities. The Ministry will monitor compliance to standards during road rehabilitation/maintenance and monitoring.

3.4 Relevant International Treaties and Conventions on Environment

Some of the international Treaties and Conventions on environment to which Nigeria is a party, which are relevant to this sub-project, are summarized in Table 4.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Treaties and Conventions</th>
<th>Year</th>
<th>Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The United Nations Environmental Guidance Principles</td>
<td>1972</td>
<td>Provide guidelines for protecting the integrity of the global environment and the development system</td>
</tr>
<tr>
<td>3.</td>
<td>United Nations Convention on Biological Diversity</td>
<td>1992</td>
<td>Places general obligations on countries to observe sustainable use and equitably share the plants and animals of the earth</td>
</tr>
<tr>
<td>4.</td>
<td>United Nations Framework Convention on Climate Change</td>
<td>1994</td>
<td>It calls on developed countries and economies to limit her emissions of the greenhouse gases which cause global warming</td>
</tr>
<tr>
<td>S/N</td>
<td>Treaties and Conventions</td>
<td>Year</td>
<td>Agreement</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>6.</td>
<td>Convention on Conservation of Migratory species of Wild animals (Bonn Convention)</td>
<td>1979</td>
<td>Stipulates actions for the conservation and management of migratory species including habitat conservation</td>
</tr>
<tr>
<td>7.</td>
<td>Vienna Convention for the Protection of the Ozone Layer</td>
<td>1985</td>
<td>Places general obligation on countries to make appropriate measures to protect human health and the environment against adverse effects resulting from human activities, which tend to modify the ozone layer.</td>
</tr>
</tbody>
</table>

3.5 International Treaties Relevant to Social Protection

- **The International Covenant on Civil and Political Rights (ICCPR) (2004)**; which pursues the promotion of self-realization by upholding the right of self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development. Also, all peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic co-operation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence.

- **The International Covenant on Economic, Social and Cultural Rights (ICESCR) (2004)**; which undertakes to take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.

- **The Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (CAT) (1993)** that promotes the protection of people from "torture", which means any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as obtaining from him or a third person information or a confession, punishing him for an act he or a third person has committed or is suspected of having committed, or intimidating or coercing him or a third person, or for any reason based on discrimination of any kind, when such pain or suffering is inflicted by or at the instigation of or with the consent or acquiescence of a public official or other person acting in an official capacity. It does not include pain or suffering arising only from, inherent in or incidental to lawful sanctions.

- **The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) (1984)**, discourages the discrimination against women by any distinction, exclusion or restriction made on the basis of sex which has the effect or purpose of impairing or nullifying the recognition, enjoyment or exercise by women, irrespective of their marital status, on a basis of equality of men and women, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field.

- **The Convention on the Rights of Persons with Disabilities (CRPD) (2012)**; which adopts a broad categorization of persons with disabilities and reaffirms that all persons with all types of disabilities must enjoy all human rights and fundamental freedoms. It clarifies and qualifies how all categories of rights apply to persons with disabilities and identifies areas
where adaptations have to be made for persons with disabilities to effectively exercise their rights and areas where their rights have been violated, and where protection of rights must be reinforced.

- **International Convention on the Elimination of All Forms of Racial Discrimination (1976)**, which discourages any distinction, exclusion, restriction or preference based on race, colour, descent, or national or ethnic origin which has the purpose or effect of nullifying or impairing the recognition, enjoyment or exercise, on an equal footing, of human rights and fundamental freedoms in the political, economic, social, cultural or any other field of public life.

### 3.6 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);

### 3.7 National polices

- The National Gender Policy (2010).

### 3.8 World Bank Safeguard Policies

The World Bank’s Environmental and Social Safeguard Policies are cornerstones of its support for sustainable poverty diminution. It has, thus, ensured that environmental and social issues are assessed in decision making so as to reduce and manage any proposed developmental project/programme risk. The process inherently gives mechanisms for consultations and disclosure of information to the public and related stakeholders.

The activities of the RAMP2 have triggered four of the World Bank environmental & social safeguard polices as listed in Table 5 below

**Table 5: Safeguard Policies Triggered by RAMP2**

<table>
<thead>
<tr>
<th>Policy</th>
<th>Triggered by RAMP2</th>
<th>Applicable to the proposed intervention?</th>
<th>How this has been addressed by the Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment (OP 4.01)</td>
<td>Construction/rehabilitation/maintenance works will have site-specific social and environmental impacts due to the nature of civil works, change in existing environmental and social components in the project areas</td>
<td>Yes, Project activities may affect the environmental and social components in the project areas</td>
<td>This ESMP has been prepared to outline mitigation measures to address potential adverse impacts</td>
</tr>
<tr>
<td>Involuntary Resettlement (OP 4.12)</td>
<td>This policy is triggered when project activities may lead to loss of assets, proposed maintenance</td>
<td>No. Proposed maintenance</td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>ESMP- Enugu RAMP-2 Community Based and Mechanized Road Maintenance of 5 Pilot Roads</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>loss of access to livelihood or disturbances</td>
<td>Mitigation measures have been documented in this ESMP.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>activities will be on existing road paths with no required land, asset</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>acquisition or displacements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Habitats OP/BP 4.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From conversion or degrading of natural habitats, site clearance/vegetation</td>
<td>Yes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>clearance activities, borrow pits</td>
<td>Due to clearance of overgrown shrubs along the route, potential soil erosion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>physical Cultural Resources OP/BP 4.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This policy is triggered when project may affect sites having archaeological</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(prehistoric), paleontological, historical, religious, and unique natural</td>
<td>Though the maintenance project is not envisaged to trigger this policy, a sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>values</td>
<td>Physical &amp; Cultural Resources/ Chance Find Procedures have been included in</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>annex 7 of this ESMP as a precaution.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER FOUR: BASELINE ENVIRONMENTAL AND SOCIAL CONDITIONS

4.1 Overview of the Project Environment

Enugu state is an inland state in southeastern Nigeria. Enugu State is in the South East geopolitical Zone of Nigeria. It is located at 6°30' North of Equator, and 7°30' East of Latitude. It is bordered by the following states: Abia and Imo to the south; Ebonyi to the east, Benue to the north-east, Kogi to the north-west and Anambra State to the west. It covers an area of 7,161 km² (2,765 sq mi).

Enugu State is currently made up of 17 Local Government Areas. These are: Aninri, Awgu, Enugu East, Enugu North, Enugu South, Ezeagu, Igbo-Etiti, Igbo-Eze North, Igbo-Eze South, Isi-Uzo, Nkanu East, Nkanu West, Nsukka, Oji River, Udenu, Udi and Uzo Uwani. This is shown in Figure 1.

4.2. Description of the Physical Environment

Summary description of the physical environment is stated below:

**Climate**
According to the official website of the State, the hottest month in Enugu is February with about 87.16 °F (30.64 °C), while the lowest temperature is recorded in November/December, reaching about 60.54 °F (15.86 °C).

**Rainfall**
The average annual rainfall in Enugu is around 2,000 millimetres (79 in), which arrives intermittently and becomes very heavy during the rainy season. Lowest rainfall of about 0.16 cubic centimeters (0.0098 cu in) is recorded in February, while the highest rainfall is recorded in July at about 35.7 cubic centimeters (2.18 cu in).

**Temperature**
The mean daily temperature is 26.7 °C (80.1 °F). Other weather conditions affecting the city include Harmattan, a dusty trade wind lasting a few weeks of December and January. The hottest month is February with about 87.16 °F (30.64 °C), while the lowest temperature is recorded in November/December, reaching about 60.54 °F (15.86 °C).

**Geology**
The study area is characterized by the Ajali Formation and the Mamu Formation. The Ajali Formation whose age is Upper Maastrichtian is false-beckoned and highly friable sandstone while the Mamu Formation (Lower Maastrichtian) which is also known as the Lower Coal measure is mainly made up of shale with intercalations if sand and siltstone.
Soil  Enugu falls into the category of the interior zone of laterite soil. Laterite (a name which originated from the Latin word ‘Later’, meaning ‘Brick’) is a red tropical soil - a reddish mixture of clayey iron and aluminium oxides and hydroxides formed by the weathering of basalt under humid, tropical conditions. Laterite is a dense, porous, iron-bearing soil that can be quarried like stone and capable of withstanding intensive development.

Drainage  The State lies partly within the semi-tropical rain forest belt of the south, the State spreads towards the north through a land area of approximately 7,161 sq km. Its physical features change gradually from tropical rain forest to open wood-land and then to Savannah. Apart from a chain of low hills, running through Abakaliki, Ebonyi State in the east toNsukka in the north-west, and southwards through Enugu and Agwu, the rest of the state is made up of low land separated by numerous streams and rivulets, the major ones of which are the Adada River and the Oji River.

4.3  Socioeconomic environment of Enugu State

Socioeconomic environment of Enugu state

A network of roads connects Enugu town with Awgu, Ezzangbo, and Nsukka. Enugu is linked by the eastern branch of the Nigerian Railways with Aba & Port Harcourt and it has an airport. Nigeria’s first indigenous university, University of Nigeria Nsukka (UNN) is located in the Nsukka town of Enugu State. The general overview is presented below

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Enugu people are predominantly Igbos although other ethnic groups of Nigeria inhabit the state.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>With an estimated population of 4, 826 582 (extrapolated from a figure of 3,267.837, 2006 Census using a population growth rate of +3.05%/year), the state ranks 23rd in population size out of the 36 States of the federation. Enugu State is also densely populated, and is rated at 460/km² (1,200/sq. mi). This is regarded as one of the highest in Africa.</td>
</tr>
<tr>
<td>Occupation</td>
<td>Economically, the state is predominantly agrarian, with a substantial proportion of its working population engaged in farming, although trading (18.8%) and services (14.9%) are also important. A small proportion of the population is also engaged in manufacturing activities, with the most pronounced among them located in Enugu town, Oji, Nsukka and Ohebedim. Enugu, the state capital, is a major centre for coal mining. Iron ore also is mined, and deposits of limestone, fine clay, marble, and silica sand are worked. Industries include textile manufacturing, food processing, lumbering, soft drink bottling, brewing, and furniture manufacturing.</td>
</tr>
<tr>
<td>Agriculture</td>
<td>Agriculture, predominantly subsistence, ranks first in the people's economic activities. It can be divided into two types: Agriculture on the plateau and agriculture on low land (Fadama). Agriculture on plateau is based on the extensive cultivation of the conventional staples of yam, cassava, maize, sweet potato, grain legumes, pawpaw,</td>
</tr>
</tbody>
</table>

1  Source: [http://population.city/nigeria/adm/enugu/](http://population.city/nigeria/adm/enugu/)
banana, plantain and vegetables. Agriculture on low land support fadama crops like rice and vegetable. Income from the farm is supplemented by earnings from the sale of products from local economic tree crops like oil palm, cashew, kola nut, coconut, mangoes, breadfruit (ukwa), castor beans, oil beans, et cetera. Most of these tree crops are located on the compound land farmland plots.

Social Structure/Trends and Social Groups

The unique combination of communality and high individual motivation in Igbo land, creates a system of decentralized power that is found in multiple centres in society such as the Umunna (male kindred), Umuada (female kindred), Inyom di (wives of the kindred), Ohanaeze (general assembly of the kin group), and Otu ogbo (age grades), among many others. This decentralized yet very cohesive system of social power is a characteristic of the people of the South East of Nigeria in the post-colonial era, and it is very important in charting a historiography of civil society organizations in the zone.

4.4 Baseline Conditions of Specific Project Locations

This section presents information on the specific project locations for the 5 pilot roads selected for maintenance activities. Figure 2-6 show maps of the project roads.

Figure 2: Map showing UNN Green House – Owerre Ezeorba – Orie Orba Market road with spur to Nkwo Orba Umuafia – Agbamere road

Figure 3: Map showing Ngwuru junction-Lejja road
Figure 4: Map showing Ogbugbuagu Iwolo – Imezi Olo – Amadim Oo Road with spur to Ukwuagba Okpogho Bore hole Center

Figure 5: Map showing Amaogwu – Ohebe Umuna with spur to tarred road

Figure 6: Map showing Amtu Isube – Aguluilonze – Community Secondary School Nze
4.5 Socioeconomic assessment of the sub-project locations

The socio-economic study involved a collection of baseline data within the targeted areas thereby enabling the social assessment of potentially project affected populations/communities and identify potential project affected persons. The socio-economic study focused on the identification of stakeholders (demographic data), the participation process, and impact on the school property and their educational learning systems, the institutional analysis and the system for monitoring and evaluation.

4.5.1 Socio-economic Conditions

The socio-economic characteristics of the sub-project area are shown in table 6. A total of 65 persons were survey within the targeted areas.

Table 6: Socioeconomic Characteristics of Project Area

<table>
<thead>
<tr>
<th>Item</th>
<th>Category</th>
<th>No.</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
<td>26</td>
<td>38.9</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>39</td>
<td>61.1</td>
</tr>
<tr>
<td>Age</td>
<td>Less than 18 years</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>18 - 30 years</td>
<td>7</td>
<td>11.2</td>
</tr>
<tr>
<td></td>
<td>30 - 50 years</td>
<td>29</td>
<td>44.4</td>
</tr>
<tr>
<td></td>
<td>51 - 70 years</td>
<td>22</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>above 70</td>
<td>7</td>
<td>11.1</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Single</td>
<td>7</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>58</td>
<td>88.9</td>
</tr>
<tr>
<td></td>
<td>Widow</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Religion</td>
<td>Christianity</td>
<td>54</td>
<td>83.3</td>
</tr>
<tr>
<td></td>
<td>Muslim</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>Traditionalist</td>
<td>11</td>
<td>16.7</td>
</tr>
<tr>
<td>Highest Educational Level</td>
<td>No Education</td>
<td>9</td>
<td>13.8</td>
</tr>
<tr>
<td></td>
<td>Primary Education</td>
<td>14</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>Secondary School Education</td>
<td>28</td>
<td>44.4</td>
</tr>
<tr>
<td></td>
<td>Tertiary Education</td>
<td>14</td>
<td>22.2</td>
</tr>
<tr>
<td>Occupation</td>
<td>Civil Servants</td>
<td>4</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>Artisans</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>Traders</td>
<td>28</td>
<td>44.4</td>
</tr>
<tr>
<td></td>
<td>Farmers</td>
<td>14</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>Self employed</td>
<td>19</td>
<td>27.8</td>
</tr>
<tr>
<td>No of Children</td>
<td>1-2 Children</td>
<td>14</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>3 - 4 Children</td>
<td>19</td>
<td>27.8</td>
</tr>
<tr>
<td>Item</td>
<td>Category</td>
<td>No.</td>
<td>Percentage (%)</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------</td>
<td>-----</td>
<td>----------------</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td>Less than N1000</td>
<td>25</td>
<td>38.9</td>
</tr>
<tr>
<td></td>
<td>N1000 -N 5000</td>
<td>7</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>N5000 - N10000</td>
<td>4</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>N10000 - N15000</td>
<td>10</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>Above N15000</td>
<td>19</td>
<td>27.8</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>55</td>
<td></td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>Male</td>
<td>26</td>
<td>38.9</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>39</td>
<td>61.1</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>65</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>Less than 18 years</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>18 - 30 years</td>
<td>7</td>
<td>11.2</td>
</tr>
<tr>
<td></td>
<td>30 - 50 years</td>
<td>29</td>
<td>44.4</td>
</tr>
<tr>
<td></td>
<td>51 - 70 years</td>
<td>22</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>above 70</td>
<td>7</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>65</td>
<td></td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td>Single</td>
<td>7</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>58</td>
<td>88.9</td>
</tr>
<tr>
<td></td>
<td>Widow</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>65</td>
<td></td>
</tr>
<tr>
<td><strong>Religion</strong></td>
<td>Christianity</td>
<td>54</td>
<td>83.3</td>
</tr>
<tr>
<td></td>
<td>Muslim</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>Traditionalist</td>
<td>11</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>65</td>
<td></td>
</tr>
<tr>
<td><strong>Highest Educational Level</strong></td>
<td>No Education</td>
<td>9</td>
<td>13.8</td>
</tr>
<tr>
<td></td>
<td>Primary Education</td>
<td>14</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>Secondary School Ed.</td>
<td>28</td>
<td>44.4</td>
</tr>
<tr>
<td></td>
<td>Tertiary Education</td>
<td>14</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>65</td>
<td></td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td>Civil Servants</td>
<td>4</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>Artisans</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>Traders</td>
<td>28</td>
<td>44.4</td>
</tr>
<tr>
<td></td>
<td>Farmers</td>
<td>14</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>Self employed</td>
<td>19</td>
<td>27.8</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>65</td>
<td></td>
</tr>
<tr>
<td><strong>No of Children</strong></td>
<td>1-2 Children</td>
<td>14</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>3 - 4 Children</td>
<td>19</td>
<td>27.8</td>
</tr>
<tr>
<td></td>
<td>5 - 6 Children</td>
<td>25</td>
<td>38.9</td>
</tr>
<tr>
<td></td>
<td>Above 6</td>
<td>7</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>65</td>
<td></td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td>Less than N1000</td>
<td>7</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td>N1000 - N 5000</td>
<td>25</td>
<td>38.9</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>
### 4.5.1.1. Gender distribution in sub-project Areas

Gender distribution among respondents in the sub-project area showed that there were more women (39) to the 26 men (38.9%) that were interviewed during consultation, indicating that there is higher population of female gender and the implication of this is that it would determine the type of job demanded on this project. This is shown in figure 7.

![Gender distribution in sub-project areas](image)

### 4.5.1.2. Age distribution in sub-project Areas

Age distribution in sub-project area showed that the age distribution among the respondents (who were interviewed majorly in their place of business) were mostly between the 30-50 age band which stood at 29 persons (44.4%), while 22 respondents (33.3%) were between the age of 51-70 years indicating that more than over seventy percent are still in their productive years and can be employable on the project. Only six percent (11.1%) of respondents were above seventy years old, while none of the respondents was under eighteen years of age. This is shown in Figure 8.

![Age distribution in sub-project areas](image)

### 4.5.1.3. Occupation in sub-project Areas

Majority of the persons interviewed or consulted were traders (44.4%), involved in petty trade of provisions and foodstuffs such as selling of yam, while over a third of the respondents (27.8%) are self-employed, engaged in one form of activity or the other. This indicates that in term of livelihoods; over seventy percent are involved in activities that are capable of feeding them, daily. Twenty-two (22.2%) of the respondents are farmers, while a very small proportion of six percent (5.6%) are public servants, working with the local government authority. This is illustrated in Figure 9.

![Occupation in Project Area](image)
4.5.1.4. Income distribution in Project

Almost forty percent (38.9%) of the respondents earn between N1000 – N5000, weekly and this formed majority of the people interviewed, while 27.8% respondents in communities closer to the capital city of Enugu responded to earning between N10,000 – N15,000 weekly. Thus, indicating that the closer communities to the capital city engage in livelihood activities that are capable of ensuring higher earning & possess a better purchasing power. This is illustrated in Figure 10.

![Figure 10: Income distribution in Project Area](image)

4.5.1.5. Population

Population in the LGAs where the 5 pilot roads have been selected is shown in table 7 using a population growth rate of +3.05%/year\(^2\)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Udi</td>
<td>238,305</td>
<td>321,700</td>
</tr>
<tr>
<td>Nsukka</td>
<td>309,448</td>
<td>417,700</td>
</tr>
<tr>
<td>Igbo-Etiti</td>
<td>208,333</td>
<td>281,300</td>
</tr>
<tr>
<td>Udenu</td>
<td>178,687</td>
<td>241,200</td>
</tr>
<tr>
<td>Ezeagu</td>
<td>170,603</td>
<td>230,300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,492,200</strong></td>
<td></td>
</tr>
</tbody>
</table>


Population, from the 2016 projected estimates is 1,492,200 for the 5 LGAs from which the pilot roads have been selected.

4.5.1.6 Cultural Resources

Cultural resources in any country are very important in identifying any particular group of people. Across the state some cultures, rivers, mountains, trees, shrines etc., are revered. However, there are no cultural resources along the 5 pilot roads considered for the maintenance component.

4.6 Summary of Environmental & Social Baseline Conditions

This section presents a summary of the critical environmental and social baseline, identified in the 5-Pilot roads. Environmental sensitivities observed were mainly erosion and gully formation, electricity poles and some collapsed culverts, while social sensitivities were mainly exposed utility pipes, schools and markets in proximity to the project roads. It is noteworthy that no assets will be affected during the maintenance phase. Borrow pits may be created for mechanized maintenance works, proper transactional agreements will be appropriately documented and a borrow pit management plan is presented in annex 17. Some of these are represented in table 8 below, while additional information on locations and pictures is provided in table 8.

\(^2\) [http://population.city/nigeria/adm/enugu/](http://population.city/nigeria/adm/enugu/)
Table 8: Environmental & Social Sensitivities in the Project Locations

<table>
<thead>
<tr>
<th>Lots</th>
<th>Name of Road</th>
<th>LGA</th>
<th>Environmental Issues/Sensitivities</th>
<th>Social Sensitivities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot1</td>
<td>Ngwuru Junction – Lejja Road</td>
<td>Nsukka/ Udenu</td>
<td>Gully formation from Ama-Eze village in Ejioha Lejja (N06 45 048 E007 21 704)</td>
<td>Electricity Poles near road</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nsukka/ Udenu</td>
<td>Drainage - run off/erosion issues – N06 45 240 E007 21 944</td>
<td>Market along road</td>
</tr>
<tr>
<td>Lot 1</td>
<td>UNN Green House – Owerre Ezeorba – Orie Ora Market road with spur to Nkwo Ora Umuafia – Agbamere road</td>
<td>Nsukka/ Udenu</td>
<td>Waste in drains– N06 26 270 E007 26 772</td>
<td>Ofukara market - N06 51 508 W007 27 259</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Erosion issues – N06 51 838 E007 25 582</td>
<td>Water pipes exposed by erosion</td>
</tr>
<tr>
<td>Lot 2</td>
<td>Ogbugbuagu Iwolo – Imezi Olo – Amadim Oo Road with spur to Ukwuagba Okpogho Bore hole Center</td>
<td>Ezeagu</td>
<td>Erosion issues – N06 26 090 E007 16 006</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------</td>
<td>--------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Lot 3</td>
<td>Amtu Isube – Aguluilonze – Community Secondary School Nze</td>
<td>Igbo Eti/Udi</td>
<td>Collapsed box culvert</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>water pipeline along road – N06 42 089 N007 20 793</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Houses along road – N06 42 201 E007 20 112</td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER FIVE: DESCRIPTION OF ENVIRONMENTAL AND SOCIAL IMPACTS

5.1 Background

Field inspections and observations, concerns arising from stakeholder consultations, project description and designs formed the basis for the identified potential environmental and social issues and impacts likely to be associated with the proposed RAMP2 road maintenance intervention sub-project.

5.2 Project Area of Influence

The immediate geographical area of influence of work is the land area identified for the 5-pilot roads of this sub-project. The larger geographical area of influence covers Udi, Nsukka, Igbo-Etiti, Udenu and Ezeagu Local Government Areas of Enugu State.

5.2.1 Physical Environmental & Social Media Influence

The physical environmental media to be potentially influenced by the activities of the proposed project are land (landscape), air quality, groundwater and any adjacent drain to any of the project sites. The landscape features include soil, flora and fauna at the proposed project site, which will be impacted by the project activities. Any adjacent drain to any of the project sites will be the recipient of runoff water from the project site. Any percolation of fuels through the soil may impact on groundwater resources. The air quality may also be impacted by dust and gaseous emissions from construction activities.

Also to be considered, the social media to be influenced by this project includes activities such as physical or economic displacement and mobilization of workforce with accompanying challenges such as labour influx, GBV etc.

5.3 Project Activities of Environmental and Social Concern

Activities of potential environmental and social impacts identified with the proposed project are outlined under four (4-No.) phases of the project activities as shown in table 9; namely preconstruction; construction; operations/maintenance and decommissioning phases as shown in table 9.

Table 9: Project Phases & Activities

<table>
<thead>
<tr>
<th>Project Phase</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Maintenance</td>
<td>• Marking of road right of way (ROW)</td>
</tr>
<tr>
<td></td>
<td>• Preparation of staging area</td>
</tr>
<tr>
<td></td>
<td>• Mobilization of plant, equipment &amp; personnel to site</td>
</tr>
<tr>
<td></td>
<td>• Creation of borrow pits</td>
</tr>
<tr>
<td></td>
<td>• Siting of workers camp, if necessary</td>
</tr>
<tr>
<td></td>
<td>• Clearing of overgrown vegetation</td>
</tr>
<tr>
<td>Maintenance</td>
<td>• Clearing of culverts and trenches of solid waste and silt</td>
</tr>
<tr>
<td>Phase</td>
<td>• Routine inspection of drainage structures and road (pavement) surface</td>
</tr>
<tr>
<td></td>
<td>• Scheduled &amp; unscheduled integrity checks for culvert structural components</td>
</tr>
<tr>
<td></td>
<td>(foundation, joins etc.)</td>
</tr>
<tr>
<td></td>
<td>• Maintenance of erosion control structures, fencing walls screens and other</td>
</tr>
<tr>
<td></td>
<td>environmental barriers</td>
</tr>
<tr>
<td></td>
<td>• Sub-grade preparation</td>
</tr>
<tr>
<td></td>
<td>• Routine maintenance and replacement of wearing/faulty/damaged parts (e.g.</td>
</tr>
<tr>
<td></td>
<td>binder)</td>
</tr>
</tbody>
</table>
5.4 Potential Positive Impacts
The potential positive impacts of the proposed sub project are stated and evaluated in Table 10.

Table 10: Evaluation of potential positive impacts.

<table>
<thead>
<tr>
<th>No.</th>
<th>Impact</th>
<th>Key receptor(s)</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sustained access to rural communities by enhancing transport conditions.</td>
<td>Communities along rural roads of intervention areas</td>
<td>The maintenance works will improve public road access to rural communities and ease of transport.</td>
</tr>
<tr>
<td>2</td>
<td>Employment generation</td>
<td>Community members, local contractors, businesses and food sellers</td>
<td>The proposed road maintenance sub-project will create employment opportunities for skilled and unskilled labour during the construction and operational phases. Also, there are indirect employment opportunities for food vendors, petty traders and suppliers of raw materials for construction. During the operational phase, job opportunities will be created for maintenance workers and suppliers, waste management companies, etc.</td>
</tr>
<tr>
<td>3</td>
<td>Improvement in local and national economy</td>
<td>Neighbouring communities, LGA and national economy</td>
<td>The creation of direct and indirect job opportunities during the construction and operational phases of the project will boost the local and national economy</td>
</tr>
</tbody>
</table>

5.5 Potential Adverse Environmental and Social Impacts Associated with the Proposed Project
The adverse environmental and social issues, which could potentially arise from the proposed project activities, are stated and evaluated in Table 11.
Table 11: Potential Adverse Impacts

<table>
<thead>
<tr>
<th>POTENTIAL ADVERSE IMPACTS</th>
<th>SOCIAL IMPACTS</th>
<th>ENVIRONMENTAL IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SOCIAL IMPACTS</strong></td>
<td>• Increase in security risks due to storage of materials and equipment on site</td>
<td>• Deterioration of local air quality due to the emission of dusts &amp; gases</td>
</tr>
<tr>
<td></td>
<td>• Threat to community culture, safety and security due to presence of workers.</td>
<td>• Noise and vibration disturbances from operation of heavy-duty vehicles</td>
</tr>
<tr>
<td></td>
<td>• Increase in the demand on existing community health and sanitation infrastructure</td>
<td>• Surface water contamination from sediment-laden runoffs</td>
</tr>
<tr>
<td></td>
<td>• Increase in movement of cars and motorbikes within the communities, with potential to increase the rate of traffic accidents and injuries.</td>
<td>• Soil degradation may result from spillage of fuels, lubricants and other toxic materials.</td>
</tr>
<tr>
<td></td>
<td>• Increase in risk of communicable diseases such as HIV/AIDS and other STIs: due to influx of migrant workers, hawkers etc.</td>
<td>• Loss of vegetation and fauna habitat destruction</td>
</tr>
<tr>
<td></td>
<td>• Gender-based violence risk: Exploitation, molestation and violence against women and the girl child may occur given the potential increase in population and mix of group of people from different backgrounds.</td>
<td>• Predisposition to soil erosion due to the removal of vegetal cover.</td>
</tr>
<tr>
<td></td>
<td>• Loss of employment for temporary workers after construction</td>
<td>• Landscape disruption and visual intrusion</td>
</tr>
<tr>
<td></td>
<td>• Increase in number of persons with respiratory and eye problems from exposure to dusts and gaseous gases during operation of phase of the roads</td>
<td>• Increase in waste burden from waste generation which could also become breeding grounds for disease vectors and cause contamination of soil and water</td>
</tr>
<tr>
<td></td>
<td>Increase in number of persons with hearing impairments due to noise exposure</td>
<td>• Occupational accidents and injuries to workers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Community health and safety risks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Poorly managed and unreclaimed borrow pits and staging areas could become hazards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Public utilities like electric poles may be affected during annual mechanized activities</td>
</tr>
</tbody>
</table>
CHAPTER SIX: ENVIRONMENTAL AND SOCIAL MITIGATION AND MANAGEMENT PLAN

6.0 Introduction

The Environmental and Social Management Plan (ESMP) is a detailed plan and schedule of measures necessary to minimize, mitigate or control any potential negative environmental and social impacts identified under this sub-project.

These ESMPs have been developed separately for the 5-Pilot roads to meet international and national standards on environmental and social (E&S) performance and covers the project implementation phases (i.e. pre-construction, construction and operation phases) of the sub-project. Furthermore, it details the mitigation and enhancement measures the Enugu SPIU and their Contractors will be committed to implement throughout sub-project implementation and desired outcomes, performance indicators, monitoring, timing for actions and responsibilities.

6.1 Institutional Arrangements for Implementation

The successful implementation of the ESMP will depend on the commitment and capacity of the State Project Implementation Unit (SPIU), Contractors and other third parties (institutions) to implement the program effectively. The roles and responsibilities of those that will be involved in the implementation and monitoring of this ESMP are described in Table 12.

Table 12: Roles and Responsibility of Institutions to implement the ESMP

<table>
<thead>
<tr>
<th>Institution</th>
<th>Responsibilities</th>
</tr>
</thead>
</table>
| RAMP SPIU                                        | • Management, implementation, monitoring and compliance of the ESMP, and any approval conditions, including construction supervision and performance of all Project staff, contractors and subcontractor  
  • Review of ESMP performance and implementation of correction actions  
  • Stop work procedures, in the event of breaches of ESMP conditions that may lead to serious impacts on local communities, or affect the reputation of the Project  
  • Ensure effective communication and dissemination of the content and requirements of the ESMP to contractors and subcontractors  
  • Ensure compliance to all project social commitments, including implementation of the social management plans  
  • Ensure effective community liaison and fulfill commitments to facilitate public consultation throughout the project cycle  
  • Liaise with other relevant State Government MDAs, Federal Government MDAs, CBOs and NGOs for effective implementation of the ESMP |
| Environmental and Social Safeguard Unit – SPIU   | • Review all ESIs/ESMPs documents prepared by environmental and social consultants and ensure adequacy under the World Bank Safeguard policies  
  • Ensure that the project design and specifications adequately reflect the recommendations of the ESIs/ESMPs  
  • Co-ordinate application, follow up processing and obtain requisite clearances required for the project  
  • Liaise with the Federal and State Ministries of Environment to disclose safeguard documents  
  • Develop, organize and deliver training program for the PIU staff, the contractors and others involved in the project implementation, in collaboration with the PIU Review and approve the Contractor’s ESMP |

Page 23
<table>
<thead>
<tr>
<th>Institution</th>
<th>Responsibilities</th>
</tr>
</thead>
</table>
| ESMP - Enugu RAMP-2 Community Based and Mechanized Road Maintenance of 5 Pilot Roads | • Liaise with various Central and State Government agencies on environmental, resettlement and other regulatory matters  
  • Continuously interact with the NGOs and community groups that would be involved in the project  
  • Establish dialogue with the affected communities and ensure that the environmental and social concerns and suggestions are incorporated and implemented in the project  
  • Review the performance of the project through an assessment of the periodic environmental and social monitoring reports; provide a summary of the same to the Project Manager, and initiate necessary follow-up actions  
  • Prepare monthly environmental safeguards reports for the attention of the FPMU Safeguards unit  

| Environmental and Social Safeguard Unit (ESSU-FPMU)                          | • Provide guidance for ESMP implementation  
  • Conduct safeguard due diligence to the State  
  • Review safeguard reports including ESIA/ESMP/RAP/ARAP  
  • Review monthly safeguard reports and provide recommendations and action plan to the ESSU-SPIU  

| Grievance Redress Committee (GRC)                                            | • Receive and record complaints and redress accordingly  
  • A critical actor in the operation of the Grievance Redress Mechanism (GRM) set for the project  

| Enugu State Ministry of Environment                                         | • Responsible for environmental performance of RAMP  
  • Monitor, evaluate and audit the implementation of the ESMP to ensure that the rehabilitation works and project operations meet “best environmental practices”  

| Construction Contractor                                                     | • Ensure all contractors and workers sign the Code of Conduct (CoC) and are routinely trained on the contents of the CoC  
  • Compliance to BOQ specification in procurement of material and construction  
  • Prepare C-ESMP for approval of ESSU-SPIU  
  • Ensure that all construction personnel and subcontractors are trained on the content of the C-ESMP and are made aware of the required measures for environmental and social compliance and performance  
  • Prepare and implement Campsite, Staging Area management Plan for the pre-construction phase, construction and decommissioning phase  
  • Prepare OHS manual and abide by labor laws as set out in the agreement  
  • Provide adequate basic amenities and PPEs to workers, and ensure that the PPEs are worn by workers during work  
  • Prepare and maintain records and all required reporting data as stipulated by the ESMP, for submission to the Supervising Consultant  

| Supervision Consultant (Environmental and Social Officers)                  | • Prepare and implement Environmental and Social Monitoring Plan during construction Supervise contractor performance of implementation of the Construction Campsite/Staging area Camp Management Plan/C-ESMP  
  • Report any incidents or non-compliance with the C-ESMP to the ESSU-SPIU  
  • Ensure adequate training and education of all staff involved in environmental supervision  
  • Prepare monthly safeguards report including recommendations to the RAMP regarding ESMP performance as part of an overall commitment to continuous improvement  

| Federal Ministry of Environment                                             | • Register ESIs/ESMPs in the Ministry’s database  
  • Provide guidance for disclosure of safeguard documents in-country  

<table>
<thead>
<tr>
<th>Institution</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Ministry of Agriculture and Rural Development</td>
<td>Supervise the Enugu state rural access road projects implementation, management and monitoring program.</td>
</tr>
</tbody>
</table>
| World Bank/AFD | • Overall supervision and provision of technical support and guidance  
• Recommend additional guidance for strengthening the management framework and implementation performance  
• Conduct due diligence to ensure project environmental and social sustainability |
| Local Govt/ Community leaders/ Traditional Leaders | • Inform communities about the project  
• Ensure conducive social atmosphere for the execution of the project in their various communities  
• Act as intermediaries between the project implementation team and the communities  
• Assist in the recruitment of local workers during the construction activities and be involved in all grievance and conflict resolutions |
| Communities | • Communities to participate fully in road maintenance activities  
• Nominate vigilantes to support project security concerns |
| NGOs/CBOs | • Work with community members throughout the project.  
• Drive community approaches to road maintenance  
• Be involved in the monitoring activities, participate in Health awareness campaigns  
• Assisting in their respective ways to ensure effective response actions during the palliative works, Awareness campaigns and as 3rd party monitors |
| Federal Road Safety Corps (FRSC), Enugu State/Vehicle Inspection Office (VIO), Enugu State; Enugu State Road Maintenance Agency | • Control and manage traffic throughout project implementation  
• Ensure vehicles operate within allowable emission limits  
• Discourage counter road safety practices among road users |
| Nigeria Police Force (NPF), Enugu State Command | • Work with community leaders to ensure security during construction and operation phases of the project |
| GBV Specialist | • Mapping of services for survivors of SEA and addressing GBV risk and protection from SEA |
| Public Health Dept. | • In collaboration with the Contractor, shall implement mitigation measures that address public health issues. |
| Supervising Engineer | • Provides an independent oversight ensuring contractor adhere strictly to the engineering specifications |
| Enugu State Environmental Protection Agency | • The agency will ensure implementation of measures that concern the biophysical environment and waste management |

6.2 Mitigation/Action Plan

Mitigation and management measures for the significant adverse impacts identified from the analysis and evaluation of the potential impacts from the proposed project activities are provided in tables 13 - 17.
Table 13: Environmental & Social Impact Mitigation and Monitoring Plan for Ngwuru Junction – Lejja Road  
(Table A)

<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility</th>
<th>Responsibility (Implementation/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-maintenance Phase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Soil impacts and sediment transport            | Air, Water & Noise pollution                          | * Periodic maintenance of vehicles and equipment according to repair revision programme.  
* Use of good quality lubricants and fuel.  
* Sprinkling of water during dry periods to prevent dust.  
* Burning of wastes on site should be avoided to reduce air pollution. (see WMP in annex 8)  
Ensure that workers are kitted with ear muffs | Contractor | 100,000.00 | Observation of air borne particulates (dust) and exhaust fumes -  
* Records of dust level measurements (dust concentration should be below 150µg/m³)  
* Records of dampening of Maintenance sites and routes for vehicles/trucks | Levels of air, water and noise parameters based on FMEnv limits | Daily | Maintenance period | Environmental Safeguards Officer (ESO) PIU, SMEnv | 30,000.00 |
| Mobilising of machinery & equipment            |                                                       |                                     |                |      |                           |                       |                      |                     |              |                                             |                     |
| Mobilising of machinery & equipment            | Occupational health & safety risks  
Community health & safety | Develop and implement a project specific Occupational Health and Safety Plan (OHSP). OHSP to include but not limited to:  
Provide and enforce the use of appropriate personal protective equipment (PPE) such as safety boots, reflective jackets, hard hats, hand gloves, earplugs, nose masks, etc. for the labour force  
* All workers should be given proper induction/orientation on safety.  
* The contractors should have a Health & Safety Policy to guide the road maintenance activities.  
* Ensure first aid kits are available on site and assign a trained person to administer first aid. (see OHS annex 9)  
* implement borrow pit mgt. plan (see annex 13)  
ensure toolbox talks are held, prior to work activities | Contractor | 200,000.00 | Availability of first aid kit  
* Adherence to health and safety procedures  
* Records on frequency, type and source of illness/accident/injury -  
Observation of compliance or otherwise  
Records of Lost time due to Injury (LTI) Reportable cases, generally Availability and proper use of PPEs | Absence of accidents/incident reports  
Compliance to HSE provisions | Daily | Environment Safeguards Specialist | 000.00 |
## Activities

<table>
<thead>
<tr>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementation/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
</table>
| Site clearing and excavation works | - Habitat loss to economic crops, trees or assets  
  - Contamination from spillages and leaks  
  - Vegetation (grass) should be cleared only when contractor is fully mobilised for Maintenance.  
  - Vegetation clearance (where necessary) and excavations should be limited to the demarcated Maintenance areas.  
  - Maintain existing road alignment in areas where economic crops are close to ROW and ensure no damage to crops, trees or property.  
  - Ensure regular maintenance of operational vehicles and the use of manufacturer-approved parts to | Contractor | 50,000.00 | Leakages, spills or vegetation removal | Vehicle/equipment maintenance records | Absence of spills & leaks | Limited cleared areas to only necessary areas | Adequately implemented PCR | ESO, SMEnv | Weekly  
  As required (when OP 4.11 is triggered) | 27 |
|  | - Prohibition of drug and alcohol use by workers while on the job.  
  - Provision of adequate first aid, first aiders, PPE, signs (English and Igbo languages).  
  - Restriction of unauthorized access to all areas of high risk activities  
  - Provision of specific personnel training on worksite OHS management 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 signage integrated in all work sites for safety at night  
  - Appropriate security measures in place to prevent harassment or kidnapping of workers  
  - Safety Statistics boards at laydown yards and entrances to the perimeter barricade;  
  - Safety instructions at the entrances;  
  - Project sign posts should be placed along the project area | | | | | | | |

*Habitat loss to economic crops, trees or assets*  
*Contamination from spillages and leaks*  
*Vegetation (grass) should be cleared only when contractor is fully mobilised for Maintenance.*  
*Vegetation clearance (where necessary) and excavations should be limited to the demarcated Maintenance areas.*  
*Maintain existing road alignment in areas where economic crops are close to ROW and ensure no damage to crops, trees or property.*  
*Ensure regular maintenance of operational vehicles and the use of manufacturer-approved parts to.*
<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementati on/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Chance find of physical and cultural resources</td>
<td>minimize potentially serious accidents caused by equipment malfunction.</td>
<td>* adopt chance find procedure in annex 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ESO, SSO, Concerned LGA</td>
<td>-</td>
</tr>
<tr>
<td>Creation of borrow pits</td>
<td>Land degradation</td>
<td>Comply with borrow pit management plan (annex 13)</td>
<td>Contractor</td>
<td>-</td>
<td>Report of PCR findings</td>
<td>Visual observation</td>
<td>Adequately implemented Borrow pit management plan</td>
<td>During siting of borrow pits</td>
<td>ESO, SSO, Concerned LGA</td>
<td>-</td>
</tr>
<tr>
<td>Social Impacts</td>
<td>Landslides, erosion, workers accident</td>
<td>Comply with borrow pit management plan (annex 13)</td>
<td>Contractor</td>
<td>-</td>
<td>Grievances/complaints</td>
<td>Review of site log</td>
<td>Adequately implemented Borrow pit management plan</td>
<td></td>
<td>ESO, SSO, Concerned LGA</td>
<td>-</td>
</tr>
<tr>
<td>Mobilisation of Contractors for Annual</td>
<td>Landslides, erosion, workers accident</td>
<td>Comply with borrow pit management plan (annex 13)</td>
<td>Contractor</td>
<td>50,000</td>
<td>Incident Report</td>
<td>Consultations</td>
<td>Community perception and level of satisfaction</td>
<td>Weekly</td>
<td>ESO, Community Leaders</td>
<td>-</td>
</tr>
<tr>
<td>Mechanised Maintenance</td>
<td>Increased risk of illicit behaviour</td>
<td>Comply with borrow pit management plan (annex 13)</td>
<td>Contractor</td>
<td>50,000</td>
<td>Incident Report</td>
<td>Consultations</td>
<td>Community perception and level of satisfaction</td>
<td>Weekly</td>
<td>ESO, Community Leaders</td>
<td>-</td>
</tr>
<tr>
<td>Creation/Utilisation of borrow pits</td>
<td>Grievances in acquisition/locati on of borrow pit areas/ abandoned pits</td>
<td>Implement Borrow pit remediation plan Ensure properly documented transactional agreement for borrow pit siting</td>
<td>Contractor</td>
<td>50,000</td>
<td>Guildance/Complaints</td>
<td>Review of agreement</td>
<td>Community perception and level of satisfaction</td>
<td>During borrow pit siting</td>
<td>ESO, SSO</td>
<td>-</td>
</tr>
<tr>
<td>Road maintenance &amp; rehabilitation</td>
<td>Grievances in acquisition/locati on of borrow pit areas/ abandoned pits</td>
<td>Implement Borrow pit remediation plan Ensure properly documented transactional agreement for borrow pit siting</td>
<td>Contractor</td>
<td>50,000</td>
<td>Guildance/Complaints</td>
<td>Review of agreement</td>
<td>Community perception and level of satisfaction</td>
<td>During borrow pit siting</td>
<td>ESO, SSO</td>
<td>-</td>
</tr>
<tr>
<td>Environmental Issues</td>
<td>Generation and disposal of waste</td>
<td>* Comply with waste management plan (see sample in annex 8)</td>
<td>Contractor</td>
<td>100,000</td>
<td>Waste management plan</td>
<td>Visual observation</td>
<td>Compliance to waste management plan</td>
<td>Daily</td>
<td>ESO, PIU Engineer, SMEgov</td>
<td>30,000.00</td>
</tr>
<tr>
<td>Mechanised road Maintenance activities, civil</td>
<td>* Comply with waste management plan</td>
<td>* Comply with waste management plan (see sample in annex 8)</td>
<td>Contractor</td>
<td>100,000</td>
<td>Waste management plan</td>
<td>Visual observation</td>
<td>Compliance to waste management plan</td>
<td>Daily</td>
<td>ESO, PIU Engineer, SMEgov</td>
<td>30,000.00</td>
</tr>
<tr>
<td>works, groundworks</td>
<td>* Purchase the right quality and quantity of materials;</td>
<td>* Comply with waste management plan (see sample in annex 8)</td>
<td>Contractor</td>
<td>100,000</td>
<td>Waste management plan</td>
<td>Visual observation</td>
<td>Compliance to waste management plan</td>
<td>Daily</td>
<td>ESO, PIU Engineer, SMEgov</td>
<td>30,000.00</td>
</tr>
<tr>
<td></td>
<td>* Reuse excavated soil material for backfilling and levelling if appropriate.</td>
<td>* Comply with waste management plan (see sample in annex 8)</td>
<td>Contractor</td>
<td>100,000</td>
<td>Waste management plan</td>
<td>Visual observation</td>
<td>Compliance to waste management plan</td>
<td>Daily</td>
<td>ESO, PIU Engineer, SMEgov</td>
<td>30,000.00</td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementation/ Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>------------</td>
<td>---------------------------</td>
<td>-----------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Mechanised road Maintenance activities, civil works, groundworks</td>
<td>Occupational health and safety (OHS) issues at staging area. Borrow pit site, construction site, workers campsite</td>
<td>* Develop and implement a project specific Occupational Health and Safety Plan (OHSP). OHSP to include but not limited to: Provide and enforce the use of appropriate personal protective equipment (PPE) such as safety boots, reflective jackets, hard hats, hand gloves, earplugs, nose masks, etc. for the labour force  * All workers should be given proper induction/orientation on safety.  * The contractors should have a Health &amp; Safety Policy to guide the road maintenance activities.  * Ensure first aid kits are available on site and assign a trained person to administer first aid. (see OHS annex 9)  * implement borrow pit mgt plan (see annex 13)  ensure toolbox talks are held prior to work activities  - Prohibition of drug and alcohol use by workers while on the job.  - Provision of adequate first aid, first aiders, PPE, signages (English and Igbo languages).  - Restriction of unauthorized access to all areas of high risk activities  - Provision of specific personnel training on worksite OHS management</td>
<td>Contractor</td>
<td>150,000.00</td>
<td>Availability of first aid kit - Adherence to health and safety procedures - Records on frequency, type and source of illness/accident/injury</td>
<td>Absence of accidents/incident reports  - Compliance to HSE provisions</td>
<td>Daily</td>
<td>Environ Safeguards Specialist</td>
<td>40,000.00</td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementation/Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>------------</td>
<td>------------------</td>
<td>--------------------------------------</td>
<td>----------------</td>
<td>------</td>
<td>---------------------------</td>
<td>-----------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>-------------------------------------------</td>
<td>-------------------</td>
</tr>
</tbody>
</table>
|            |                  | - 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  
Safety Statistics boards at laydown yards and entrances to the perimeter barricade;  
Safety instructions at the entrances;  
Project sign posts should be placed along the project area | Contractor | 40,000.00 | Provision of bins  
Use of bins provided  
Records of non-compliance | Observed provisions of bins and storage containers | Good housekeeping at the site areas | Daily | ESO, SSO, SMEnv |
<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost (NGN)</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementation/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of road</td>
<td>Public Safety</td>
<td>* Ensure speed &amp; safety signs are provided at strategic areas to prevent over-speeding by motorists and road users, for example, in areas approaching school crossings. * Restrict unauthorized access to all areas of high-risk activities * Any uncovered work pits should have appropriate signage and protection around them * Lighting and/or reflective tapes and signages integrated in all worksites for safety at night</td>
<td>Contractor</td>
<td>150,000.00</td>
<td>Availability of public signs especially approaching road crossings Incident/accident reports</td>
<td>Visual observation of warning signs</td>
<td>Zero incident/accident report</td>
<td>Daily</td>
<td>ESO, SSO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community health &amp; safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>State Ministry of Works</td>
<td></td>
</tr>
<tr>
<td>Social Impacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hiring of Contractor Workers</td>
<td>Influx of Additional Population (&quot;Followers&quot;)</td>
<td>* Carry out consultations to raise awareness on labour influx within Local Communities * 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. * Define and offer quota of unskilled workers opportunities to communities * Development of a detailed and site-specific labor influx management plan. * Prioritize the hiring of the locals for qualified skilled and unskilled work * Ensure that all workers are trained on the contents of the Code of Conduct and have them signed. The training should be done in both English and the local language for ease in understanding * Train women in variety of skilled trades</td>
<td>Contractor</td>
<td>50,000.00</td>
<td>Employment document, Number of signed Code of conduct, number of grievances/complaints received, number of women engaged in work, number of local workforce employed, level of awareness of local culture by migrant workers</td>
<td>Event Report/Complaints received, resolution documented</td>
<td>Level of implementation of measures outlined</td>
<td>Quarterly</td>
<td>Consultant, ESO, SSO</td>
<td>100,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road maintenance &amp; rehabilitation works</td>
<td>Increased Communicable diseases (including STDs)</td>
<td>* Awareness raising about public health impacts from labor influx * Information campaigns on STDs among the workers and local community</td>
<td>SSO, relevant health-based NGO/CBO</td>
<td>100,000.00</td>
<td>The level of awareness of the participants, Number of Event Report/Complaints received,</td>
<td>Event Awareness conducted</td>
<td>Quarterly/At the beginning of the SPIU Public Health department</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Activities

<table>
<thead>
<tr>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementaton/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV/AIDS</td>
<td>community in collaboration with State Agency for Control of AIDS, - Implementation of HIV/AIDS education program - Training on and signing of contractor workers Code of Conduct</td>
<td>Safeguards Unit, GRC</td>
<td>100,000.00</td>
<td>health campaigns organized, number of complaints/grivances received.</td>
<td>resolution documented</td>
<td>Review of Grievance log to check resolved issues</td>
<td>Weekly</td>
<td>SPIU</td>
<td></td>
</tr>
<tr>
<td>Road maintenance &amp; rehabilitation works</td>
<td>Grievances</td>
<td>Enugu RAMP2 Safeguards Specialist, GRC</td>
<td>50,000.00</td>
<td>Public complaints</td>
<td>Number of complaints received, Number of referrals to GBV Service providers</td>
<td>Consultations with communities</td>
<td>Weekly</td>
<td>FPMU Social Safeguard Officer</td>
<td></td>
</tr>
<tr>
<td>Gender Based Violence (GBV)</td>
<td>* Implement all GBV measures outlined for RAMP 2 (see code of conduct annex 3)  * Awareness raising campaigns on gender-based violence  * 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*</td>
<td>Contractor</td>
<td>100,000.00</td>
<td>Revegetated areas</td>
<td>Visual observation</td>
<td>Revegetation of cleared areas</td>
<td>Weekly</td>
<td>ESO SMEnv</td>
<td></td>
</tr>
</tbody>
</table>

### Decommissioning

<p>| All decommissioning activities | Land/ Waste management Risks from Abandoned borrow pit | Revegetate areas around workers camp &amp; Maintenance equipment sites to restore the landscape.  * Ensure that any remaining waste streams created during Maintenance activities and waste generated during | Contractor | 100,000.00 | Revegetated areas On-site waste management | Weekly | ESO SMEnv | |</p>
<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performanc e Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementati on/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>decommissioning activities are collected from the project sites and properly disposed before handing over the project. * Ensure reclamation of borrow pit(annex 13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>contractors from site</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,100,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>250,000.00</td>
</tr>
</tbody>
</table>

Table 14: Environmental & Social Impact Mitigation and Monitoring Plan for UNN Green House – Owerre Ezeorba – Orie Orba Market road with spur to Nkwo Orba Umuafia – Agbamere road Road (Table B)

<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performanc e Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementati on/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil impacts and sediment transport</td>
<td>Air, Water &amp; Noise pollution</td>
<td>* Periodic maintenance of vehicles and equipment according to repair revision programme. * Use of good quality lubricants and fuel. * Sprinkling of water during dry periods to prevent dust. * Burning of wastes on site should be avoided to reduce air pollution. (see WMP in annex 8) Ensure that workers are kitted with ear muffs Ensure exposure of workers to noise is not beyond acceptable limit</td>
<td>Contractor</td>
<td>100,000.00</td>
<td>Observation of air borne particulates (dust) and exhaust fumes</td>
<td>- Records of dust level measurements (dust concentration should be below 150μg/m³)</td>
<td>- Records of dampening of Maintenance sites and routes for vehicles/trucks</td>
<td>Levels of air, water and noise parameters based on FMEnv limits</td>
<td>Daily During Maintenance period</td>
<td>50,000.00</td>
</tr>
<tr>
<td>Mobilising of machinery &amp; equipment</td>
<td>Occupational health &amp; safety risks</td>
<td>Develop and implement a project specific Occupational Health and Safety Plan (OHSP). OHSP to include but not limited to: Provide and enforce the use of appropriate personal protective equipment (PPE) such as safety boots, reflective jackets, hard hats, hand gloves, earplugs, nose masks, etc. for the labour force * All workers should be given proper induction/orientation on safety.</td>
<td>Contractor</td>
<td>150,000.00</td>
<td>Availability of first aid kit -Adherence to health and safety procedures - Records on frequency, type and source of illness/accide nt/injury</td>
<td>Rainy season drainage checks</td>
<td>Observation of compliance or otherwise Records of Lost time due to Injury (LTI) Reportable cases, generally</td>
<td>Daily (throughout the maintenance period)</td>
<td>ESO, PIU Engineer State Ministry of Works</td>
<td>50,000.00</td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementati on/Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>--------</td>
<td>--------------------------</td>
<td>-----------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Site clearing and excavation works</td>
<td>• Habitat loss *Damage to economic crops, trees or physical assets</td>
<td>* The contractors should have a Health &amp; Safety Policy to guide the road maintenance activities.</td>
<td>Contractor</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>* Contamination from spillages and leaks</td>
<td>* Ensure first aid kits are available on site and assign a trained person to administer first aid. (see OHS annex 9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Chance find of physical and cultural resources</td>
<td>* implement borrow pit mgmt. plan (see annex 13) ensure toolbox talks are held prior to work activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Vegetation (grasses) should be cleared only when contractor is fully mobilised for Maintenance.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Vegetation clearance (where necessary) and excavations should be limited to the demarcated Maintenance areas.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Maintain existing road alignment in areas where economic crops are close to ROW and ensure no damage to crops, trees or property.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Ensure regular maintenance of operational vehicles and the use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Adopt chance find procedures (see annex 7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creation of borrow pits</td>
<td>Land degradation</td>
<td>Comply with borrow pit management plan (annex 13)</td>
<td>Contractor</td>
<td>50,000</td>
<td>Leakages, spills or vegetational removal</td>
<td>Vehicle/equipment maintenance records</td>
<td>Absence of spills &amp; leaks</td>
<td>Limited cleared areas to only necessary areas</td>
<td>ESO, SSO, Concerned LGA</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Landslides, erosion, workers accident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Community health &amp; safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Impacts</td>
<td>Threat to community</td>
<td>All workers to sign code of conduct (see annex 3)</td>
<td>Contractor</td>
<td>50,000</td>
<td>Incident Report</td>
<td>Consultations</td>
<td>Community perception</td>
<td>Weekly</td>
<td>SSO</td>
<td>-</td>
</tr>
<tr>
<td>Mobilisation of Contractors for for community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementation/Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>----------</td>
<td>---------------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Annual Mechanised Maintenance</td>
<td>culture, safety and security due to Labor Influx</td>
<td>Training of workers on CoC, GBV/SEA, STIs/STDs</td>
<td></td>
<td></td>
<td>Grievance Log</td>
<td>Review of Log/ site reports</td>
<td>and level of satisfaction</td>
<td>Community Leaders</td>
<td>Community Leaders</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increased risk of illicit behavior</td>
<td>Implement Labor Influx plan (annex 12)</td>
<td></td>
<td></td>
<td>Consultation minutes</td>
<td>Training Report</td>
<td></td>
<td>ESO</td>
<td>SSO</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Implement the GRM procedures outlined in chapter seven</td>
<td></td>
<td></td>
<td>Evidence of training</td>
<td>Training Report</td>
<td></td>
<td>ESO</td>
<td>SSO</td>
<td></td>
</tr>
<tr>
<td>Creation of borrow pits</td>
<td>Grievances in acquisition/locati on of borrow pit areas/ abandoned pits</td>
<td>Ensure properly documented transactional agreement for borrow pit siting</td>
<td>Contractor</td>
<td>50,000</td>
<td>Transactional agreement</td>
<td>Review of agreement</td>
<td></td>
<td>Community perception and level of satisfaction</td>
<td>ESO</td>
<td>SSO</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Consultations/ interviews</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road maintenance &amp; rehabilitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Visual observation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Compliance to waste management plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanised road Maintenance activities, civil</td>
<td>Generation and disposal of waste</td>
<td>* Apply the principles of Reduce, Reuse and Recover for waste management. Provision of adequate</td>
<td>Contractor</td>
<td>100,000.00</td>
<td>Waste management plan</td>
<td>Visual observation</td>
<td>Compliance to waste management plan</td>
<td>Daily</td>
<td>ESO</td>
<td>30,000.00</td>
</tr>
<tr>
<td>works, groundworks</td>
<td></td>
<td>waste disposal containers/receptacles/skips for segregating waste from the different waste</td>
<td></td>
<td></td>
<td>Records on non-compliances</td>
<td>Complaints from community</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>streams such as road maintenance rubble, empty containers, bottles etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Purchase the right quality and quantity of materials;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Reuse excavated soil material for backfilling and levelling if appropriate.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Provide bins on site for temporary storage of domestic waste such as lubricant containers,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>drinking water sachets and carrier bags/packaging materials. Dispose all road Maintenance and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>domestic waste at approved dumpsites.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementati on/Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>------------</td>
<td>------------------</td>
<td>-------------------------------------</td>
<td>----------------</td>
<td>------</td>
<td>---------------------------</td>
<td>-----------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
<td>-------------------</td>
</tr>
</tbody>
</table>
| Mechanised road Maintenance activities, civil works, groundworks | Occupational health and safety (OHS) issues at staging area. Borrow pit site, construction site, workers campsite | * Provide and enforce the use of appropriate personal protective equipment (PPE) such as safety boots, reflective jackets, hard hats, hand gloves, earplugs, nose masks, etc. for the labour force.  
* All workers should be given proper induction/orientation on safety.  
* The contractors should have a Health & Safety Policy to guide the road maintenance activities.  
* Ensure first aid kits are available on site and assign a trained person to administer first aid.  
* Implement the borrow pit management plan (annex 13) | Contractor | 150,000.00 | Availability of first aid kit  
-Adherence to health and safety procedures  
-Records on frequency, type and source of illness/accident/injury | Observation of compliance or otherwise Records of Lost time due to Injury (LTI)  
Reportable cases, generally Availability and proper use of PPEs | Absence of accidents/incident reports  
Compliance to HSE provisions | Daily | Environ Safeguards Specialist |
| All Mechanised road maintenance phase activities | Sanitation issues and public health impacts | * Provide bins on site for temporary storage of domestic waste such as lubricant containers, drinking water sachets and carrier bags/packaging materials.  
* Dispose all Maintenance and domestic waste at the approved dumpsites and in the approved manner.  
* Ensure all trenches or excavations made during the Maintenance works do not collect stagnant water, which could breed mosquitoes. | Contractor | 50,000.00 | Provision of bins  
Use of bins provided Records of non-compliance | Observed provisions of bins and storage containers | Good housekeeping at the site areas | Daily | ESO, SSO, SMEnv |
| Use of road | Public Safety Community Health and safety | * Ensure speed & safety signs are provided at strategic areas to prevent over-speeding by motorists and road users, for example, in areas approaching school crossings.  
*Restrict unauthorized access to all areas of high-risk activities  
*Any uncovered work pits should have appropriate signage and protection around them  
* lighting and/or reflective tapes and signages integrated in all worksites for safety at night | Contractor | 40,000.00 | Availability of public signs especially approaching road crossings  
Records on frequency, type and source of illness/accident/injury  
-Absence of unauthorized persons at active | Visual observation of warning signs  
-Hoarding of site  
-Use of caution tape around trenches/ excavations | Zero incident/accident report | Daily | ESO, SO |

Enugu RAMP-2
<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementation/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Impacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Hiring of Contractor Workers | Influx of Additional Population ("Followers") | * Carry out consultations to raise awareness on labour influx within Local Communities  
* 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  
* Ensure that all workers are trained on the contents of the Code of Conduct and have them signed. The training should be done in both English and the local language for ease in understanding  
* Train women in variety of skilled | Contractor | 50,000.00 | Employment document, Number of signed Code of conduct, number of grievance/complaints received, number of women engaged in work, number of local workforce employed, level of awareness of local culture by migrant workers | Event Report | Level of implementation of measures outlined | Quarterly | Supervision Consultant, ESO, SSO | 50,000.00 |
| Road maintenance & rehabilitation works | Increased Communicable diseases (including STDs and HIV/AIDS) | Awareness raising about public health impacts from labor influx  
Information campaigns on STDs among the workers and local community in collaboration with State Agency for Control of AIDS.  
Implementation of HIV/AIDS education program; Training on and signing of contractor workers Code of Conduct | SSO, relevant health-based NGO/CBO | - | The level of awareness of the participants, Number of health campaigns organized, number of complaints/grievances received. | Event Report /Complaints received, resolution documented | Awareness conducted | Quarterly | SPIU, Public Health department | - |
## Activities

<table>
<thead>
<tr>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementati on/ Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Road maintenance &amp; rehabilitation works</strong></td>
<td>Grievances</td>
<td>* 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&lt;br&gt; * Follow GRM provision</td>
<td>GRC, Safeguards Unit</td>
<td>Public complaints &amp; receipt of grievances</td>
<td>Transportation for monitoring of Grievance Redress</td>
<td>Review of Grievance log to check resolved issues</td>
<td>Weekly</td>
<td>Social Safeguards Specialist</td>
</tr>
<tr>
<td></td>
<td>Gender Based Violence (GBV)</td>
<td>* Implement all GBV measures outline for RAMP 2&lt;br&gt; * Awareness raising campaigns on gender-based violence&lt;br&gt; Mandatory and regular training for workers on required lawful conduct in the project areas and legal consequences for failure to comply with laws;&lt;br&gt; * Commitment / policy to cooperate with law enforcement agencies investigating perpetrators of gender-based violence;&lt;br&gt; * Creation of partnership with local offices of the Ministry of Women Affairs and Social Development, NGOs and community women groups to report workers’</td>
<td>Enugu RAMP2 Safeguards Specialist, GRC</td>
<td>Public complaints</td>
<td>Number of complaints received, Number of referrals to GBV Service providers</td>
<td>Consultations with communities</td>
<td>Weekly</td>
<td>FPMU Social Safeguard Officer</td>
</tr>
</tbody>
</table>

## Decommissioning

| Land/ Waste management Risks from Abandoned borrow pit | * Re-vegetate areas around workers camp & Maintenance equipment sites to restore the landscape.<br> * Ensure that any remaining waste streams created during Maintenance activities and waste generated during decommissioning activities are collected from the project sites and properly disposed before handing over the project.<br> * Reclaim all borrow pits (see annex 13) | Contractor | Revegetated areas<br> On-site waste management | Visual observation<br> Revegetation of cleared areas<br> Compliance to waste management plan<br> Reclaimed borrow pits | Weekly<br> Upon demobilisation of contractors from site | ESO<br> SMEinv | 150,000.00 |

## Total

| 1,090,000.00 | 250,000.00 |
Table 15: Environmental & Social Impact Mitigation and Monitoring Plan for Ogbugbuagu Iwolo – Imezi Olo – Amadim Oo Road with spur to Ukwuagba Okpogho Borehole Center Road (Road C)

<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementation/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-maintenance Phase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Soil impacts and sediment transport | Air, Water & Noise pollution | * Periodic maintenance of vehicles and equipment according to repair revision programme.  
* Use of good quality lubricants and fuel.  
* Sprinkling of water during dry periods to prevent dust.  
* Burning of wastes on site should be avoided to reduce air pollution. (see WMP)  
Ensure that workers are kitted with earmuffs  
Ensure exposure of workers to noise is not beyond acceptable limit | Contractor | 150,000.00 | Observation of air borne particulates (dust) and exhaust fumes -  
Records of dust level measurements (dust concentration should be below 150µg/m³)  
Records of dampening of Maintenance sites and routes for vehicles/trucks | Levels of air, water and noise parameters based on FMEnv limits | Daily During Peak Maintenance period | Environmental Safeguards Officer (ESO) PIU, SMEnv | 30,000.00 |
| Mobilising of machinery & equipment | Occupational health & safety risks | Develop and implement a project specific Occupational Health and Safety Plan (OHSP). OHSP to include but not limited to:  
Provide and enforce the use of appropriate personal protective equipment (PPE) such as safety boots, reflective jackets, hard hats, hand gloves, earplugs, nose masks, etc. for the labour force  
* All workers should be given proper induction/orientation on safety.  
* The contractors should have a Health & Safety Policy to guide the road maintenance activities.  
* Ensure first aid kits are available on site and assign a trained person to administer first aid. (see OHS annex 9)  
* Implement borrow pit mgt. plan (see annex 13)  
ensure toolbox talks are held, prior to work activities | Contractor | 100,000.00 | Availability of first aid kit - Adherence to health and safety procedures  
- Records on frequency, type and source of illness/injury | Observation of compliance or otherwise Reports of Lost time due to Injury (LTI)  
Reportable cases, generally Availability and proper use of PPEs | Daily (throughout the maintenance period) | ESO, PIU Engineer State Ministry of Works | 20,000.00 |
<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementati on/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site clearing and excavation works</td>
<td>* Habitat loss * Damage to economic crops, trees or physical assets. * Contamination from spillages and leaks Chance find</td>
<td>* Vegetation (grasses) should be cleared only when contractor is fully mobilised for Maintenance. * Vegetation clearance (where necessary) and excavations should be limited to the demarcated Maintenance areas. * Maintain existing road alignment in areas where economic crops are close to ROW and ensure no damage to crops, trees or property. * Ensure regular maintenance of operational vehicles and the use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction. Adopt chance find procedures (annex 7)</td>
<td>Contractor</td>
<td>50,000.00</td>
<td>Leakages, spills or vegetational removal Complaints of non-compliance</td>
<td>Vehicle/equipment maintenance records Visual observations from monitoring</td>
<td>Absence of spills &amp; leaks Limited cleared areas to only necessary areas</td>
<td>Weekly</td>
<td>ESO, SMEnv</td>
<td></td>
</tr>
<tr>
<td>Creation of borrow pits</td>
<td>Land degradation Landslides, erosion, workers accident Community health &amp; safety</td>
<td>Comply with borrow pit management plan (annex 13)</td>
<td>Contractor</td>
<td>50,000.00</td>
<td>Report of PCR findings Grievances/complaints</td>
<td>Visual observation Review of site log</td>
<td>Adequately implemented Borrow pit management plan</td>
<td>During siting of borrow pit</td>
<td>ESO, SSO, Concerned LGA</td>
<td></td>
</tr>
<tr>
<td>Social Impacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobilisation of Contractors for Annual Mechanised Maintenance</td>
<td>Threat to community culture, safety and security due to Labor Influx Increased risk of illicit behavior</td>
<td>All workers to sign code of conduct (see annex 3) Training of workers on CoC, GBV/SEA, STIs/STDs Implement Labor Influx plan (annex 12) Implement GRM procedures in chapter seven</td>
<td>Contractor</td>
<td>50,000.00</td>
<td>Incident Report Grievance Log Consultation minutes Evidence of training</td>
<td>Consultations Review of Log/ site reports Training Report</td>
<td>Community perception and level of satisfaction</td>
<td>Weekly</td>
<td>SSO, Community Leaders</td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementation/Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>------------</td>
<td>--------------------------</td>
<td>------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Creation of borrow pits</td>
<td>Grievances in acquisition/locati on of borrow pit areas/ abandoned pits</td>
<td>Ensure properly documented transactional agreement for borrow pit siting</td>
<td>Contractor</td>
<td>50,000</td>
<td>Transactional agreement</td>
<td>Review of agreement consultations/ interviews</td>
<td>Community perception and level of satisfaction</td>
<td>During borrow pit siting</td>
<td>ESO, SSO</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road maintenance &amp; rehabilitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanised road Maintenance activities, civil works, groundworks</td>
<td>Generation and disposal of waste</td>
<td>* Apply the principles of Reduce, Reuse and Recover for waste management. Provision of adequate waste disposal containers/receptacles/skips for segregating waste from the different waste streams such as road maintenance rubble, empty containers, bottles etc. * Purchase the right quality and quantity of materials; * Reuse excavated soil material for backfilling and levelling if appropriate. * Provide bins on site for temporary storage of domestic waste such as lubricant containers, drinking water sachets and carrier bags/packaging materials. Dispose all road Maintenance and domestic waste at approved dumpsites.</td>
<td>Contractor</td>
<td>100,000.00</td>
<td>Waste management plan</td>
<td>Visual observation of compliance to waste management plan</td>
<td>Compliance to waste management plan</td>
<td>Daily</td>
<td>Consultant, ESO, PIU Engineer, SMEenv, State Ministry of Works</td>
<td>30,000.00</td>
</tr>
<tr>
<td>Mechanised road Maintenance activities, civil works, groundworks</td>
<td>Occupational health and safety (OH&amp;S) issues at staging areas, borrow pits, construction site, workers campsite</td>
<td>* Provide and enforce the use of appropriate personal protective equipment (PPE) such as safety boots, reflective jackets, hard hats, hand gloves, earplugs, nose masks, etc. for the labour force * All workers should be given proper induction/orientation on safety. * The contractors should have a Health &amp; Safety Policy to guide the road maintenance activities. * implement borrow pit mgt plan (annex 13) * Ensure first aid kits are available on site and assign a trained person to administer first aid.</td>
<td>Contractor</td>
<td>100,000.00</td>
<td>Availability of first aid kit - Adherence to health and safety procedures - Records on frequency, type and source of illness/accident/injury</td>
<td>Observation of compliance or otherwise - Records of Lost time due to Injury (LTI) - Reportable cases, generally Availability and proper use of PPEs</td>
<td>Absence of accidents/incident reports</td>
<td>Compliance to HSE provisions</td>
<td>Daily</td>
<td>Consultant, Envirion Safeguards Specialist</td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementati on/ Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------</td>
<td>------------------------------------</td>
<td>----------------</td>
<td>------</td>
<td>--------------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>---------------------------------------------</td>
<td>---------------------</td>
</tr>
</tbody>
</table>
| Mechanised road Maintenance activities, civil works, groundworks | Sanitation issues and public health impacts | * Provide bins on site for temporary storage of domestic waste such as lubricant containers, drinking water sachets and carrier bags/packaging materials.  
* Dispose all Maintenance and domestic waste at the approved dumpsites and in the approved manner.  
* Ensure all trenches or excavations made during the Maintenance works do not collect stagnant water, which could breed mosquitoes. | Contractor | 50,000.00 | Provision of bins  
Use of bins provided | Observation of provisions of bins and storage containers | Good housekeeping at the site areas | Daily | Supervision Consultant, ESO, SSO, SMEnv | 50,000.00 |
| Mechanised road Maintenance activities, civil works, groundworks | Public Safety Community health & safety | * Ensure speed & safety signs are provided at strategic areas to prevent over-speeding by motorists and road users, for example, in areas approaching school crossings.  
*Restrict unauthorized access to all areas of high-risk activities  
*Any uncovered work pits should have appropriate signage and protection around them  
* lighting and/or reflective tapes and signages integrated in all worksites for safety at night | Contractor | 40,000.00 | Availability of public signs especially approaching road crossings  
Records on frequency, type and source of illness/accident/injury  
Absence of unauthorized persons at active Maintenance sites | Visual observation of warning signs  
Hoarding of site  
Use of caution tape around trenches/excavations | Zero incident/accident report | Daily | Supervision Consultant, ESO, SSO  
State Ministry of Works | |
| Social Impacts | Influx of Additional Population ("Followers") | * Carry out consultations to raise awareness on labour influx within Local Communities  
* 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. | Contractor | 50,000.00 | Employment document, Number of signed Code of conduct, number of grievances/complaints received, number of women engaged in work, number | Event Report  
Complaints received; resolution documented | Level of implementation of measures outlined | Quarterly | Supervision Consultant, ESO, SSO | 100,000.00 |
<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementati on/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road maintenance &amp; rehabilitation works</td>
<td>Increased Communicable diseases (including STDs and HIV/AIDS)</td>
<td>Awareness raising about public health impacts from labor influx Information campaigns on STDs among the workers and local community in collaboration with State Agency for Control of AIDS. Implementation of HIV/AIDS education program; Training on and signing of contractor workers Code of Conduct</td>
<td>SSO, relevant health-based NGO/CBO</td>
<td>50,000.00</td>
<td>The level of awareness of the participants, Number of health campaigns organized, number of complaints, grievances received</td>
<td>Event Report/Complaints received, resolution documented</td>
<td>Awareness conducted</td>
<td>Quarterly/At the beginning of the Maintenance work</td>
<td>SPIU, Public Health department</td>
<td></td>
</tr>
<tr>
<td>Road maintenance &amp; grievances</td>
<td>Grievances</td>
<td>* 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 * Follow GRM provision</td>
<td>Safeguards Unit</td>
<td>50,000.00</td>
<td>Public complaints &amp; receipt of grievances</td>
<td>Transportation for monitoring of Grievance Redress</td>
<td>Review of Grievance log to check resolved issues</td>
<td>Weekly</td>
<td>Social Safeguards Specialist</td>
<td></td>
</tr>
<tr>
<td>Road maintenance</td>
<td>Gender Based Violence (GBV)</td>
<td>* Implement all GBV measures outline for RAMP 2 * Awareness raising campaigns on gender-based violence 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</td>
<td>Enugu RAMP2 Safeguards Specialist, GRC</td>
<td>100,000.00</td>
<td>Public complaints</td>
<td>Number of complaints received, Number of referrals to GBV Service providers</td>
<td>Consultations with communities</td>
<td>Weekly</td>
<td>FPMU Social Safeguard Officer</td>
<td>50,000.00</td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementation/Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>---------------</td>
<td>---------------------------</td>
<td>------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Decommissioning</td>
<td></td>
<td>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'</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All decommissioning activities</td>
<td></td>
<td>* Re-vegetate areas around workers camp &amp; Maintenance equipment sites to restore the landscape. * Ensure that any remaining waste streams created during Maintenance activities and waste generated during decommissioning activities are collected from the project sites and properly disposed before handing over the project. * implement the borrow pit mgt plan (see annex 13)</td>
<td>Contractor</td>
<td>100,000.00</td>
<td>Revegetated areas On-site waste management Borrow pits</td>
<td>Visual observation Revegetation of cleared areas Compliance to waste management plan/ borrow pit mgt plan</td>
<td>Weekly</td>
<td>ESO SMEenv</td>
<td>300,000.00</td>
<td></td>
</tr>
</tbody>
</table>

Table 16: Environmental & Social Impact Mitigation and Monitoring Plan for Amaogwu – Ohebe Umuna with spur to tarred road (Table D)

<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementati on/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-maintenance Phase</td>
<td></td>
<td>* Periodic maintenance of vehicles and equipment according to repair revision programme. * Use of good quality lubricants and fuel. *Sprinkling of water during dry periods to prevent dust. * Burning of wastes on site should be avoided to reduce air pollution (see WMP)</td>
<td>Contractor</td>
<td>100,000.00</td>
<td>Observation of air borne particulates (dust) and exhaust fumes .</td>
<td>Records of dust level measurements (dust concentration should be below 150µg/m³) .Records of dampening of levels of air, water and noise parameters based on FMEnv limits</td>
<td>Daily During Peak Maintenanc e period</td>
<td>Environmental Safeguards Officer (ESO) PIU SMEenv</td>
<td>30,000.00</td>
<td></td>
</tr>
</tbody>
</table>
### Activities

<table>
<thead>
<tr>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementation/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
</table>
| **Mobilising of machinery & equipment** | Occupational health & safety risks, Community health & safety risks | * Develop and implement a project specific Occupational Health and Safety Plan (OHSP). OHSP to include but not limited to: Provide and enforce the use of appropriate personal protective equipment (PPE) such as safety boots, reflective jackets, hard hats, hand gloves, earplugs, nose masks, etc. for the labour force.  
* All workers should be given proper induction/orientation on safety.  
* The contractors should have a Health & Safety Policy to guide the road maintenance activities.  
* Ensure first aid kits are available on site and assign a trained person to administer first aid. (see OHS annex 9).  
* Implement borrow pit mgt. plan (see annex 13)  
* Ensure toolbox talks are held prior to work activities. | Contractor | 150,000.00 | Availability of first aid kit - Adherence to health and safety procedures - Records on frequency, type and source of illness/accident/injury | Rainy season drainage checks | Observation of compliance or otherwise Records of Lost time due to injury (LTI)  
Reportable cases, generally Availability and proper use of PPEs | Daily (throughout the maintenance period) | ESO, PIU Engineer  
State Ministry of Works | 20,000.00 |
| **Site clearing and excavation works** | * Habitat loss to economic crops, trees or physical assets  
* Contamination from spillages and leaks  
* Chance find | * Vegetation (grasses) should be cleared only when contractor is fully mobilised for Maintenance.  
* Vegetation clearance (where necessary) and excavations should be limited to the demarcated Maintenance areas.  
* Maintain existing road alignment in areas where economic crops are close to ROW and ensure no damage to crops, trees or property.  
* Ensure regular maintenance of operational vehicles and the use of manufacturer-approved parts to minimize potentially serious | Contractor | 50,000.00 | Leaks, spills or vegetation removal  
Complaints of non-compliance | Vehicle/equipment maintenance records  
Visual observations from monitoring | Absence of spills & leaks  
Limited cleared areas to only necessary areas  
Adequately implemented chance find procedures | Weekly  
As required when OP 4.11 is triggered | ESO,  
SMErv |
<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementation/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of borrow pits</td>
<td>Land degradation Landslides, erosion, workers accident Community health &amp; safety</td>
<td>Comply with borrow pit management plan (annex 13)</td>
<td>Contractor</td>
<td>50,000</td>
<td>Report of PCR findings Grievances/complaints</td>
<td>Visual observation Review of site log</td>
<td>Adequately implemented Borrow pit management plan</td>
<td>During siting of borrow pit</td>
<td>ESO SSO Concerned LGA</td>
<td>-</td>
</tr>
<tr>
<td>Social Impacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobilisation of Contractors for Annual Mechanised Maintenance</td>
<td>Threat to community culture, safety and security due to Labor Influx Increased risk of illicit behaviour</td>
<td>All workers to sign code of conduct (see annex 3) Training of workers on CoC, GBV/SEA, STIs/STDs Implement Labor Influx plan (annex 12) Implement GRM procedures in chapter seven</td>
<td>Contractor</td>
<td>50,000</td>
<td>Incident Report Grievance Log Consultation minutes Evidence of training</td>
<td>Consultations Review of Log/site reports Training Report</td>
<td>Community perception and level of satisfaction</td>
<td>Weekly</td>
<td>Supervisor Consultant, SSO Community Leaders</td>
<td>-</td>
</tr>
<tr>
<td>Creation of borrow pits</td>
<td>Grievances in acquisition/loc ation of borrow pit areas/abandoned pits</td>
<td>Ensure properly documented transactional agreement for borrow pit siting</td>
<td>Contractor, GRC</td>
<td>50,000</td>
<td>Transactional agreement</td>
<td>Review of agreement Consultations/interviews</td>
<td>Community perception and level of satisfaction</td>
<td>During borrow pit siting</td>
<td>ESO SSO</td>
<td>-</td>
</tr>
<tr>
<td>Road maintenance &amp; rehabilitation</td>
<td>Environmental Issues</td>
<td>Mechanical road Maintenance activities, civil works, groundworks Generation and disposal of waste</td>
<td>Contractor</td>
<td>150,000</td>
<td>Waste management plan</td>
<td>Visual observation</td>
<td>Compliance to waste management plan</td>
<td>Daily</td>
<td>ESO PIU Engineer SMEenv</td>
<td>30,000</td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementation/Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>------------</td>
<td>------------------</td>
<td>--------------------------------------</td>
<td>----------------</td>
<td>------</td>
<td>--------------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>------------------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Waste streams such as road maintenance rubble, empty containers, bottles etc.</td>
<td>* Purchase the right quality and quantity of materials; * Reuse excavated soil material for backfilling and levelling if appropriate. * Provide bins on site for temporary storage of domestic waste such as lubricant containers, drinking water sachets and carrier bags/packaging materials. Dispose all road maintenance and domestic waste at approved dumpsites.</td>
<td>Contractor</td>
<td>150,000.00</td>
<td>Records on non-compliances</td>
<td>Complaints from community</td>
<td>Daily</td>
<td>Environ Safeguards Specialist</td>
<td>40,000.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste streams such as road maintenance rubble, empty containers, bottles etc.</td>
<td>* Ensure all trenches or excavations made during the Maintenance works do not collect stagnant water, which could breed mosquitoes.</td>
<td>Contractor</td>
<td>40,000.00</td>
<td>Provision of bins Use of bins provided Records of non-compliance</td>
<td>Observed provisions of bins and storage containers</td>
<td>Daily</td>
<td>ESO, SSO, SME</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementati on/Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Use of road</td>
<td>Public Safety</td>
<td>* Ensure speed &amp; safety signs are provided at strategic areas to prevent over-speeding by motorists and road users, for example, in areas approaching school crossings. *Restrict unauthorized access to all areas of high-risk activities *Any uncovered work pits should have appropriate signage and protection around them * lighting and/or reflective tapes and signages integrated in all worksites for safety at night</td>
<td>Contractor</td>
<td>150,000.00</td>
<td>Availability of public signs especially approaching road crossings Records on frequency, type and source of illness/accident/injury -Absence of unauthorized persons at active Maintenance sites</td>
<td>Visual observation of warning signs .Hoarding of site .Use of caution tape around trenches/ excavations</td>
<td>Zero incident/accident report</td>
<td>Daily</td>
<td>ESO, SSO</td>
<td>100,000.00</td>
</tr>
<tr>
<td>Social Impacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hiring of Contractor Workers</td>
<td>Influx of Additional Population (&quot;Followers&quot;)</td>
<td>* Carry out consultations to raise awareness on labour influx within Local Communities * Contractor to hire workers through a systematic process managed by the HR office and avoid hiring &quot;at the gate&quot; 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 * Ensure that all workers are trained on the contents of the Code of Conduct and have them signed. The training should be done in both English and the local language for ease in understanding * Train women in variety of skilled workers</td>
<td>Contractor</td>
<td>50,000.00</td>
<td>Employment document, Number of signed Code of conduct, number of grievances/complaints received, number of women engaged in work, number of local workforce employed, level of awareness of local culture by migrant workers</td>
<td>Event Report</td>
<td>Awareness conducted</td>
<td>Quarterly</td>
<td>Consultant, ESO, SSO</td>
<td>100,000.00</td>
</tr>
<tr>
<td>Road maintenance &amp; rehabilitation works</td>
<td>Increased Communicable diseases (including</td>
<td>Awareness raising about public health impacts from labor influx Information campaigns on STDs among the workers and local</td>
<td>SSO, relevant health-based NGO/CBO</td>
<td>100,000.00</td>
<td>The level of awareness of the participants, Event Report /Complaints received,</td>
<td>Awareness conducted</td>
<td>Quarterly</td>
<td>At the beginning of the Maintenance period</td>
<td>SPU, Public Health department</td>
<td></td>
</tr>
</tbody>
</table>
## Activities

<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementation/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STDs and HIV/AIDS</strong></td>
<td>community in collaboration with State Agency for Control of AIDS, Implementation of HIV/AIDS education program; Training on and signing of contractor workers Code of Conduct</td>
<td></td>
<td></td>
<td></td>
<td>Number of health campaigns organized, number of complaints/grrievances received.</td>
<td>resolution documented</td>
<td></td>
<td></td>
<td>Maintenance work</td>
<td></td>
</tr>
<tr>
<td><strong>Road maintenance &amp; rehabilitation works</strong></td>
<td><strong>Grievances</strong></td>
<td>* 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 * Follow GRM provision</td>
<td>GRC, Safeguards Unit</td>
<td>100,000.00</td>
<td>Public complaints &amp; receipt of grievances</td>
<td>Transportation for monitoring of Grievance Redress</td>
<td>Review of Grievance log to check resolved issues</td>
<td>Weekly</td>
<td>Social Safeguards Specialist</td>
<td></td>
</tr>
<tr>
<td><strong>Road maintenance</strong></td>
<td><strong>Gender Based Violence (GBV)</strong></td>
<td>* Implement all GBV measures outline for RAMP 2 * Awareness raising campaigns on gender-based violence 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’*</td>
<td>Enugu RAMP2 Safeguards Specialist, GRC</td>
<td>50,000.00</td>
<td>Public complaints</td>
<td>Number of complaints received, Number of referrals to GBV Service providers</td>
<td>Consultations with communities</td>
<td>Weekly</td>
<td>FPMU Social Safeguard Officer</td>
<td>30,000.00</td>
</tr>
<tr>
<td><strong>Decommissioning</strong></td>
<td><strong>All decommissioning activities</strong></td>
<td>* Re-vegetate areas around workers camp &amp; Maintenance equipment sites to restore the landscape. * Ensure that any remaining waste streams created during Maintenance activities and waste generated during</td>
<td>Contractor</td>
<td>100,000.00</td>
<td>Revegetated areas</td>
<td>Visual observation</td>
<td>Revegetation of cleared areas</td>
<td>Weekly</td>
<td>ESO SMEenv</td>
<td></td>
</tr>
</tbody>
</table>

Enugu RAMP-2
### Table 17: Environmental & Social Impact Mitigation and Monitoring Plan for Amtu Isube – Aghulimonze – Community Secondary School Nze Road (Table E)

<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementation/Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-maintenance Phase</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil impacts and sediment transport</td>
<td>Air, Water &amp; Noise pollution</td>
<td>* Periodic maintenance of vehicles and equipment according to repair revision programme. * Use of good quality lubricants and fuel. * Sprinkling of water during dry periods to prevent dust. * Burning of wastes on site should be avoided to reduce air pollution. Ensure that workers are kitted with ear muffs Ensure exposure of workers to noise is not beyond acceptable limit</td>
<td>Contractor</td>
<td>100,000.00</td>
<td>Observation of air borne particulates (dust) and exhaust fumes</td>
<td>- Records of dust level measurements (dust concentration should be below 150µg/m³) Records of dampening of Maintenance sites and routes for vehicles/trucks</td>
<td>Levels of air, water and noise parameters based on FMEenv limits</td>
<td>Daily During Peak Maintainence period</td>
<td>Environmental Safeguards Officer (ESO) PIU, SMEnv</td>
<td>30,000.00</td>
</tr>
<tr>
<td>Mobilising of machinery &amp; equipment</td>
<td>Occupational health &amp; safety risks</td>
<td>Develop and implement a project specific Occupational Health and Safety Plan (OHSP). OHSP to include but not limited to: Provide and enforce the use of appropriate personal protective equipment (PPE) such as safety boots, reflective jackets, hard hats, hand gloves, earplugs, nose masks, etc. for the labour force * All workers should be given proper induction/orientation on safety.</td>
<td>Contractor</td>
<td>100,000.00</td>
<td>Availability of first aid kit -Adherence to health and safety procedures -Records on frequency, type and source of illness/accident/injury Rawy season drainage checks</td>
<td>Observation of compliance or otherwise Records of Lost time due to Injury (LTI) Reportable cases, generally</td>
<td>Daily (throughout the maintainence period)</td>
<td>ESO, PIU Engineer State Ministry of Works</td>
<td>20,000.00</td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementati on/ Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>------------</td>
<td>--------------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Site clearing and excavation works</td>
<td>• Habitat loss *Damage to economic trees, crops, or physical assets * Contamination from spillages and leaks Chance find</td>
<td>* Vegetation (grasses) should be cleared only when contractor is fully mobilised for Maintenance. * Vegetation clearance (where necessary) and excavations should be limited to the demarcated Maintenance areas. *Maintain existing road alignment in areas where economic crops are close to ROW and ensure no damage to crops, trees or property. * Ensure regular maintenance of operational vehicles and the use of manufacturer-approved parts to minimize potentially serious accidents caused by equipment malfunction. Adopt chance find procedures</td>
<td>Contractor</td>
<td>50,000.00</td>
<td>Leakages, spills or vegetational removal Complaints of non-compliance</td>
<td>Vehicle/equipment maintenance records Visual observations from monitoring</td>
<td>Absence of spills &amp; leaks Limited cleared areas to only necessary areas Adequately implemented chance find procedures</td>
<td>Weekly</td>
<td>ESO, SMO, Concerned LGA</td>
<td></td>
</tr>
<tr>
<td>Creation of borrow pits</td>
<td>Land degradation Landslides, erosion, workers accident Community health &amp; safety</td>
<td>Comply with borrow pit management plan (annex 13)</td>
<td>Contractor</td>
<td>50,000</td>
<td>Report of PCR findings Grievances/complaints</td>
<td>Visual observation Review of site log</td>
<td>Adequately implemented Borrow pit management plan</td>
<td>During siting of borrow pit</td>
<td>ESO, SSO Concerned LGA</td>
<td></td>
</tr>
<tr>
<td>Social Impacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Cost</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementati on/Supervision)</td>
<td>Cost Estimate (NGN)</td>
</tr>
<tr>
<td>------------</td>
<td>------------------</td>
<td>--------------------------------------</td>
<td>----------------</td>
<td>------</td>
<td>--------------------------</td>
<td>----------------------</td>
<td>----------------------</td>
<td>-------------------</td>
<td>-------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Mobilisation of Contractors for Annual Mechanised Maintenance</td>
<td>Threat to community culture, safety and security due to Labor Influx Increased risk of illicit behaviour</td>
<td>All workers to sign code of conduct (see annex 3) Training of workers on CoC, GBV/SEA, STIs/STDs Implement Labor Influx plan (annex 12) Implement GRM procedures in chapter seven</td>
<td>Contractor</td>
<td>50,000</td>
<td>Incident Report Grievance Log Consultation minutes Evidence of training</td>
<td>Consultations Review of Log/site reports Training Report</td>
<td>Community perception and level of satisfaction</td>
<td>Weekly</td>
<td>SSO Community Leaders</td>
<td>-</td>
</tr>
<tr>
<td>Creation of borrow pits</td>
<td>Grievances in acquisition/location of borrow pit areas/abandoned pits</td>
<td>Ensure properly documented transactional agreement for borrow pit siting</td>
<td>Contractor</td>
<td>50,000</td>
<td>Transactional agreement</td>
<td>Review of agreement Consultations/ interviews</td>
<td>Community perception and level of satisfaction</td>
<td>During borrow pit siting</td>
<td>ESO SSO</td>
<td>-</td>
</tr>
<tr>
<td>Road maintenance &amp; rehabilitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanised road Maintenance activities, civil works, groundworks</td>
<td>Generation and disposal of waste</td>
<td>* Apply the principles of Reduce, Reuse and Recover for waste management. Provision of adequate waste disposal containers/receptacles/skips for segregating waste from the different waste streams such as road maintenance rubble, empty containers, bottles etc. * Purchase the right quality and quantity of materials; * Reuse excavated soil material for backfilling and levelling if appropriate. * Provide bins on site for temporary storage of domestic waste such as lubricant containers, drinking water sachets and carrier bags/packaging materials. Dispose all road Maintenance and domestic waste at approved dumpsites.</td>
<td>Contractor</td>
<td>150,000.00</td>
<td>Waste management plan Records on non-compliances Visual observation Complaints from community</td>
<td>Compliance to waste management plan</td>
<td>Daily</td>
<td>ESO PIU Engineer SMEnv State Ministry of Works</td>
<td>30,000.00</td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>Potential Impacts</td>
<td>Proposed Mitigation Measures/Actions</td>
<td>Responsibility</td>
<td>Parameters to be measured</td>
<td>Method of Measurement</td>
<td>Performance Indicator</td>
<td>Monitoring Frequency</td>
<td>Responsibility (Implementati on/Supervision)</td>
<td>Cost Estimate (NGN)</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>------------------</td>
<td>-------------------------------------</td>
<td>----------------</td>
<td>--------------------------</td>
<td>-----------------------</td>
<td>----------------------</td>
<td>---------------------</td>
<td>---------------------------------------------</td>
<td>------------------</td>
<td></td>
</tr>
</tbody>
</table>
| Mechanised road Maintenance activities, civil works, groundworks | Occupational health and safety (OHS) issues at staging area, borrow pits, construction sites, workers campsite | * Provide and enforce the use of appropriate personal protective equipment (PPE) such as safety boots, reflective jackets, hard hats, hand gloves, earplugs, nose masks, etc. for the labour force.  
* All workers should be given proper induction/orientation on safety.  
* The contractors should have a Health & Safety Policy to guide the road maintenance activities.  
* Ensure first aid kits are available on site and assign a trained person to administer first aid.  
* Implement borrow pit plan | Contractor | 120,000.00 | Availability of first aid kit  
-Adherence to health and safety procedures  
-Records on frequency, type and source of illness/accident/injury | Observation of compliance or otherwise  
Records of Lost time due to Injury (LTI)  
Reportable cases, generally  
Availability and proper use of PPEs | Absence of accidents/incident reports  
Compliance to HSE provisions | Daily | Environ Safeguards Specialist | 40,000.00 |
| All Mechanised road maintenance phase activities | Sanitation issues and public health impacts | * Provide bins on site for temporary storage of domestic waste such as lubricant containers, drinking water sachets and carrier bags/packaging materials.  
* Dispose all Maintenance and domestic waste at the approved dumpsites and in the approved manner.  
* Ensure all trenches or excavations made during the Maintenance works do not collect stagnant water, which could breed mosquitoes. | Contractor | 40,000.00 | Provision of bins  
Use of bins provided  
Records of non-compliance | Observed provisions of bins and storage containers | Good housekeeping at the site areas | Daily | ESO, SSO, SMEnv |
| Use of road | Public Safety  
Community health & safety | * Ensure speed & safety signs are provided at strategic areas to prevent over-speeding by motorists and road users, for example, in areas approaching school crossings.  
*Restrict unauthorized access to all areas of high-risk activities  
*Any uncovered work pits should have appropriate signage and protection around them  
* lighting and/or reflective tapes and signages integrated in all worksites for safety at night | Contractor | 100,000.00 | Availability of public signs  
especially approaching road crossings  
Records on frequency, type and source of illness/accident/injury  
-Absence of unauthorized persons at active | Visual observation of warning signs  
-Hoarding of site  
-Use of caution tape around trenches/ excavations | Zero incident/accident report | Daily | ESO, SSO | State Ministry of Works |
### Activities | Potential Impacts | Proposed Mitigation Measures/Actions | Responsibility | Cost | Parameters to be measured | Method of Measurement | Performance Indicator | Monitoring Frequency | Responsibility (Implementation/Supervision) | Cost Estimate (NGN)
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | ---
**Social Impacts**

**Hiring of Contractor Workers**

Influx of Additional Population ("Followers")

* Carry out consultations to raise awareness on labour influx within Local Communities
* 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.
* Ensure that all workers are trained on the contents of the Code of Conduct and have them signed. The training should be done in both English and the local language for ease in understanding
* Train women in variety of skilled

Contractor | 50,000.00 | Employment document, Number of signed Code of conduct, number of grievances/complaints received, number of women engaged in work, number of local workforce employed, level of awareness of local culture by migrant workers | Event Report/Complaints received, resolution documented | Level of implementation of measures outlined | Quarterly | Supervision Consultant, ESO, SSO | 100,000.00

**Road maintenance & rehabilitation works**

Increased Communicable diseases (including STDs and HIV/AIDS)

Awareness raising about public health impacts from labor influx
Information campaigns on STDs among the workers and local community in collaboration with State Agency for Control of AIDS.
Implementation of HIV/AIDS education program; Training on and signing of contractor workers Code of Conduct

SSO, relevant health-based NGO/CBO | 50,000.00 | The level of awareness of the participants, Number of health campaigns organized, number of complaints/grievances received. | Event Report/Complaints received, resolution documented | Awareness conducted | Quarterly | SPIU, Public Health department

**Activities** | **Potential Impacts** | **Proposed Mitigation Measures/Actions** | **Responsibility** | **Cost** | **Parameters to be measured** | **Method of Measurement** | **Performance Indicator** | **Monitoring Frequency** | **Responsibility (Implementation/Supervision)** | **Cost Estimate (NGN)**
<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
<th>Parameters to be measured</th>
<th>Method of Measurement</th>
<th>Performance Indicator</th>
<th>Monitoring Frequency</th>
<th>Responsibility (Implementati on/ Supervision)</th>
<th>Cost Estimate (NGN)</th>
</tr>
</thead>
</table>
| Road maintenance & rehabilitation works       | Grievances            | * 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  
* Follow GRM provision | Safeguards Unit, GRC | 150,000.00 | Public complaints & receipt of grievances                                                                 | Transportation for monitoring of Grievance Redress                                  | Review of Grievance log to check resolved issues                                     | Weekly               | PIU, Social Safeguards Specialist | 50,000.00           |
|                                               |                       |                                                        |                                        |                                |                                                                 |                                                                                        |                                                                         |                     |                                               |                     |
| Road maintenance                              | Gender Based Violence (GBV) | * Implement all GBV measures outline for RAMP 2  
* Awareness raising campaigns on gender-based violence  
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’ | Enugu RAMP2 Safeguards Specialist, GRC | 50,000.00 | Public complaints | Number of complaints received, Number of referrals to GBV Service providers | Consultations with communities                                                   | Weekly               | FPMU Social Safeguard Officer            | 30,000.00           |
| Decommissioning                               | Land/ Waste management | * Re-vegetate areas around workers camp & Maintenance equipment sites to restore the landscape.  
* Ensure that any remaining waste streams created during Maintenance activities and waste generated during decommissioning activities are collected from the project sites and properly disposed before handing over the project.  
* implement borrow pit plan | Contractor | 200,000.00 | Revegetated areas | Visual observation | Revegetation of cleared areas  
On-site waste management  
Borrow pit | Weekly               | Upon demobilisation of contractors | ESQ  
SMEnv | 250,000.00          |
| All decommissioning activities                | Risks from abandoned borrow pits |                                                        |                                        |                                |                                                                 |                                                                                        |                                                                         |                     |                                               |                     |
| Total                                         |                       |                                                        |                                        |                                |                                                                 |                                                                                        |                                                                         |                     |                                               |                     |
|                                               |                       |                                                        |                                        |                                |                                                                 |                                                                                        |                                                                         |                     |                                               | 1,060,000           |
|                                               |                       |                                                        |                                        |                                |                                                                 |                                                                                        |                                                                         |                     |                                               | 250,000.00           |
Summary of Costs for the five (5) pilot roads is shown in table 17 A+B+C+D+E.

Table 18: Summary of Mitigation and Monitoring Costs

<table>
<thead>
<tr>
<th>ESMP/Pilot Road</th>
<th>MITIGATION</th>
<th>MONITORING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ngwuru Junction – Lejja Road</td>
<td>1,100,000</td>
<td>250,000</td>
</tr>
<tr>
<td>UNN Green House – Owerre Ezeorba – Orie Orba Market Road with spur to Nkwo Orba Umuafia – Aghamere Road</td>
<td>1,090,000</td>
<td>250,000</td>
</tr>
<tr>
<td>Ogbuguagu Iwolo – Imezi Olo – Amadam Oo Road with spur to Ukwuagba Okpogho Borehole Center Road</td>
<td>1,090,000</td>
<td>300,000</td>
</tr>
<tr>
<td>Amaogwu – Ohebe Umuna with spur to tarred road</td>
<td>1,140,000</td>
<td>250,000</td>
</tr>
<tr>
<td>Amtu Isibe – Aguluilonze – Community Secondary School Nze Road</td>
<td>1,060,000</td>
<td>250,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,480,000</strong></td>
<td><strong>1,300,000</strong></td>
</tr>
</tbody>
</table>
6.3 Additional Mitigation Measures for Social Impacts

6.3.1 Labour Influx

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.

6.3.2 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 Enugu 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.

6.4 Capacity Building for Implementation of ESMP and Permit Conditions

An initial assessment indicates that the capacity of the SPIU for implementing this ESMP is weak, especially in the area of the application, implementation and management of the World Bank’s environmental safeguards policies, therefore requiring strengthening in order to close these gaps. Consequently, a training Workshop will be organized to guide the implementation of the ESMP and topical areas of discussion would include the World Bank’s Safeguards Policy triggered and issues on environmental and social management. The training on the ESMP implementation will include the Code of conduct for contractor and his/her labour force, public health and safety issues, occupational health, Grievance Redress Mechanism for the project, ESMP monitoring and reporting. The capacity building will also involve sensitisation of workers on issues such as child sexual exploitation, labour influx, Gender Based Violence, HIV/AIDS and their mitigation measures.

The capacity building plan proposed to achieve this is provided in Table 19.

Table 12: Capacity building plan for implementation of the ESMP & permit conditions

<table>
<thead>
<tr>
<th>No.</th>
<th>Activity</th>
<th>Target Group/Participants</th>
<th>Timeline/Duration</th>
<th>Proposed Facilitator</th>
<th>Cost NGN</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Induction on occupational and public health and safety requirements of the works and environmental management, training on code of conduct understanding</td>
<td>All construction/contractor workers</td>
<td>Prior to commencement of construction works. (1 day)</td>
<td>Lead Contractor/Engineering Consultant</td>
<td>250,000.00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>750,000.00</td>
</tr>
</tbody>
</table>

6.5 Monitoring and Reporting

The monitoring activities, which shall include both Internal and External Monitoring for the ESMP is presented in Table 20 below. Monitoring results shall be documented with preventive/corrective actions to be implemented.
Table 13: Internal and External Monitoring

<table>
<thead>
<tr>
<th>Monitoring</th>
<th>Action</th>
<th>Responsibility</th>
<th>When</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal Monitoring</strong></td>
<td>Regular site visit as stated in the mitigation tables 13 -17, to ensure that the mitigation measures and actions specified in the monitoring plan and as bound by the contract is satisfactorily implemented.</td>
<td>Environmental and Social Safeguard Officers from SPIU.</td>
<td>During Preconstruction, Construction and Operation Phases</td>
<td>Monitoring Reports and documentation as described in Subsection 6.5.1</td>
</tr>
<tr>
<td></td>
<td>Site visit for monitoring and inspection to ensure contractor adhere strictly to the engineering designs and specifications for the project.</td>
<td>Independent Supervising Consultants and Engineer</td>
<td>During Preconstruction Construction and Operation Phases</td>
<td>Observations and Monitoring Reports to be compiled and presented to the SPIU.</td>
</tr>
<tr>
<td><strong>External Monitoring</strong></td>
<td>Regular site visit to check adherence to mitigation measures and standards using the monitoring indicators specified in the monitoring plan and other national and international environmental &amp; social requirements.</td>
<td>FMEnv, Enugu State Ministry of Environment, Representatives of affected communities, and other relevant MDAs.</td>
<td>During Preconstruction, Construction and Operation Phases</td>
<td>Inspect monitoring reports from Safeguard units and provide feedback on observations. Enforce corrective actions where necessary.</td>
</tr>
</tbody>
</table>

### 6.5.1 Reporting Procedures

The reporting procedures presented in Table 21 have been developed in order to ensure that the SPIU is able to receive feedback from the implementation of the ESMP on an ongoing basis and to take rapid corrective actions if there are issues of non-conformance.

Table 14: Reporting Procedures

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

### 6.5.2. 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 OHS Plan (See Annex 9), Waste Management Plan (See Annex 8), Traffic Control Plan (See annex 10), Emergency response and preparedness procedures (See Annex 11), 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 E&S 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 6.3.2 are to be kept by the Safeguard unit and be made available to relevant regulators upon request. In addition, all significant communications with FMEnv,
ESME 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.

6.6 Implementation Schedule
The activities related to environmental management and monitoring must be integrated in the overall construction schedule. The project implementation phase is estimated for completion in 3 months. The implementation schedule is presented in Table 22.

Table 15: Tentative ESMP Implementation Schedule

<table>
<thead>
<tr>
<th>s/n</th>
<th>Activity Description</th>
<th>Responsible</th>
<th>Preconstruction (Weeks)</th>
<th>Construction (Weeks)</th>
<th>Operations Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Responsible</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>Clearance and Formal Disclosure of ESMP</td>
<td>SPIU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Inclusion of E&amp;S Requirements in bid documents</td>
<td>SPIU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Allocating Budget for ESMP</td>
<td>SPIU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Review &amp; Approval of Contractor’s E&amp;S Plans</td>
<td>SPIU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Finalization of Engineering Designs</td>
<td>SPIU/Consultant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Mobilization to site</td>
<td>Contractor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Site Clearing</td>
<td>Contractor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Construction Phase</td>
<td>Contractor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Implementation of Mitigation</td>
<td>SPIU/Contractor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Supervising ESMP Implementation</td>
<td>SPIU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Monitoring &amp; Reporting on ESMP Implementation</td>
<td>SPIU/MDAs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Environmental and Social Training</td>
<td>E&amp;S Consultant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Environmental and Social Auditing</td>
<td>SPIU/SME/Consultant</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6.7 Contractual Measures
The Enugu RAMP2, and any institution participating in the implementation, will not issue a Request for Proposal (RFP) of any activity without the construction phase’s Environmental and Social Management Plan (ESMP) inserted in, and will not authorize the works to commence before the contractor’s ESMP (CESMP) has been approved and integrated into the overall planning of the works.

Most of the mitigation measures are the obligation of the Contractor during the pre-construction and construction phases of the project. Consequently, the potential contractor will have to prepare their proposals taking into account the measures in Table 23 as well as the detailed general environmental management conditions during civil works attached as Annex 5.
Table 16: Contractual Measures

<table>
<thead>
<tr>
<th>Action</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>Cost of mitigation measures be added to the cost of the contractual document</td>
<td>The contractor must take into account and put the cost for the environmental and social requirements specified in the ESMP.</td>
</tr>
</tbody>
</table>

6.8 Estimated Budget for ESMP Implementation

The environmental and social management actions described above require detailed cost analysis after project development to determine the budget needed for implementation. It is estimated that an amount Seven Million Nine Hundred and Six Thousand, Five Hundred Naira only (₦7,906,500.00), or, Twenty One Thousand, Nine Only ($21,962.00) will be required to implement the provisions of the ESMP for this intervention project.

Table 17: ESMP Budget

<table>
<thead>
<tr>
<th>#</th>
<th>Item</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Source of financing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Local</td>
<td>US$ ($1=N360)</td>
</tr>
<tr>
<td>1</td>
<td>Mitigation</td>
<td>Sum</td>
<td>5,480,000</td>
<td>152,22</td>
</tr>
<tr>
<td>2</td>
<td>Capacity Building</td>
<td>Sum</td>
<td>750,000.0</td>
<td>2,083</td>
</tr>
<tr>
<td>3</td>
<td>Monitoring &amp; Audit</td>
<td>Sum</td>
<td>1,300,000.0</td>
<td>3,611</td>
</tr>
<tr>
<td>4</td>
<td>Contingency (5% of 1+2+3)</td>
<td>Sum</td>
<td>376,500</td>
<td>1045.8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>7,906,500</td>
<td>21,962.5</td>
</tr>
</tbody>
</table>

6.9 ESMP Disclosures

After the ESMP review and clearance by the World Bank, the information in Table 25 describes the process of disclosure.

Table 18: ESMP Disclosure

<table>
<thead>
<tr>
<th>s/n</th>
<th>Action</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Disclosure on 2 state newspapers</td>
<td>The SPIU will disclose the ESIA/ESMP as required by the Nigeria EIA public notice and review procedures</td>
</tr>
<tr>
<td>2</td>
<td>Disclosure on 2 national newspapers</td>
<td>The SPIU will disclose the ESIA/ESMP as required by the Nigeria EIA public notice and review procedures</td>
</tr>
<tr>
<td>3</td>
<td>Disclosure at the Enugu State Ministry of Environment</td>
<td>The SPIU will disclose the ESIA/ESMP as required by the Nigeria EIA public notice and review procedures</td>
</tr>
<tr>
<td>4</td>
<td>Disclosure at the Enugu SPIU office</td>
<td>The SPIU will disclose the ESIA/ESMP as required by the Nigeria EIA public notice and review procedures</td>
</tr>
<tr>
<td>5</td>
<td>Disclosure at Enugu LGA office</td>
<td>The purpose will be to inform stakeholders about the project activities; E&amp;S impacts anticipated and proposed E&amp;S mitigation measures.</td>
</tr>
<tr>
<td>6</td>
<td>Disclosure at the World Bank Info Shop</td>
<td>The ESMP will be disclosed according to the World Bank ESS 10 (Stakeholder Engagement and Information Disclosure)</td>
</tr>
</tbody>
</table>
CHAPTER SEVEN: GRIEVANCE REDRESS MECHANISM (GRM)

7.0 Introduction

The redress of grievance is important to avoid unnecessary legal delays from land dispute issues and prevent cost overrun of the project. Also, this is a forum for people to express their dissatisfaction over the implementation of the sub-project and other issues of concern regarding the work. Grievance mechanisms are increasingly important for development projects where ongoing risks or adverse impacts are anticipated. For the proposed subprojects, grievances are likely to arise due to the following:

i) Delay in civil works;
ii) Conflict between road maintenance workers and community members;
iii) Unmanaged expectations;
iv) Lack of information about the project

To manage these social risks and others, which cannot be foreseen now with a view to ensuring successful project development and implementation, experience has revealed that open dialogue and collaborative grievance resolution represent the best practice. The grievance mechanisms shall at a minimum be targeted at the following:

i) Provide a way to reduce risk for projects,
ii) Provide an effective avenue for expressing concerns and achieving remedies for communities;
iii) Promote a mutually constructive relationship;
iv) Prevent and address community concerns, and
v) Assist larger processes that create positive social change.

7.1 Grievance Redress Process

At the time that the sub projects intervention contracts are approved and contracts are signed, communities will have been informed of the availability of a process for expressing dissatisfaction and to seek redress. The grievance procedure will be simple and administered as far as possible at the local levels to facilitate access, flexibility and ensure transparency. All the grievances will be channeled via the Grievance redress committee (GRCs) constituted. This would be as depicted in flow chart figure 11.

7.1.1 Grievance Redress Committee

A first level Grievance Redress Committee (community based GRC) shall be constituted for the Community to address complaints and ensure satisfactory resolution of grievances. This committee will comprise persons appointed or selected by the Igwe (or traditional ruler) and the other community stakeholders during consultations with capability of working in the interest of the community in providing necessary support to SPIU and the Contractor, in delivering the objectives of the project.

A second level Grievance Redress Committee shall be further constituted to address cases of complaints that are escalated beyond the community based GRC for resolution. The SPIU shall ensure persons selected are willing and committed to serve for the purpose of delivering a successful intervention project and not for personal aggrandizement. These may comprise:

- Permanent Secretary, Enugu State Ministry of Lands
- Permanent Secretary, Enugu State Ministry of Environment
- Project Coordinator, SPIU
- Social Safeguards Officer, SPIU

The main functions of the Committee are:

- Ensure that purpose of GRC is not for validation, instead they are to:
  - Receive grievances from member of the public; especially from communities located along the pilot roads considered for maintenance
• Evaluate grievances from affected persons concerning the application to them of the Entitlement Policy;
• Recommend to the Social Officer, SPIU as the case may be, solutions to such grievances from affected persons;
• Communicate the decisions to the Claimants;
• Hear appeals from persons, households or groups who, not being affected persons, believe that they are qualified to be recognized as affected persons, to recommend to the SPIU whether such persons should be recognized as affected persons, and to communicate the decision of the SPIU in that regard to the Claimants;
• Ensure that all notices, forms, and other documentation required by aggrieved persons are made available in Local language understood by people
• Made provision for complainants to submit claims without fear of retaliation.

7.1.2 Expectation When Grievances Arise
For Enugu RAMP-2, it is recognized that the formal legal mechanisms for grievance redress may tend to be a lengthy and acrimonious procedures, thus an informal grievance redress mechanism through the SPIU Safeguard Units will be established. This unit will comprise the social safeguards officer, who shall work with the committee comprising the head of the community or his representative, community president-general, the contractor and other relevant persons that would be required for this process.
In instances when the local people in the communities located along these priority roads selected for intervention present a grievance, they would generally expect to receive one or more of the following: acknowledgement of their problem, an honest response to questions/issues brought forward, an apology, adequate compensation, modification of the conduct that caused the grievance and some other fair remedies.

In expressing their concerns, complainants also expect to be heard and taken seriously. Therefore, the contractors, or government officials must convince people that they can detail their challenges and work to resolve them without retaliation or negative backlash. To address these challenges, contractors are encouraged to lead and work with their host communities to fund non-judicial, dialogue-based approaches for preventing and addressing community grievances.

The overall process of grievance shall take the following way:

- During the initial stages of the valuation process, the affected persons are given copies of grievance procedures as a guide on how to handle the grievances;
- The process of grievance redress will start with registration of the grievances to be addressed for reference, and to enable progress updates of the cases.
- The response time will depend on the issue to be addressed but it should be addressed with efficiency. Nevertheless, Grievance form will be filled by person affected by the sub-project with the Community based Grievance Redress Committee, which will act on it within 7 working days on receipt. If no understanding or amicable solution is reached, or the affected person does not receive a response from the local Grievance Redress Committee within 14 working days, the affected person can appeal to a designated officer in the SPIU (as the 2nd level of the GRC), which should act on the complaint/grievance within 14 working days of its filing.
- The appeals process will use a local mechanism, which includes peers and local leaders of the affected people. These will ensure equity across cases; they eliminate nuisance claims and satisfy legitimate claimants at low cost.
- Compensation will be paid to individual PAPs only after a written consent of the PAPs, including both husband and wife has been received by the Committee.
- All reasonable moves shall be made to settle any grievance that arises, amicably. If affected person is not satisfied with the decision received, he/she can, as a last resort, appeal to a court of competent jurisdiction. Affected persons will be exempted from all administrative and legal fees incurred pursuant to grievance redress procedures.
- If discussions break down at this stage, or the grievance remains unresolved, the matter would be escalated to the GRC of the FPMU.

7.2 Grievance Log

A grievance log will be established by the project and copies of the records kept with all the relevant authorities. A review of grievances will be conducted at least once a week during implementation in order to detect and correct systemic problems.

The SPIU Social Safeguards Officer will ensure that each complaint has an individual reference number, and is appropriately tracked and recorded actions are completed. The log also contains a record of the person responsible for an individual complaint, and records dates for the following events:

- Date the complaint was reported.
- Date the Grievance Log was uploaded onto the project database.
- Date the information on proposed corrective action sent to complaint.
- The date the complaint was closed out.
- Date response was sent to complainant.
- Monitoring Complaints.
CHAPTER EIGHT: STAKEHOLDER CONSULTATIONS

8.1 Introduction

Stakeholder participation during project planning, design and implementation is widely recognized as an integral part of environmental and social management for projects. It is a two-way flow of information and dialogue between project proponents and stakeholders, which is specifically aimed at developing ideas that can help shape project design, resolve conflicts at an early stage, assist in implementing solutions and monitor ongoing activities.

8.2 Objectives of Consultation

The main objective of the consultations with stakeholders is to discuss the proposed project’s environmental and social implications and to identify alternatives for consideration. Specifically, the consultations seek to achieve the following objectives:

- To provide some information about the proposed project;
- To provide opportunities for stakeholders to discuss their concerns and offer recommendations;
- To gain insight on the role of each stakeholder in the implementation of the environmental and social safeguards as well as structures in place for the management of the proposed facilities;
- To provide and discuss with stakeholders the alternatives considered to reduce anticipated impacts;
- To identify and verify significance of environmental, social and health impacts; and
- To inform the process of developing appropriate mitigation and management options.

8.3 Stakeholder Consultation Strategy and Plan

Stakeholder consultation is a process and would continue through the ESMP study stages to its implementation. Table 26 summarizes the proposed approach for stakeholder engagement.
Table 19: Stakeholder engagement programme

<table>
<thead>
<tr>
<th>No.</th>
<th>Activity</th>
<th>Identified Stakeholders</th>
<th>Focus of Consultation/ Engagement</th>
<th>Timelines/ Frequency</th>
<th>Forms of communication</th>
<th>Facilitator</th>
</tr>
</thead>
</table>
| 1.  | Preparation of ESMP                                       | • State Project Coordinating Unit  
• Federal Ministry of Agriculture  
• Federal Ministry of Environment  
• State Ministry of Environment  
• State Ministry of Works  
• Community and Community Based Organisations  
• FMF  
• World Bank                                                                             | Large scale forums  
Key stakeholders interviews  
Mapping of community interests and concerns  
Communities need to know what the project is all about.                                      | Throughout the ESMP study period | • Focus Group  
Discussion/workshops  
Phone calls  
One on one interview  
Distribution of pamphlets  
Public meetings  
Newspapers/magazines  | ENUGU RAMP-2 SPIU |
| 2.  | Site preparation prior to Maintenance works                | • ENUGU RAMP-2 SPIU  
• Contractor  
• Supervising Engineers  
• Consultant  
• Suppliers  
• Businessmen  
• NGOs/vulnerable groups  
• Communities                                                                             | Information Disclosure at Federal Ministry of Environment, State Ministry of Environment and Local Government level. | Two weeks prior to Maintenance work | • Through Radio and Newspapers                                                                  | PC ENUGU RAMP-2 SPIU  
Federal Ministry of Environment |
| 3.  | Start of Maintenance works                                 | • ENUGU RAMP-2 SPIU  
• Contractors  
• Supervising Engineers  
• Consultant  
• Suppliers  
• Businessmen  
• NGOs/vulnerable groups  
• Communities                                                                             | Affected Communities  
Government Officials  
World Bank                                               | Throughout the Maintenance period | • Phone calls  
Newspapers  
Radios  
Pamphlets  
One on One                                                        | ENUGU RAMP – 2 SPIU  
FMF  
WORLD BANK                                                 |
| 4.  | End of Maintenance works / Decommissioning of Maintenance equipment and machinery | • ENUGU RAMP-2 SPIU  
• Government Officials  
• Affected Communities  
• World Bank                                                                       | Government Officials  
Affected Communities                                                                 | Decommissioning phase | • Phone calls  
Televsions  
Radios  
Newspapers  
Emails  
Pamphlets                                                  | Government Officials  
ENUGU SPIU  
RAMP - 2                                                  |
| 5.  | Commissioning and handing over of Institutional sanitation facility | • Government Officials  
• ENUGU RAMP-2 SPIU  
• Beneficiary Communities                                                                 | Government Officials  
Beneficiary Communities                                          | Prior to operation of the facility | • Newspapers  
Television  
Radio                                                       | ENUGU RAMP-2 SPIU |
| 6.  | Operation and maintenance of facility                      | • Beneficiary Communities                                                                   | Beneficiary Communities                                               | During operation and maintenance period | • One on one  
Workshops/FGD  
Television  
Radio                                                    | ENUGU RAMP-2 SPIU |
<table>
<thead>
<tr>
<th>No.</th>
<th>Activity</th>
<th>Identified Stakeholders</th>
<th>Focus of Consultation/Engagement</th>
<th>Timelines/Frequency</th>
<th>Forms of communication</th>
<th>Facilitator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENUGU RAMP-2 SPIU</td>
<td>• Beneficiary Communities</td>
<td>3 times a week</td>
<td>• Visits</td>
<td></td>
<td>ENUGU RAMP-2 SPIU</td>
</tr>
<tr>
<td></td>
<td>RAMP - 2</td>
<td>• Beneficiary Communities</td>
<td>Fortnightly</td>
<td>• Visits</td>
<td></td>
<td>ENUGU RAMP-2 SPIU</td>
</tr>
<tr>
<td></td>
<td>• Government Officials</td>
<td>• Beneficiary Communities</td>
<td>3 times a week</td>
<td>• Visits</td>
<td>ENUGU RAMP-2 SPIU</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Other Communities</td>
<td>• Beneficiary Communities</td>
<td>3 times a week</td>
<td>• Visits</td>
<td>ENUGU RAMP-2 SPIU</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NGOs/CBOs</td>
<td>• Beneficiary Communities</td>
<td>Once a term</td>
<td>• Visits</td>
<td>ENUGU RAMP-2 SPIU</td>
<td></td>
</tr>
<tr>
<td></td>
<td>World Bank</td>
<td>• Beneficiary Communities</td>
<td>Once a term</td>
<td>• Visits</td>
<td>ENUGU RAMP-2 SPIU</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8.4 Stakeholders Consulted

Key stakeholders to the community based and mechanized road maintenance of 5 pilot roads project were identified for consultations and these included some schools, local communities, health centers and local community leaders in communities along the selected roads. The Consultation of the stakeholders was carried out from November 21st – 23rd, 2018 to gather information, comments and concerns on the proposed project with respect to the potential environmental and social issues and impacts. The approach adopted for the stakeholder consultations involved one-on-one interviews and focus group discussions.

8.5 Outcome of Stakeholder Consultations carried out during ESMP Preparation

Site visits were carried out in order to undertake physical assessment of the roads at Amagogwu-Ohebe-Umana with spur to the tarred road, Amutu-Isube-Aguluilonze-Community Secondary School Nze Road, Nguru Junction-Lejja Road, Ogbugbuagu-Iwollo Imezi Olo-AmandimOlo road with spur to Ukwuagba Okpogho bore hole centre and the UNN Green House-Owerre Ezeorba-Orie Orba Market road with spur to Nkwo Orba-Umuafia-Agbamere road. Consultations, through Public consultation forum, focus group discussions & Key Informant Interviews (KII) were held in many of the village communities where the sub-projects would be located. Pictures of consultation meetings are shown in Figure 12 below. A summary of the outcome of the stakeholder consultations is provided in Table 27 below. Additional information is provided in Annexure.

Figure 12. Pictures of Consultation Meetings
The formal consultation meetings enabled proper discussions on the type of project and also address expectations from the communities. In the villages the meetings were attended by village heads and other community representatives. The reception at the different locations was friendly and deliberations were held primarily in Igbo language. Table 29 summarized issues raised during public consultation.

Table 20: Public Consultation Table

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of areas where interviews were conducted</td>
<td>Traditional leader &amp; Stakeholders along Nze Road \</td>
</tr>
<tr>
<td></td>
<td>Communities along Nguru Junction- Lejja Road, Oghrugugu-Iwollo Imezi \</td>
</tr>
<tr>
<td></td>
<td>Olo-Amandim Olo road with spur to Ukwuagba Okpogho bore hole centre \</td>
</tr>
<tr>
<td></td>
<td>Stakeholders in Communities along UNN Green House-Owerre-Ezeorba-Orie \</td>
</tr>
<tr>
<td></td>
<td>Orba Market road with spur to Nkwo Orba- Umuafia- Agbamere road.</td>
</tr>
<tr>
<td>Date</td>
<td>November 21 – 23, 2018</td>
</tr>
<tr>
<td>Language of communication</td>
<td>Ibo</td>
</tr>
<tr>
<td>Summary of Matters Discussed at Meetings</td>
<td>The purpose of the discussions was introduced to the stakeholders and community representatives at the different gatherings. The consultant also explained the intervention of the 5-pilot roads for community based and mechanized road maintenance and that the purpose of the ESMP study, which is to ensure the environment &amp; people’s livelihoods are not negatively impacted. The team then solicited the support of the community to ensure the project is a success.</td>
</tr>
<tr>
<td>Opening Remarks</td>
<td>The issues that were raised and have been addressed by this ESMP are: \</td>
</tr>
<tr>
<td>Clarifications, Questions and concerns</td>
<td>a. Assured the people that there is no likelihood of property demolition during the maintenance works \</td>
</tr>
<tr>
<td></td>
<td>b. The communities will form the community based maintenance groups which will bring employment with special consideration for youth and women. Also priority consideration will also be given to indigenous contractors for the annual mechanized works. \</td>
</tr>
<tr>
<td>At the different locations, the stakeholders and other community</td>
<td>c. The team explained that this project will be carried out and will not be abandoned. However, this ESMP is essential for ensuring no negative impacts on people and the environment. \</td>
</tr>
<tr>
<td></td>
<td>d. This has been included in the composition of first level GRCs (as contained in chapter eight) of this ESMP. \</td>
</tr>
<tr>
<td></td>
<td>a) Some expressed concern about the likelihood of their homes or property being demolished for the road project.   \</td>
</tr>
<tr>
<td></td>
<td>b) They encouraged the engagement of their youth in project activities for employment. \</td>
</tr>
<tr>
<td></td>
<td>c) Political interference with ethnic or religious undertones for projects thereby leading to project abandonment. \</td>
</tr>
<tr>
<td></td>
<td>d) Level of involvement of community leaders in project development and implementation processes. \</td>
</tr>
</tbody>
</table>
e) The project should distinct itself from other failed interventions carried out by other organizations.

<table>
<thead>
<tr>
<th>Perceptions about the Project</th>
<th>There was a general atmosphere of cordiality in every community visited and all participants showed appreciation for the introduction of such a laudable project at this point in time. They also promised to cooperate fully in every aspect of the projects implementation. The stakeholders welcomed the idea of establishing Grievances Redress Committees, as this would encourage a sense of ownership of the project among the benefitting communities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendations &amp; Remarks</td>
<td>Generally the consultations process was a success. Also every question and concern raised by the communities was clearly responded to by the Enugu RAMP-2 team. All concerns are to be communicated to project implementation management for consideration. The team noted that most communities visited had health centers in case of medical emergency on site.</td>
</tr>
</tbody>
</table>
CHAPTER NINE: SUMMARY AND RECOMMENDATIONS

9.0 Summary & Recommendations

This chapter presents a summary of the ESMP and recommendations to be undertaken by the SPIU to enhance the achievement of environmental and social safeguards, and a conclusion to the ESMP report.

9.1 Summary

The ESMP provides in detail the mitigation measures for identified potential adverse impact for the various phases of the project, and a monitoring program to ensure compliance. With adequate application of mitigation measures, the impacts will be avoided, reduced or mitigated, and in very few cases they may be offset. The SPIU should also ensure that the capacity building program is adhered to in a timely manner to ensure that all identified stakeholders effectively carry out their responsibilities in the implementation of the ESMP.

9.2 Recommendations

Road maintenance activities will have highly beneficial impact on the immediate communities as it will help maintain the rehabilitated roads and protect the investment, contribute to a more efficient road transportation system, reduce travel time, promote trade activities, reduce road accidents amongst other benefits.

Although, the civil works that will be implemented during the maintenance phase of the project will lead to some limited environmental and social impacts, these adverse impacts will largely be localized in spatial extent, short term and occurring within less sensitive environmental areas. These will be managed through the application of the appropriate mitigation measures stated in the ESMP matrix tables for each Lot, inclusion in the contractor’s agreement, good practices, adequate supervision and enforcement during project implementation.

In consideration of the above therefore, there is no major environmental or social issue to impede the implementation of the proposed project. Below are some of the recommendations to be undertaken by the SPIU that will enhance the overall sustainability of the project:

- 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.
- construction and safety signs boards and lights should be installed in the work areas to protect workers and members of the public around the during maintenance works
- priority should be given to local workers to stimulate local socioeconomic activities, improve livelihood and poverty reduction in the affected communities.
- ensure affected communities are assisted and have a voice in appropriation of mitigation measures.
- all bare and exposed soils should be re-vegetated with native vegetation immediately to prevent erosion,
- maintenance works should be carried out in an environmentally sustainable and socially responsible and inclusive manner;
- the Safeguard Unit of PIU should ensure active monitoring to ensure the contractor adhere strictly to the requirements of this ESMP especially in the application of mitigation measures
- the SPIU should ensure that the relevant sections of the ESMP should be made available to contractors
REFERENCES

Enugu State Rural Access and Mobility Project 2. *Environmental and Social Impact Assessment (ESIA) Report for Phase 1 Roads*


ANNEX 1

TERMS OF REFERENCE
Terms of Reference for Community Based and Mechanized Road Maintenance of 5- Pilot Roads

1.0 BACKGROUND

1.1. 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) currently in the States of Adamawa, Enugu, Imo, Niger and Osun; and intends to apply part of the proceeds for consultancy services for the production/upgrade of Environmental and Social Management Plan (ESMP) for the projects of the RAMP-2 participating States. The Project is implemented in each of the 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.

1.2. 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).

The proposed ESMP is intended to cover the 5 rural pilot roads measuring 49.8km already prioritized for community-based road maintenance and annual mechanized maintenance under Enugu RAMP-2.

PROJECT DEVELOPMENT OBJECTIVES

1.3. 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 has three primary components:

- **Component 1: Rehabilitation of Rural and State Roads** - This component would finance rehabilitation works for an indicative 115.6km of rural and state roads in Enugu states as well as the related design studies and external supervision activities.

- **Component 2: Roads Maintenance and Local Development** – This component would finance road maintenance activities on rehabilitated roads and support state mechanisms for maintenance funding. The model to be used in the maintenance mechanism involves community-based approach to among others.

- **Component 3: Capacity Building and Project Administration** – This component would finance Institutional Strengthening activities at state level as well as project administration costs.

1.4. 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 FMEnv 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.

2.0 PROJECT AREA

A total number of five (5) pilot roads have been selected under Enugu State RAMP-2 for community-based road maintenance and annual mechanized maintenance. The list of the selected pilot roads totaling approximately 49.8Km is shown below:

<table>
<thead>
<tr>
<th>S/N</th>
<th>Name of Road</th>
<th>Length of Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amagogwu-Ohebe- Umana with spur to the tarred road</td>
<td>8.6km</td>
</tr>
<tr>
<td>2</td>
<td>Amatu-Isube-Agbolaiten-Community Secondary School Nze Road</td>
<td>3km</td>
</tr>
<tr>
<td>3</td>
<td>Nguru Junction- Leja Road</td>
<td>10km</td>
</tr>
<tr>
<td>4</td>
<td>Ogbugbuag-Iwollo-ImeziOlo-AmandimOlo road with spur to UkwuagbaOkpogho bore hole centre</td>
<td>14km</td>
</tr>
<tr>
<td>5</td>
<td>UNN Green House-OwerreEzeorba-OrieOrba Market road with spur to NkwoOrba- Umuafia- Aghamere road</td>
<td>6.6km</td>
</tr>
</tbody>
</table>

3.0 OBJECTIVES
The main objective of the assignment is to prepare an Environmental and Social Management Plan (ESMP) for the five (5) pilot roads selected for community based and mechanised road maintenance. Other specific objectives include the following:

(i) Identify potential impacts that may occur during the mechanised maintenance of the (5) pilot roads within the project areas.
(ii) Develop detailed mitigation measures with relevant costs implication that will need to be achieved during and after sub-project implementation
(iii) Specify responsibilities and institutional arrangements that will be in place to ensure that the mitigation measures are implemented, and
(iv) Provide implementation and monitoring schedule

4.0 SCOPE OF CONSULTANCY

The objective of the consulting services is to prepare an environmental and social management plans (ESMPs) for the proposed road maintenance 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 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 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 shall include:

i. Review existing documentation of the RAMP 2, all relevant safeguards documents and the PAD, PIM, ESMFs and ESMPs prepared for the project;
ii. Review Environmental Assessment procedures of the World Bank safeguards policies especially Environmental Assessment (OP 4.01);
iii. Ensure that there are no discrepancies between the technical specifications of the works to be implemented and the ones used for the development of the ESMP, including but not limited to the width of works from the center line of the existing road along the entire length of each road;
iv. Review the existing Federal and State Environmental Laws/legal framework;
v. Assess the potential environmental and social impacts related to project activities
vi. Determine the mitigation measures that will need to be taken into consideration and the procedures during pre-Maintenance of road, Maintenance & rehabilitation, and operation phases.

vii. Define the institutional arrangements for implementing activities to mitigate adverse environmental and social impacts, suppressing or reducing them to acceptable levels;
viii. Identify responsibilities and actors for the implementation of proposed mitigation measures.
ix. Assess the capacity available to implement the proposed mitigation measures, and suggest recommendation in terms of training and capacity building, and estimate their costs.
x. Develop an Environmental and Social Management Plan (ESMP) with indicative costs for implementation and source of funding.

The ESMP should capture:

(i) The potential environmental and social impacts resulting from project activities
(ii) The proposed mitigation measures;
(iii) The institutional responsibilities for implementation;
(iv) the monitoring indicators;
(v) the institutional responsibilities for monitoring and implementation of mitigation measures;
(vi) the costs of activities; and
(vii) a calendar for implementation.
(vii) Public consultations: Stakeholders identification and categorisation should be discussed under this. Minutes and attendance of consultation should be included in the final ESMP report. 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
(ii) Labour Influx, GBV, and HIV/AIDs
(iii) ESMP Disclosures
(iv) Summary and Recommendations

5.0 OUTPUTS
The expected outputs of the consultancy service are:

i) An Environmental and Social Management Plan (ESMPs) for the 5 pilot roads maintenance project

6.0 CONSULTANT QUALIFICATION AND EXPERIENCE

The requisite qualifications of the Environmental and Social Safeguards Consultant shall include a Bachelor degree (BSc) and Master’s Degree (MSc) qualification in relevant fields including but not limited to: Social Sciences, Environmental Science, Environmental Management, Environmental Economics, Environmental Engineering or related field.

Minimum experience should be eight (8) years with minimum specific experience of five (5) years on practical experience in safeguards assessment, planning and conducting of Environmental and Social issues.

Possession of relevant professional qualifications in Social/Environmental issues and evidence of similar jobs undertaken will be an added advantage.

The Consultant(s) must have adequate knowledge of World Bank operational safeguards policies gained through hands-on experience in the preparation and implementation of ESMPs in rural areas.

7.0 TIME FRAME AND INPUT

The consultancy input is estimated to be 30 man days to be completed within six (5) weeks after signing of contract.

8.0 DELIVERABLES AND TIMING

The following table shows the proposed report schedule and deliverables:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Schedule</th>
<th>No of Hard Copies</th>
<th>No of electronic copies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Signing</td>
<td>Week 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inception Report</td>
<td>Week 1 after Contract Signing</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Draft Report</td>
<td>Week 3 after Contract Signing</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Draft Final Report</td>
<td>Week 4 after Contract Signing</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Final Report</td>
<td>Week 5 after Contract Signing</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>
ANNEX 2

SAMPLE QUESTIONNAIRE

Questionnaire for the Preparation of Environmental and Social Management for RAMP2 Projects in Enugu State

Preamble:
My name is ..................................................................................................................................................
..................................................................................................................................................................
.................................................................................................................................................................
DATE:..................................................Questionnaire No..............................................
Community:...........................................................................................................
LGA:.............................................................................................................................GPS Location:
Please simply tick (x) or write in brief detail where appropriate

SECTION A: BIO-DATA

1. Name: ..............................................................................................................................................
2. PhoneNumber:...................................................................................................................................
3. Address(optional): ..................................................................................................................................
4. Age (years): <18 □ 8-30 □ 30-50 □ 50-70 □ above 70 □
5. Sex: □ Male □ Female □
6. What is your religion: Christian □ Muslim □ Pagan □ traditionalist □ Others □
7. Marital Status: Single □ Married □ Separated/Divorcee □
8. No. of children: Non □ 1-2 □ 3-4 □ 5-6 □ Above □
9. Level of education: (  ) No formal educ. (  ) Primary (  ) Secondary (  ) Tertiary (  ) others (specify)
................................................................................................................................-----------------
10. What do you do for a living (your primary occupation/nature of business)?
    (  ) Self-employed (  ) fisherman (  ) hunter (  ) public sector (  ) Others (specify)
    ............................................................................................................................................................
11. How long have you been resident in this community?
    (  ) Since birth (  ) above 15 years (  ) 10 – 15 years (  ) 5 – 10 years (  ) below 5 years
12. What are the transportation means to this community?
    (  ) Car/bus (  ) motorcycle (  ) bicycle (  ) lorry (  ) others

SECTION B

11. What is your general opinion of this road Maintenance /rehabilitation project?
...............................................................................................................................................................  
12. How do you think the project will affect the community? How will it affect the individual families?
...............................................................................................................................................................  
13. Pls explain the benefits or negative impacts of this project in the community?
...............................................................................................................................................................  
14. How do you seek redress when there is a grievance among people in this community?
...............................................................................................................................................................  
15. Can you let us know how much you earn in a day/month?
...............................................................................................................................................................
16. How far or how close is the nearest market?

17. Please describe the leadership structure in this community

18. Please describe the health care facilities in this village. Where is the nearest hospital located?
ANNEX 3

SAMPLE COMPANY CODE OF CONDUCT

Preventing Gender Based Violence and Violence Against Children

The company is committed to creating and maintaining an environment in which gender based violence (GBV) and violence against children (VAC) have no place, and where they will not be tolerated by any employee, associate, or representative of the company. Therefore, in order to ensure that all those engaged in the project are aware of this commitment, and in order to prevent, be aware of, and respond to any allegations of GBV and VAC, the company commits to the following core principles and minimum standards of behavior that will apply to all company employees, associates, and representatives including sub-contractors, without exception:

1. The company—and therefore all employees, associates, and representatives—commit to treating women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status. Acts of GBV and VAC are in violation of this commitment.

2. Demeaning, threatening, harassing, abusive, culturally inappropriate, or sexually provocative language and behavior are prohibited among all company employees, associates, and its representatives.

3. Acts of GBV or VAC constitute gross misconduct and are therefore grounds for sanctions, which may include penalties and/or termination of employment. All forms of GBV and VAC, including grooming are unacceptable, regardless of whether they take place on the work site, the work site surroundings, at worker’s camps or at worker’s homes.

4. In addition to company sanctions, legal prosecution of those who commit acts of GBV or VAC will be pursued if appropriate.

5. Sexual contact or activity with children under 18—including through digital media—is prohibited. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.

6. Sexual favors—for instance, making promises or favorable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior are prohibited.

7. Unless there is full consent\(^3\) by all parties involved in the sexual act, sexual interactions between the company’s employees (at any level) and members of the communities surrounding the work place are prohibited. This includes relationships involving the withholding/promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered “non-consensual” within the scope of this Code.

8. All employees, including volunteers and sub-contractors are highly encouraged to report suspected or actual acts of GBV and/or VAC by a fellow worker, whether in the same company or not. Reports must be made in accordance with GBV and VAC Allegation Procedures.

---

\(^3\) **Consent** is defined as the informed choice underlying an individual’s free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.
9. Managers are required to report suspected or actual acts of GBV and/or VAC as they have a responsibility to uphold company commitments and hold their direct reports responsible.

To ensure that the above principles are implemented effectively the company commits to ensuring that:

10. All managers sign the ‘Manager’s Code of Conduct’ detailing their responsibilities for implementing the company’s commitments and enforcing the responsibilities in the ‘Individual Code of Conduct’.

11. All employees sign the project’s ‘Individual Code of Conduct’ confirming their agreement not to engage in activities resulting in GBV or VAC.

12. Displaying the Company and Individual Codes of Conduct prominently and in clear view at workers’ camps, offices, and in public areas of the work space. Examples of areas include waiting, rest and lobby areas of sites, canteen areas, health clinics.

13. Ensure that posted and distributed copies of the Company and Individual Codes of Conduct are translated into the appropriate language of use in the work site areas as well as for any international staff in their native language.

14. An appropriate person is nominated as the company’s ‘Focal Point’ for addressing GBV and VAC issues, including representing the company on the GBV and VAC Compliance Team (GCCT) which is comprised of representatives from the client, contractor(s), the supervision consultant, and local service provider(s).

15. Ensuring that an effective Action Plan is developed in consultation with the GCCT which includes as a minimum:

   a. **GBV and VAC Allegation Procedure** to report GBV and VAC issues through the project Grievance Redress Mechanism (GRM);

   b. **Accountability Measures** to protect confidentiality of all involved; and,

   c. **Response Protocol** applicable to GBV and VAC survivors and perpetrators.

16. That the company effectively implements the Action Plan, providing feedback to the GCCT for improvements and updates as appropriate.

17. All employees attend an induction training course prior to commencing work on site to ensure they are familiar with the company’s commitments and the project’s GBV and VAC Codes of Conduct.

18. All employees attend a mandatory training course once a month for the duration of the contract starting from the first induction training prior to commencement of work to reinforce the understanding of the project’s GBV and VAC Code of Conduct.

I do hereby acknowledge that I have read the foregoing Company Code of Conduct, and on behalf of the company agree to comply with the standards contained therein. I understand my role and responsibilities to prevent and respond to GBV and VAC. I understand that any action inconsistent with this Company Code of Conduct or failure to take action mandated by this Company Code of Conduct may result in disciplinary action.

Company name: _________________________

Signature: ____________________________

Printed Name: _________________________

Title: _________________________________

Date: ________________________________
Manager’s Code of Conduct

Preventing Gender Based Violence and Violence Against Children

Managers at all levels have particular responsibilities to uphold the company’s commitment to preventing and addressing GBV and VAC. This means that managers have an acute responsibility to create and maintain an environment that prevents GBV and VAC. Managers need to support and promote the implementation of the Company Code of Conduct. To that end, managers must adhere to this Manager’s Code of Conduct and also sign the Individual Code of Conduct. This commits them to supporting and developing systems that facilitate the implementation of the Action Plan and maintain a GBV-free and VAC-free environment at the workplace and in the local community. These responsibilities include but are not limited to:

Implementation

1. To ensure maximum effectiveness of the Company and Individual Codes of Conduct:
   a. Prominently displaying the Company and Individual Codes of Conduct in clear view at workers’ camps, offices, and in public areas of the work space. Examples of areas include waiting, rest and lobby areas of sites, canteen areas, health clinics.
   b. Ensuring all posted and distributed copies of the Company and Individual Codes of Conduct are translated into the appropriate language of use in the work site areas as well as for any international staff in their native language.
2. Verbally and in writing explain the Company and Individual Codes of Conduct to all staff.
3. Ensure that:
   a. All direct reports sign the ‘Individual Code of Conduct’, including acknowledgment that they have read and agree with the Code of Conduct.
   b. Staff lists and signed copies of the Individual Code of Conduct are provided to the GCCT and the client.
   c. Participate in training and ensure that staff also participate as outlined below.
   d. Staff are familiar with the Grievance Redress Mechanism (GRM) and that they can use it to anonymously report concerns of GBV or VAC incidents.
   e. Staff are encouraged to report suspected or actual GBV or VAC through the GRM by raising awareness about GBV and VAC issues, emphasizing the staff’s responsibility to the Company and the country hosting their employment, and emphasizing the respect for confidentiality.
4. In compliance with applicable laws and to the best of your abilities, prevent perpetrators of sexual exploitation and abuse from being hired, re-hired or deployed. Use background and criminal reference checks for all employees.
5. Ensure that when engaging in partnership, sub-contractor or similar agreements, these agreements:
   a. Incorporate the GBV and VAC Codes of Conduct as an attachment.
   b. Include the appropriate language requiring such contracting entities and individuals, and their employees and volunteers, to comply with the Individual Codes of Conduct.
   c. expressly state that the failure of those entities or individuals, as appropriate, to take preventive measures against GBV and VAC, to investigate allegations thereof, or to take corrective actions when GBV or VAC has occurred, shall constitute grounds for sanctions and penalties in accordance with the Individual Codes of Conduct.
6. Provide support and resources to the GCCT to create and disseminate internal sensitization initiatives through the awareness-raising strategy under the Action Plan.
7. Ensure that any GBV or VAC issue warranting police action is reported to the client and the World Bank immediately.

Training

8. All managers are required to attend an induction manager training course prior to commencing work on site to ensure that they are familiar with their roles and responsibilities in upholding the GBV and VAC Codes of Conduct. This training will be separate from the induction training course required of all employees and will provide managers with the necessary understanding and technical support needed to begin to develop the Action Plan for addressing GBV and VAC issues.
9. Ensure that time is provided during work hours and that staff attend the mandatory project facilitated induction training on GBV and VAC required of all employees prior to commencing work on site.
10. Ensure that staff attend the monthly mandatory refresher training course required of all employees to combat increased risk of GBV and VAC during civil works.
11. Managers are required to attend and assist with the project facilitated monthly training courses for all employees. Managers will be required to introduce the trainings and announce the self-evaluations.
12. Collect satisfaction surveys to evaluate training experiences and provide advice on improving the effectiveness of training.

**Response**

13. Managers will be required to provide input to the GBV and VAC Allegation Procedures and Response Protocol developed by the GCCT as part of the final cleared Action Plan.

14. Once adopted by the Company, managers will uphold the Accountability Measures set forth in the Action Plan to maintain the confidentiality of all employees who report or (allegedly) perpetrate incidences of GBV and VAC (unless a breach of confidentiality is required to protect persons or property from serious harm or where required by law).

15. If a manager develops concerns or suspicions regarding any form of GBV or VAC by one of his/her direct reports, or by an employee working for another contractor on the same work site, s/he is required to report the case using the GRM.

16. Once a sanction has been determined, the relevant manager(s) is/are expected to be personally responsible for ensuring that the measure is effectively enforced, within a maximum timeframe of 14 days from the date on which the decision to sanction was made.

17. Managers failing to report or comply with such provision can in turn be subject to disciplinary measures, to be determined and enacted by the company’s CEO, Managing Director or equivalent highest-ranking manager. Those measures may include:
   a. Informal warning.
   b. Formal warning.
   c. Additional Training.
   d. Loss of up to one week's salary.
   e. Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
   f. Termination of employment.

18. Ultimately, failure to effectively respond to GBV and VAC cases on the work site by the company’s managers or CEO may provide grounds for legal actions by authorities.

_I do hereby acknowledge that I have read the foregoing Manager's Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to GBV and VAC. I understand that any action inconsistent with this Manager's Code of Conduct or failure to take action mandated by this Manager's Code of Conduct may result in disciplinary action._

Signature: __________________________

Printed Name: __________________________

Title: __________________________

Date: __________________________
Individual Code of Conduct

Preventing Gender Based Violence and Violence Against Children

I, ____________________________, acknowledge that preventing gender based violence (GBV) and violence against children (VAC) is important. The company considers that GBV or VAC activities constitute acts of gross misconduct and are therefore grounds for sanctions, penalties or potential termination of employment. All forms of GBV or VAC are unacceptable be it on the work site, the work site surroundings, or at worker’s camps. Prosecution of those who commit GBV or VAC may be pursued if appropriate.

I agree that while working on the project I will:

• Consent to police background check.
• Treat women, children (persons under the age of 18), and men with respect regardless of race, color, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
• Not use language or behavior towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
• Not participate in sexual contact or activity with children—including grooming, or contact through digital media. Mistaken belief regarding the age of a child is not a defense. Consent from the child is also not a defense or excuse.
• Not engage in sexual favors—for instance, making promises or favorable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behavior.
• Unless there is the full consent by all parties involved, I will not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered “non-consensual” within the scope of this Code.
• Attend and actively partake in training courses related to HIV/AIDS, GBV and VAC as requested by my employer.
• Consider reporting through the GRM or to my manager any suspected or actual GBV or VAC by a fellow worker, whether employed by my company or not, or any breaches of this Code of Conduct.

With regard to children under the age of 18:

• Wherever possible, ensure that another adult is present when working in the proximity of children.
• Not invite unaccompanied children unrelated to my family into my home, unless they are at immediate risk of injury or in physical danger.
• Not sleep close to unsupervised children unless absolutely necessary, in which case I must obtain my supervisor’s permission, and ensure that another adult is present if possible.
• Use any computers, mobile phones, or video and digital cameras appropriately, and never to exploit or harass children or to access child pornography through any medium (see also “Use of children’s images for work related purposes” below).
• Refrain from physical punishment or discipline of children.
• Refrain from hiring children for domestic or other labor which is inappropriate given their age or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury.
• Comply with all relevant local legislation, including labor laws in relation to child labor.

Use of children’s images for work related purposes

When photographing or filming a child for work related purposes, I must:

4 Consent is defined as the informed choice underlying an individual’s free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.
• Before photographing or filming a child, assess and endeavor to comply with local traditions or restrictions for reproducing personal images.
• Before photographing or filming a child, obtain informed consent from the child and a parent or guardian of the child. As part of this I must explain how the photograph or film will be used.
• Ensure photographs, films, videos and DVDs present children in a dignified and respectful manner and not in a vulnerable or submissive manner. Children should be adequately clothed and not in poses that could be seen as sexually suggestive.
• Ensure images are honest representations of the context and the facts.
• Ensure file labels do not reveal identifying information about a child when sending images electronically.

Sanctions

I understand that if I breach this Individual Code of Conduct, my employer will take disciplinary action which could include:

• Informal warning.
• Formal warning.
• Additional Training.
• Loss of up to one week’s salary.
• Suspension of employment (without payment of salary), for a minimum period of 1 month up to a maximum of 6 months.
• Termination of employment.
• Report to the police if warranted.

I understand that it is my responsibility to avoid actions or behaviors that could be construed as GBV or VAC or breach this Individual Code of Conduct. I do hereby acknowledge that I have read the foregoing Individual Code of Conduct, do agree to comply with the standards contained therein and understand my roles and responsibilities to prevent and respond to GBV and VAC. I understand that any action inconsistent with this Individual Code of Conduct or failure to take action mandated by this Individual Code of Conduct may result in disciplinary action and may affect my ongoing employment.

Signature: ________________________
Printed Name: ________________________
Title: ________________________
Date: ________________________
ANNEX 4

SUMMARY OF WORLD BANK ENVIRONMENTAL AND SOCIAL SAFEGUARD POLICIES TRIGGERED BY RAMP2

- **Environmental Assessment (OP 4.01).** 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.

- **Natural Habitats (OP 4.04).** The conservation of natural habitats, like other measures that protect and enhance the environment, is essential for long-term sustainable development. The Bank does not support projects involving the significant conversion of natural habitats unless there are no feasible alternatives for the project and its siting, and comprehensive analysis demonstrates that overall benefits from the project substantially outweigh the environmental costs. If the environmental assessment indicates that a project would significantly convert or degrade natural habitats, the project includes mitigation measures acceptable to the Bank. Such mitigation measures include, as appropriate, minimizing habitat loss (e.g. strategic habitat retention and post-development restoration) and establishing and maintaining an ecologically similar protected area. The Bank accepts other forms of mitigation measures only when they are technically justified. Should the sub-project-specific EMPs indicate that natural habitats might be affected negatively by the proposed sub-project activities with suitable mitigation measures.

- **Involuntary Resettlement (OP 4.12).** This policy covers direct economic and social impacts that both result from Bank-assisted investment projects, and are caused by (a) the involuntary taking of land resulting in (i) relocation or loss of shelter; (ii) loss of assets or access to assets, or (iii) loss of income sources or means of livelihood, whether or not the affected persons must move to another location; or (b) the involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on the livelihoods of the displaced persons. The ESMF and RPF reports discuss the applicability of this policy in detail.

- **Physical Cultural Resources (OP. 4.11)** This policy addresses physical cultural resources, which are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings, and may be above or below ground, or under water. Their cultural interest may be at the local, provincial or national level, or within the international community. Physical cultural resources are important as sources of valuable scientific and historical information, as assets for economic and social development, and as integral parts of a people’s cultural identity and practices.
ANNEX 5

GENERAL ENVIRONNEMENTAL MANAGEMENT CONDITIONS FOR MAINTENANCE/MAINTENANCE CONTRACTS

General
1. In addition to these general conditions, the Contractor shall comply with any specific Environmental Management Plan (EMP) 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 maintenance 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 maintenance 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.
Discourage maintenance 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.

Implement soil erosion control measures in order to avoid surface run off and prevents siltation, etc.

Ensure that garbage, sanitation and drinking water facilities are provided in maintenance workers camps.

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

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

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.

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.

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

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

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.

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

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.

Maintenance/maintenance 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.

1.1.1.2 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 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 Maintenance 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.

1.1.1.3 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 maintenance.
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. Topssoil 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 maintenance/Maintenance 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. Re-vegetate 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.

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 downstream, and maintains the ecological balance of the river system.
36. No maintenance/Maintenance 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.

1.1.1.1.5

1.1.1.1.6 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.

1.1.1.1.7 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.

1.1.1.1.8 Disposal of Unusable Elements

45. Unusable materials and Maintenance 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.

1.1.1.1.9 Health and Safety

49. In advance of the maintenance/Maintenance work, the Contractor shall mount an awareness and hygiene campaign. Workers and local residents shall be sensitized on health risks particularly of Cholera, tetanus and Hepatitis.
50. Adequate road signs to warn pedestrians and motorists of maintenance/Maintenance activities, diversions, etc. shall be provided at appropriate points.

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

1.1.1.10 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.

1.1.1.11 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.

1.1.1.12 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 given 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.

1.1.1.1.13 Training of Contractor’s Personnel

58. 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 (raise awareness on social issues).

1.1.1.1.14 Cost of Compliance

59. 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.
ANNEX 6 CONSULTATION MEETINGS

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Areas where interviews were conducted</td>
<td>Community Forum/Meeting with stakeholders</td>
</tr>
<tr>
<td>In attendance</td>
<td>The Consultant, SPIU team, the Community representatives; Igwe, Chiefs of Community</td>
</tr>
<tr>
<td>Location</td>
<td>Nkwo Orba (AKA - Ejuona Orba)</td>
</tr>
<tr>
<td>Number of people in attendance</td>
<td>36</td>
</tr>
<tr>
<td>Date</td>
<td>13th March 2019</td>
</tr>
<tr>
<td>Language of communication</td>
<td>Igbo</td>
</tr>
<tr>
<td>Summary of Matters Discussed at Meetings</td>
<td></td>
</tr>
<tr>
<td>Opening Remarks</td>
<td>1. Introduction of the purpose of the meeting for the civil works of the pilot road project, which will soon commence.</td>
</tr>
<tr>
<td></td>
<td>2. The safeguards policies guiding the project don't permit harm to people and the environment. As such, assets including structures and crops are not to be removed, as the project will work with the available width.</td>
</tr>
<tr>
<td></td>
<td>3. The community representatives - Ichie Julius Odoh; Mkposhi Nicholas Eze and other community representatives affirmed that they have been expectant for the road and thank God that their prayers are being answered.</td>
</tr>
<tr>
<td></td>
<td>4. They however were not comfortable with the project working with only the available width. They feel it’s strange to narrow a road project for the sake of crops</td>
</tr>
<tr>
<td></td>
<td>5. The community further requested that special attention be given to a section just before the market that have serious erosion issues that have carried and killed 3 people and a jeep vehicle in the past.</td>
</tr>
<tr>
<td>Clarifications, Questions and concerns</td>
<td></td>
</tr>
<tr>
<td>Clarifications to Questions</td>
<td>1. The team made up of social and environmental safeguard officers; the Development Communication Officer and the M&amp;E Officer thanked the community for their feedback and assured them that efforts will be made to make the erosion spot on the road better.</td>
</tr>
<tr>
<td></td>
<td>2. They also helped the community members to understand why the project can only work with available width and not impact on crops and structures and advised that they do not pressure the contractor to do otherwise.</td>
</tr>
<tr>
<td>Recommendations &amp; Remarks</td>
<td>The consultant and the environmental and Social Safeguards officers requested that the community cooperate with the project for a timely implementation of the project; while taking actions to ensure protection against HIV/AIDS and GBV. The community agreed to support the project to work according to their policy, while adding that state government can always improve on the width when they intervene.</td>
</tr>
</tbody>
</table>

Enugu RAMP-2

Page 92
### Number of people in attendance
17

### Date
13th March 2019

### Language of communication
Igbo

### Summary of Matters Discussed at Meetings

#### Opening Remarks
1. Introduction of the purpose of the meeting for the civil works of the pilot road project, which will soon commence.
2. The safeguards policies guiding the project don’t permit harm to people and the environment. As such, assets including structures and crops are not to be removed as the project will work with the available width.
3. Appeal to those whose tables are outside the constructed shops to move them inside once the contractor approaches.
4. Warm appeal to guard against GBV and HIV and report same in event of occurrence.
5. The market women thanked the team and report how the World Bank contractors that constructed the other side of Orie Orba market and road several years ago, impregnated and left girls with many diseases. They sincerely hope it won’t be the same again.

#### Clarifications, Questions and concerns

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Areas where interviews were conducted</td>
<td>Community Forum/Meeting with stakeholders</td>
</tr>
<tr>
<td>In attendance</td>
<td>Environmental and Social Safeguards Officers &amp; Other SPIU representatives, Igwe of Lejja Village, Representatives from Nguru and many other stakeholders from the two communities</td>
</tr>
<tr>
<td>Location</td>
<td>Nguru-Lejja</td>
</tr>
<tr>
<td>Number of people in attendance</td>
<td>48</td>
</tr>
<tr>
<td>Date</td>
<td>13th March 2019</td>
</tr>
<tr>
<td>Language of communication</td>
<td>English &amp; Igbo</td>
</tr>
</tbody>
</table>

#### Recommendations & Remarks
The Environmental and the Social Safeguards officers announced phone numbers that can call should there be any issue.

#### Item | Description
--- | ---
Opening Remarks | 1. Introduction was made for all in attendance and of the purpose of the meeting for the civil works of the road project, which will soon commence in the two communities-Nguru and Lejja.
2. The safeguards policies guiding the project don’t permit harm to people and the environment. As such, assets including structures and crops are not to be removed as the project will work with the available width.
3. The Igwe and other major community stakeholders including professors, former local government chairman and permanent secretary in PPSMB were elated with the news. According to them, the community members were begged before they could vote in the just concluded election because of the bad terrain of the road.
4. They assured that the contractor will not have any security issue and pledged total support to the project.
5. They frowned at the project policy not to remove any economic trees from the road and claimed that their ancestors will not be happy with them if the road is narrow for trivial reasons.
6. They further requested for drains and culverts at strategic places because of the erosion issues they have in the two communities.

Clarifications, Questions and concerns

<table>
<thead>
<tr>
<th>Clarifications to Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The team thanked the Igwe and the other stakeholders promised that drains and culverts will be constructed at the appropriate places.</td>
</tr>
<tr>
<td>2. They also helped the community members to understand why the project can only work with available width and not impact on crops and structures and candidly advised that they do not pressure the contractor to do otherwise.</td>
</tr>
<tr>
<td>3. The community agreed that the project should run in accordance with the policies guiding it.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Areas where interviews were conducted</td>
<td>Community Forum/Meeting with stakeholders</td>
</tr>
<tr>
<td>In attendance</td>
<td>Environmental and Social Safeguards Officers &amp; Other SPIU representatives, Sectary and Vice President of Ogbugbuagu Iwollo town union and other community stakeholders</td>
</tr>
<tr>
<td>Location</td>
<td>Ogbugbuagu-Iwollo</td>
</tr>
<tr>
<td>Number of people in attendance</td>
<td>31</td>
</tr>
<tr>
<td>Date</td>
<td>14th March 2019</td>
</tr>
<tr>
<td>Language of communication</td>
<td>English &amp; Igbo</td>
</tr>
</tbody>
</table>
| Summary of Matters Discussed at Meetings | 1. Introduction was made for all in attendance and of the purpose of the meeting for the civil works of the road project, which will soon commence in the community.  
2. The safeguards policies guiding the project don’t permit harm to people and the environment. As such, assets including structures and crops are not to be removed as the project will work with the available width.  
3. They assured that the contractor will not have any security issue and pledged total support to the project especially if the contractor is sincere with them.  
4. The Vice President of the town union frowned at the project policy not to remove any economic trees from the road.  
5. They further requested for drains and culverts at strategic places because of the erosion issues they have in the two communities. |
| Clarifications, Questions and concerns | 6. The team thanked the Vice President town union and the other stakeholders and promised that drains and culverts will be constructed at the appropriate places.  
7. They also helped the community members to understand why the project can only work with available width and not impact on crops and structures and candidly advised that they do not pressure the contractor to do otherwise. |
8. The community agreed that the project should run in accordance with the policies guiding it.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of Areas where interviews were conducted</strong></td>
<td>Community Forum/Meeting with stakeholders</td>
</tr>
<tr>
<td><strong>In attendance</strong></td>
<td>Environmental and Social Safeguards Officers &amp; Other SPIU representatives, Imezi-Olo community stakeholders</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>Imezi-Olo</td>
</tr>
<tr>
<td><strong>Number of people in attendance</strong></td>
<td>36</td>
</tr>
<tr>
<td><strong>Date</strong></td>
<td>14th March 2019</td>
</tr>
<tr>
<td><strong>Language of communication</strong></td>
<td>English &amp; Igbo</td>
</tr>
</tbody>
</table>

**Summary of Matters Discussed at Meetings**

**Opening Remarks**

1. Introduction was made for all in attendance and of the purpose of the meeting for the civil works of the road project, which will soon commence in the community.
2. The safeguards policies guiding the project don’t permit harm to people and the environment. As such, assets including structures and crops are not to be removed as the project will work with the available width.
3. They assured that the contractor will not have any security issue and pledged total support to the project.
4. The women pleaded that the road be quickly done as they bad condition of the road makes them sick and age prematurely.
5. They further requested for drains and culverts at strategic places because of the erosion issues they have in the two communities.

**Clarifications, Questions and concerns**

6. The team thanked the community members and promised that project will be quickly executed and drains and culverts will be constructed at the appropriate places.
7. They also helped the community members to understand why the project can only work with available width and not impact on crops and structures and candidly advised that they do not pressure the contractor to do otherwise.
8. The community agreed that the project should run in accordance with the policies guiding it.
### Opening Remarks

1. Introduction was made for all in attendance and of the purpose of the meeting for the civil works of the road project, which will soon commence in the community.
2. The safeguards policies guiding the project don’t permit harm to people and the environment. As such, assets including structures and crops are not to be removed as the project will work with the available width.
3. They assured that the contractor will not have any security issue and pledged total support to the project.
4. They further requested for the asphalting of the road to make it last.

### Clarifications, Questions and concerns

5. The team thanked the community members and promised that drains and culverts will be constructed at the appropriate places.
6. They also helped the community members to understand why the project can only work with available width and not impact on crops and structures and candidly advised that they do not pressure the contractor to do otherwise.
7. The community agreed that the project should run in accordance with the policies guiding it.
8. They were helped to appreciate the fact that RAMP does not asphalt her project roads but the state government can with adequate advocacy.

---

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Areas where interviews were conducted</td>
<td>Community Forum/Meeting with stakeholders</td>
</tr>
<tr>
<td>In attendance</td>
<td>Environmental and Social Safeguards Officers &amp; Other SPIU representatives, Amogwu Aku community stakeholders</td>
</tr>
<tr>
<td>Location</td>
<td>Amogwu Aku</td>
</tr>
<tr>
<td>Number of people in attendance</td>
<td>37</td>
</tr>
<tr>
<td>Date</td>
<td>15th March 2019</td>
</tr>
<tr>
<td>Language of communication</td>
<td>English &amp; Igbo</td>
</tr>
<tr>
<td>Summary of Matters Discussed at Meetings</td>
<td></td>
</tr>
<tr>
<td>Opening Remarks</td>
<td>1. Introduction was made for all in attendance and of the purpose of the meeting for the civil works of the road project, which will soon commence in the community.</td>
</tr>
<tr>
<td></td>
<td>2. The safeguards policies guiding the project don’t permit harm to people and the environment. As such, assets including structures and crops are not to be removed, as the project will work with the available width.</td>
</tr>
</tbody>
</table>
3. They assured that the contractor will not have any security issue and pledged total support to the project.
4. They further requested that care be taken not to remove a functional iron water pipe that is visibly unearthed by erosion and which covers Ama Echem Amogwu to Elu Orie.

Clarifications, Questions and concerns

<table>
<thead>
<tr>
<th>Clarifications to Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The team promised that the contractors will not remove or destroy their functional water pipe.</td>
</tr>
</tbody>
</table>

Below are pictures taken during the consultation meetings:

- Meeting at Nkwo Orba
- Sensitization at Orie Orba
- Sensitization at Imezi Olo
- Consultation at Nguru-Leija
- Sensitization at Ogbugbuagu Iwollo
Attendant sheets
ANNEX 7

CULTURAL HERITAGE MANAGEMENT / CHANCE FIND PROCEDURE

Identification and Assessment
For Cultural Heritage Management (CHM) under the Enugu RAMP 2, Inventory will always be a key management tool in the area of identification and assessment. The extent to which inventories are prepared will depend on criteria adopted by the PIU and in lines with requirements or guidelines by the WB. The principal best practice in assessing cultural heritage issues around roads to be rehabilitated under the Enugu RAMP 2 is to have a thematic and individual value assessment procedure in place, so as to justify long-term conservation of an asset. The aim of an identification and assessment process should be not only the identification of places, but also the establishment of a hierarchy of significant places under a thematic system.

Best Practice Inputs
- The Enugu RAMP 2 should have a standard inventory form, also available as a Standard Operating Procedure (SOP).
- Inventory should be updated as new information comes to light, or as new technology is introduced eg. GPS plotting of sites.
- Inventory is thematically linked and has the primary aim of revealing a hierarchy of significant places under a variety of relevant themes.
- Inventory work focuses on geographic areas or themes where there is little recorded inventory and a potential threat exists to unrecorded sites.
- Each road project area has assessment criteria and an assessment process, both of which have been endorsed by the SPIUs Safeguard Unit and WB.
- The Enugu RAMP 2 SPIU should maintain a CHM database containing all information relating to history and management of CHM assets with cross-reference to other state inventories.
- Assessment of significance of heritage places by an external CHM specialist should be a prerequisite for major capital expenditure on any CHM asset.

Allocating Resources
Best Practice inputs/Indicators
1. There should be provision for access to a capital works budget for CHM catch up maintenance.
2. The Enugu SPIU should plan for an ongoing core funding base for cyclical maintenance of CHM assets within each institution responsible for CHM and the reflection of this responsibility in the expected outputs.
3. Ensure risk management actions for CHM emergencies.
4. Prioritisation of resource allocation to places on a thematic significance basis. This should be founded on an understanding of the history of land under management and broader state or national themes.
5. The proportion of CHM staff /institutional responsibilities to CHM assets managed should be similar to the proportion of staff to assets in other functional areas within the organisation.
6. Identification of core competencies for CHM staff/institutional responsibilities and competency-based recruitment procedures including assessment of competencies by a CHM specialist.
7. The SPIU should ensure that training in core CHM competencies are integrated into SPIU training programs. (Including instruction in broad CHM principles and specific standard operating procedures)
9. Regular analysis of CHM assets to ensure that each asset is managed by the Enugu RAMP 2 SPIU with the best expertise, resources, motivation and local presence to effectively conserve that place, and to present the place if it is appropriate to do so.
10. Comprehensive guidelines and programs to promote & support community involvement in CHM.
11. All leases on CHM assets include provision for specific ongoing works funded by lessee.
12. Revenue generated from CHM should be retained for CHM without a corresponding drop in budget funding, in order to encourage sustainable management.

Protection
1. The Enugu SPIU should ensure that the process of acquiring places with a range of conservation or heritage values (natural, historic and indigenous) should take into account all the identified values and provide for their future management.
2. If the SPIU considers acquisition is not an option, or is unnecessary, then other options including reserving, listing on a state heritage register, voluntary conservation agreement, covenanting, gazetting or referral to another relevant authority are pursued, with the cooperation of the owner.
3. The Enugu RAMP 2 risk management strategy addresses the need for staff training and appropriate checks and balances to minimise the threat to CHM assets by in-house staff.

Conservation
1. Conservation of places of cultural significance should be done according to a plan – a conservation management plan (CMP).
2. The breadth and detail of CMPs are commensurate with the needs of the place.
3. Shorter CMPs for individual sites, tailored to specific circumstances, should be prepared where; there is urgency to do the work, or the issues are simple and the vision statement for the place dictates action, or the plan forms part of a broader management plan.
4. Broad management plans or ‘historic area plans’ are prepared for larger land areas with predominantly historic values or places with multiple, geographically linked heritage assets. Work specifications or shorter CMPs are then prepared for each identified heritage asset in the area.
5. All CMPs are signed off by, at the minimum, by the SPIUS Safeguard Unit (or their equivalent) to ensure organisational ‘buy-in’.
6. Costed work specifications, together with plans, must be are prepared to relevant industry standards
7. Provision is made for a CHM specialist to inspect progress and ensure that work is proceeding according to the plan and that all work is supervised and conducted by skilled conservation practitioners or tradespeople.
8. Where sites have a multiplicity of values (e.g. natural and cultural as well as historic), then an overarching integrated management plan is prepared for that place. Cultural heritage is a component of such a plan.

Monitoring
Physical monitoring of sites of cultural heritage will require synergized involvement attention by several relevant state and national agencies e.g. State Ministry for Culture and Tourism.

Best Practice Inputs/Indicators
The Enugu RAMP 2 PIU should ensure:
1. The use of a formal asset management and monitoring system for CHM assets.
2. Annual reporting of agreed performance measures
3. Auditing of CHM to ensure management objectives are met
4. Integration of heritage places into organizational asset management systems.
5. A process existing for consistently reviewing plans, quality of planning & those who prepare them.
6. Establishment of a register of contract CHM specialists that is regularly reviewed based on existing contractors’ work, allows for the addition of new contractors and is open to public inspection.
7. Long term monitoring of the condition of cultural heritage places
8. Regular meetings of Enugu SPIU Staff and CHM specialists as a means of monitoring progress towards best practice and assisting agencies to set higher levels of best practice.
9. Ongoing market research to measure effectiveness of presentation in interpreting specific places, raising awareness of cultural heritage conservation and encouraging appropriate growth in visitor numbers.
10. A CHM strategy/policy document which is published and subject to public consultation and scrutiny
11. Monitoring of visitor numbers at all actively managed places
### Annex 8

#### Waste Management Plan

<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
</tr>
</thead>
</table>
| Mechanised road Maintenance activities, civil works, groundworks | Generation and disposal of waste       | * Apply the principles of Reduce, Reuse and Recover for waste management. Provision of adequate waste disposal containers/receptacles/skips for segregating waste from the different waste streams such as road maintenance rubble, empty containers, bottles etc.  
* Purchase the right quality and quantity of materials;  
* Reuse excavated soil material for backfilling and levelling if appropriate.  
* Provide bins on site for temporary storage of domestic waste such as lubricant containers, drinking water sachets and carrier bags/packaging materials.  
* Dispose all road Maintenance and domestic waste at approved dumpsites. | Contract or  
  |                                        |                                        |                                                                                                      | 250,000.00  
  |                                        |                                        |                                                                                                      | 100,000.00  
  |                                        |                                        |                                                                                                      | 100,000.00  
  |                                        |                                        |                                                                                                      | 250,000.00  
  |                                        |                                        |                                                                                                      | 250,000.00  |
| All decommissioning activities          | Land/ Waste management                  | * Re-vegetate areas around workers camp & Maintenance equipment sites to restore the landscape.  
* Ensure that any remaining waste streams created during Maintenance activities and waste generated during decommissioning activities are collected from the project sites and properly disposed before handing over the project. | Contract or  
  |                                        |                                        |                                                                                                      | 250,000.00  
  |                                        |                                        |                                                                                                      | 250,000.00  
  |                                        |                                        |                                                                                                      | 400,000.00  
  |                                        |                                        |                                                                                                      | 200,000.00  
  |                                        |                                        |                                                                                                      | 200,000.00  |
| Total (implementation of Waste Management Plan – WMP) for individual roads |                                      |                                                                                                      |                                                     | 550,000.00  
  |                                        |                                        |                                                                                                      | 350,000.00  
  |                                        |                                        |                                                                                                      | 500,000.00  
  |                                        |                                        |                                                                                                      | 500,000.00  
  |                                        |                                        |                                                                                                      | 500,000.00  |
| Total (implementation for all roads)    |                                      |                                                                                                      |                                                     | 2,400,000.00 |
Annex 9

**Occupational Health & Safety Plan**

<table>
<thead>
<tr>
<th>Activities</th>
<th>Potential Impacts</th>
<th>Proposed Mitigation Measures/Actions</th>
<th>Responsibility</th>
<th>Cost</th>
</tr>
</thead>
</table>
| Mechanised road Maintenance activities, civil works, groundworks | Occupational health and safety (OHS) issues | * Provide and enforce the use of appropriate personal protective equipment (PPE) such as safety boots, reflective jackets, hard hats, hand gloves, earplugs, nose masks, etc. for the labour force.  
* All workers should be given proper induction/orientation on safety.  
* The contractors should have a Health & Safety Policy to guide the road maintenance activities.  
* Ensure first aid kits are available on site and assign a trained person to administer first aid. | Contractor | 350,000.00  
250,000.00  
250,000.00  
250,000.00  
220,000.00 |
| All Mechanised road maintenance phase activities | Sanitation issues and public health impacts | * Provide bins on site for temporary storage of domestic waste such as lubricant containers, drinking water sachets and carrier bags/packaging materials.  
* Dispose all Maintenance and domestic waste at the approved dumpsites and in the approved manner.  
* Ensure all trenches or excavations made during the Maintenance works do not collect stagnant water, which could breed mosquitoes. | Contractor | 40,000.00  
50,000.00  
50,000.00  
40,000.00  
40,000.00 |
| Use of road | Public Safety | * Ensure speed & safety signs are provided at strategic areas to prevent over-speeding by motorists and road users, for example, in areas approaching school crossings. | Contractor | 250,000.00  
40,000.00  
40,000.00  
250,000.00  
280,000.00 |

Total (OHS Plan implementation for different roads) | 640,000.00  
390,000.00  
390,000.00  
590,000.00  
590,000.00 |

Total (OHS Plan implementation for all roads) | 2,600,000.00 |
ANNEX 10

PROJECT TRAFFIC MANAGEMENT PLAN (SAMPLE)

1. Introduction
This Traffic Management Plan describes procedures and protocols for site access, traffic routing and management, and contractor company guidelines with respect to vehicle and employee transportation in delivering their obligations on this intervention project. Public, employee and contractor safety is the primary goal of this plan. It is vital that the Contractor recognizes that the traffic within the project area will be dynamic throughout the course of execution of this works and the safety of other road users is absolutely essential during this time.

2. General Site Access
In the interest of site security and public safety, access to operational areas or locations where heavy duty machinery would be operated in related to the execution of this contract will be restricted to authorized site personnel through the usage of signs and gates where appropriate. Facilities that potentially present danger to persons or wildlife such as the electrical substation, equipment staging area and workers camp will be fenced or barricaded as appropriate to prevent general access.

3. Traffic Management
All traffic on routes to and from the site will be radio controlled. Where this is not possible, signage will be installed at appropriate locations in order to warn the public along these routes. In the event that temporary closure occurs, access to the sites will be further restricted through the use of fences and gates as appropriate. Access to work areas such as temporary excavated places, or confined spaces where work is on going will be securely blocked by means of a temporary but robust barrier or barricade. Buildings and ancillary facilities will be locked and secured. A number of additional general measures related to site access, road management and public safety and construction events notification are presented here:

- Private employee off-road vehicles or private transport buses will be prohibited from entry into the site.
- Signage will be posted near all construction sites.
- Notifications will be provided for activities that would be carried out over the weekend or public holiday periods. These would be disseminated through existing social institutions such as the village or district heads of communities, Local Government Councilors and NGO’s or CBO’s
- Speed limit maintained at 10 km/hr speed limit within or near the communities;
- Install reverse alarm fitted on all trucks, heavy duty equipment and off road vehicles
- Employ or engage the use of a minimum of two flagmen around excavated areas, one for traffic approach and one to direct traffic away from the sites
- In accordance with the Occupational Health and Safety Regulations for public roads, use of flashing devices/trafficators on all vehicles/machinery and equipment that will cross, travel on or may otherwise pose a risk to users of public roads.

4. Employee Transportation
To the extent possible employees will use buses provided by the contractor as transportation to and from the site, thereby reducing overall vehicle traffic. Project vehicles or will be utilized by staff, only when necessary.

5. Speed Limits
Speed limits will be enforced to and from the site and signage(s) shall be posted along the access and site roads (maximum 40 km/hr, reduced to 20 km/hr at blind corners and bridge crossings. Traffic
along other access roads will be radio controlled for safety and speed control. Furthermore, employees and contractors will be educated on safety including traffic protocols and speed limits during mandatory orientation. Routine traffic inspections and/or speed indicator signs will be used to encourage safe and responsible driving.

6. Communications And Notification Protocols
It is anticipated that the intervention project will require only single-lane temporary closures. Signage warnings of construction activities on the roads will be placed at appropriate distances from the construction site, in consultation with SPIU, Ministry of Transports, department of Highways & Public Works. For significant work activity (those requiring more than one day to complete), written notification will be distributed to residents and the SPIU, Ministry of Transport, department of Highways & Public Works will be notified. A public notice would be posted at multiple locations in the metropolis to communicate to residents any new activities that may be occurring or scheduled. Contact information for the Contractors senior management will be included in this notice and any concerns regarding the intervention work/project or traffic management can be forwarded through this notification system.

7. Traffic Routing And Volumes
Alternative traffic routing shall be mapped out and provided in the event that there will be complete closure of the road due to this intervention work activity. Traffic officers and appropriate road diversion signage(s) shall be deployed to ensure diversions routes are properly identified and traffic is directed along the mapped route. The flagmen shall be properly kitted in their Personal Protective Equipment (PPE), such as reflector vests and safety boots, to ensure that safety on the job is given due priority.

8. Reporting
Records on traffic management and implementation of this plan should be kept and updated by the contractor as evidence of on going mitigation compliance, which will be submitted to SPIU as part of routine reports on progress of work.
ANNEX 11

CONTINGENCY AND EMERGENCY RESPONSE PLAN (SAMPLE)

Introduction

An emergency is best described as a serious situation or unforeseen crisis that happens unexpectedly and requires or demands immediate/necessary action. This is often associated with danger. Therefore, this plan has been prepared to establish a process that has been adopted by our organization to respond to any emergency situation. This plan has the following fundamental objectives are:

- To ensure that we can identify how to prepare for an emergency
- Provide a checklist of actions that would enable our team prepare to handle such emergencies

The objective

The aim of this plan is therefore to examine a series of steps in the process, which is designed to ensure that any situation that necessitated that the status of emergency be apportioned, be managed in a manner that would ameliorate this condition.

Thus, this plan provides guidelines on the best approach that would be engaged by employees of the Contractor company in emergency situations, which may be as a consequence of the following:

- Medical (health)
- Safety
- Environmental
- Security
- Any other types of emergencies

Emergency Response Team (ERT)

An emergency response team will be constituted for the project. These will be the group of persons that would have the responsibility of managing this emergency plan in a manner that would ensure the goals of this plan are achieved. For this reason, the members of the ERT are:

- Managing Director (or representative)
- HSEQ Officer
- Project Engineer
- Supervisor
- Support members (headmen from units – civil, mechanical, electrical etc.)
- Supervising Consultant representative
- SPIU representative

Emergency Response Centre (ERC)

Due to the temporary nature of the facilities that would be utilized as workers camp & site office, for intervention projects, the site office will also be converted into the Emergency Response Centre (ERC), in cases of emergency. Therefore, appropriate communication equipment shall be available in the office, to ensure that the channels of contact are available, at all times.

In the minimum our ERC will have:
- A computer system with internet facilities available
- A telephone
• A public address system

Activation of this Emergency Response Centre

The individual that receives the information that could potentially necessitate an emergency response should immediately convey the information to the Project Engineer.

Jointly, the project engineer and the Safety officer will review the situation/information, following which the managing director will be contacted (if not on site).

The managing director will thereafter take the decision of the gravity of the situation, following which it may be necessary to constitute an ERT and convert the site office into the ERC.

Core ERT and support members will be represented once the ERC is activated.

Checklist of Emergency Response Actions

These actions shall be implemented immediately the ERC is activated:

<table>
<thead>
<tr>
<th>S/n</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Verify status of emergency and likely exposure of other personnel to risk, ensure ERT members are fully equipped in emergency response equipment</td>
</tr>
<tr>
<td>2.</td>
<td>Locate and account for all personnel on site (muster point) and if appropriate, implement the evacuation procedure, if necessary. Review decision on need to establish contact with family of personnel involved in emergency</td>
</tr>
<tr>
<td>3.</td>
<td>Establish and maintain close contact with relevant authorities related or connected to the resolving of this emergency. e.g. in case of medical emergency, a hospital, security emergencies will require a contact with government law enforcement agencies – police etc.</td>
</tr>
<tr>
<td>4.</td>
<td>Inform supervising consultant &amp; SPIU representative as promptly as possible in order to establish interface link with Client</td>
</tr>
<tr>
<td>5.</td>
<td>Transmit any information update or changes in situation status to emergency focal group; the managing director and members of the ERT and determine if there is a need to shut down critical on going operational activities</td>
</tr>
<tr>
<td>6.</td>
<td>Depending on the type of emergency, any necessary follow up action should be determined and promptly acted upon, as may be required e.g. medical emergencies may require evacuation, environmental emergencies may require containment, safety emergencies may require prompt cordon off of area etc.</td>
</tr>
<tr>
<td>7.</td>
<td>Internal Communication channel with other personnel should be kept open, by means of public address system or telecommunication (walkie talkies) and updates provided to forestall any likely re-occurrences, where possible</td>
</tr>
<tr>
<td>8.</td>
<td>Examine cross-cutting impact of emergency on liability issues and operational continuity. e.g. media involvement in security emergencies</td>
</tr>
<tr>
<td>9.</td>
<td>Undertake an assessment of risk to review other potential liabilities and deploy mitigation measures, where necessary, e.g. workmen compensation insurances in case of accident emergencies</td>
</tr>
<tr>
<td>10.</td>
<td>Review all cost implications of emergency response actions and make necessary budgetary provisions</td>
</tr>
<tr>
<td>11.</td>
<td>Provide the SPIU with updates immediately additional information is received.</td>
</tr>
</tbody>
</table>

Accident reporting

This accident report would be factual, free from hearsay, assumptions, gossips and / or preliminary conclusions. The report shall be duly signed by the Project engineer. The SPIU shall be briefed about the accident in writing within 24 Hours.
1.1.1.2 Timing of investigation
The investigation should be carried out as soon as possible after the accident. The quality of evidence can deteriorate rapidly with time and delayed investigation are usually not as conclusive as those performed with dispatch. A prompt investigation is a good demonstration of management concern for safety.

1.1.1.3 Scope of Investigation
The scope of the investigation can be divided into four areas:

- Personnel
- Technique
- The Environment
- Organization

In each of these areas, actions of omission may be identified which could be a factor contributing to the accident or subsequent injury, damage or loss.

1.1.1.4 Establishment of the fact
In establishing the fact(s) of an accident, we would consider the followings as necessary factors:

**Background information that would be considered,**
- the procedure for this type of operations
- command structure
- the person involved

**Facts collection**
Facts collection shall include but not limited to topography, weather, warning signs /notices, condition of the equipment, housekeeping, before interview can be conducted.
ANNEX 12: LABOUR INFLUX PLAN

The Labour Influx Management Plan for the rural roads rehabilitation Project, under the Enugu Ramp 2 should to a minimum address specific activities that will be undertaken to minimize the impacts of labour influx on the local project communities.

Elements for managing labour influx risks under the proposed project include:

• **The Contractor should endeavour to reduce labour influx by tapping into the local workforce:** This is the most effective mitigation measure against labour influx. To avoid and mitigate impacts of influx, it is paramount that the Enugu RAMP 2 SPIU, ensures that its Contractors make use of unskilled workforce which is recruited locally. Depending on the requirements of the sub-project and the skill level of the workforce, it may be possible to train local workers within a reasonable timeframe to meet project requirements. This may be more likely if such trained staff are needed afterwards for the operation and maintenance of the rehabilitated roads and upgraded hydraulic structures.

• **Establishment of worker codes of conduct:** The Supervising Engineer and Safeguards Unit of the SPIU should ensure that Contractors establish a workers’ Code of Conduct (CoC). The CoC will help mitigate some of the social and environmental impacts of labour influx such as risk of social conflict, Increased risk of illicit behaviour and crime, Increased burden on and competition for public service provision, Wastewater discharges, Increased demand on freshwater resources, and Inadequate waste disposal and illegal waste disposal sites etc., will help keep workers (local/foreign) in check on the rules and regulations binding their engagement.

• **Training programs:** Conduct and ensure key staff, including contractors, receive training regarding the likelihood, significance and management of influx-related issues such as HIV/AIDS, GBV, SEA, VAC etc.

• **Carry out Regular Monitoring:** The Enugu RAMP 2 SPIU should monitor for change throughout the project cycle on labour influx related mitigation compliance and on mitigation effectiveness from projects/contractors. Ensure a documented monitoring program that tracks key social outcomes, changes and issues at regular intervals throughout the project lifecycle.
ANNEX 13: BORROW PIT REMEDIATION PLAN

A borrow pit is an area from which material is excavated for use in the construction of a nearby infrastructure project.

Objectives of Borrow Pit remediation plan
The objectives for the restoration and aftercare of the borrow pits are to:

- Restore land to a condition suitable for its original use, post-excavation;
- Essential mitigation for local environmental effects that occur as a consequence of the use of the borrow pits; and
- Contribute to addressing the impact of climate change by taking opportunities to mitigate pre-existing and potential future flood risk and water stress risk issues.

Design Principles for borrow pits
The following design principles will be applied when siting the borrow pits:

- All borrow pits will be excavated only for granular material for use within the Proposed Scheme (i.e. not for commercial extraction);
- Borrow pits will be backfilled using natural uncontaminated material from Proposed Scheme excavations (including clay / fines which are a by-product of processing the granular material at the borrow pit sites), and restored using subsoil and topsoil stripped from and stored within the Proposed Scheme. Surplus topsoil, whether from within and outside the borrow pit sites, will not be used as backfill. Topsoil and subsoil will normally be stripped and stored separately within the footprint of the borrow pit for use in site restoration;
- It is intended that the borrow pits will be restored to the original ground level and to a condition suitable for their previous land use, except where the land is proposed to be used for other purposes, such as for a replacement floodplain storage area, balancing pond or access track;
- Where agricultural uses are to be resumed on land disturbed during the construction of the Proposed roads, the design objective is to avoid any reduction in long term capability, which would downgrade the quality of the disturbed land, through the adoption of good practice technique in handling, storing and reinstating soils on that land and to provide a sufficiently deep soil profile to manage both wetter and drier conditions in the future due to climate change impacts;
- Backfill will be compacted as much as necessary to meet the relevant requirements for the intended end use of the land;
- Ruminate groundwater control during borrow pit excavation with regards to hydrological regimes

Borrow pit Restoration Plans
The plan will consider these approaches:

- Soil reinstatement
- Backfilling
- Revegetation
ANNEX 14: WORKERS CAMP SITE MANAGEMENT PLAN

The Workers Camp Site Management Plan for the Spot improvement of rural roads Project, under the Enugu Ramp 2 should to a minimum address specific activity that will be undertaken to minimize the impacts resulting from siting a workers camp on the local project communities.

Elements for managing risks associated with the Workers Campsite under the proposed project include:

- The Contractor shall ensure to site workers camp at a designated and approved location by the Enugu RAMP 2 SPIU.
- **On-site Social and Health Care Facilities:** Provision of basic on-site social and medical facilities such as first aid, basic health care center, recreational center, food service, etc. in order to reduce pressure on community facility.
- **Campsite Safety and Security:** Provision of 24 hours security stationed at the Campsite to ensure the security and safety of construction workforce and construction equipment.
- **Campsite Waste Management:** Adequate waste management of sewage and other forms of waste within the campsite. The Campsite shall be equipped with independent toilet facilities for male and female workers respectively, in order to discourage irregular waste disposal. Furthermore, standards must be instituted for personal and public hygiene among project workers. Additionally, project workers shall be properly trained on personal hygiene.
- **Establishment of and Training on Workers on Code of Conduct:** The Supervising Engineer and Enugu RAMP 2 Safeguards Unit shall ensure that Contractors establish a workers’ Code of Conduct (CoC). The CoC will help mitigate some of the social and environmental impacts of labour influx such as risk of social conflict, increased risk of illicit behaviour and crime, increased burden on and competition for public service provision, wastewater discharge, increased demand on freshwater resources, and inadequate waste disposal and illegal waste disposal sites, etc., will help keep workers (local/foreign) in check on the rules and regulations binding their engagement. Contractors to ensure provision of training to workforce on code of conduct and ensure strict compliance. Measures provided for in the ESMP to deter illicit behaviour and other social vices are adequately enforced.
- **Training programs:** Conduct and ensure key staff, including contractors, receive training regarding the likelihood, significance and management of influx-related issues such as HIV/AIDS, GBV, SEA, VAC etc.
- **Carry out Regular Monitoring:** The Enugu RAMP 2 SPIU shall monitor for change throughout the project cycle to ensure compliance and on mitigation effectiveness from projects/contractors. Ensure a documented monitoring program that tracks key social outcomes, changes and issues at regular intervals throughout the project lifecycle.