YOBE STATE MULTISECTORAL CRISIS RECOVERY PROJECT (MCRP)

Environmental & Social Impact Assessment (ESIA)

For

Rehabilitation of 40km Gujba-Ngalda Road

INFRASTRUCTURE PROJECTS UNDER COMPONENT 2 OF MCRP

DRAFT REPORT

MARCH, 2020

Table of Contents

List of Figures v
List of Tables vi
Acronyms and Abbreviations vii
Executive Summary ix
CHAPTER ONE: INTRODUCTION 2
1.1 Background 2
1.1.1 Technical Approach and Methodology to the ESIA 3
1.1.2 Desktop Research 3
1.1.3 Reconnaissance Survey and Field Visits 3
1.2 Applicable Laws and International Regulatory Framework 4
1.3 International Treaties and Conventions on Environment 6
1.5 Gender-Based Violence 7
1.5.1 International Treaties Relevant to GBV 8
1.5.2 Regional Treaties Relevant to GBV 8
1.5.3 National Polices Relevant to GBV 8
1.6 International Treaties Relevant to Social Protection 8

CHAPTER TWO: DESCRIPTION OF THE PROJECT 11
2.0 Project Description 11
2.1 Description of the MCRP 40km Gujba-Ngalda road rehabilitation activities 11
2.1.1. Design Standards 12
2.2 Description of MCRP Intervention Activities 13
2.3. Scope of Civil Works 15
2.4.1 Process Inputs 19
2.4.2 Sources of Energy Available to the Project 19
2.5 Labour, Manpower and Human Resource 19
2.6 Campsite & Staging Areas 19
2.7 Sourcing of water & other materials 20

CHAPTER THREE: PROJECT ALTERNATIVES AND OPTIONS 22
3.0 Introduction 22
3.1 Analysis of Alternatives 22
3.2.1 No-Action Project Alternative 22
3.2.2 Using Alternative Travel Modes 22
3.2.3 Alternative Alignments 23
3.2.4 Construction of new Road 23
3.3 Development Options 24
3.3.1 No Project Development 24
3.3.2 Delayed Project Development 24
3.3.3 Road Surfacing Alternative 25
3.3.4 Immediate Project Development 25

CHAPTER FOUR: DESCRIPTION OF THE PROJECT ENVIRONMENT 26
4.1 Overview of the Project Environment 26
4.1.1. Gujba LGA 27
4.2.1. Climate 27
4.2.2. Rainfall 27
4.2.3. Temperature 27
4.2.4 Geology 28
4.2.5 Drainage 28
4.2.6 Agriculture 28
3.2.7 Vegetation 28

4.2.8 Ecological Problems 29
4.3 Analysis of Environmental Media in Project Area 29
4.3.1 Air Quality 29
4.3.2. Noise 30
4.3.3. Water Quality 31
4.3.3.1Total dissolved solids (TDS) 34
4.3.3.2Dissolved Oxygen 34
4.3.3.3Exchangeable Cations 34
4.3.3.4Heavy metals 35
4.3.3.5Hydrocarbons 35
4.3.3.6Microbiology of Water 35
4.3.4 Soil Quality 35
4.3.4.1Textural composition 35
4.3.4.1 Soil Properties 36
4.4 Site Specific Environmental & Social Conditions 38
4.5 Description of The Socio-economic Environment 42
4.5.1 Population 46
4.5.2 Land Use 46
4.5.3 Land Tenure 46
4.5.4 Transportation 47
4.5.3 Infrastructure 48
4.6 Gender and Gender-Based Violence Information 48

CHAPTER SIX: ENVIRONMENTAL IMPACT MITIGATION AND MONITORING PLAN 57
6.1 Background 57
6.2 Additional Mitigation for Gender Based Violence (GBV)/ Sexual Exploitation and Abuse (SEA). 95
6.3 Institutional Arrangements 97
6.4 Contractual Measures 99
6.5 Capacity Building for Implementation of ESMP and Permit Conditions 100
6.7 Estimated Budget for ESMP Implementation 104
5.8 ESIA Disclosures 104

CHAPTER SEVEN: GRIEVANCE REDRESS MECHANISM 106
7.1 Introduction 106
7.2 Grievance Redress Committee 106
7.3 Grievance Redress Process ..... **Error! Bookmark not defined.**
7.4 Expectation when Grievances arise 109
7.5 Grievance Log 110
7.6 Financing the Grievance Redress Mechanism and Cost of Remediation ... 111

CHAPTER EIGHT: STAKEHOLDER CONSULTATIONS 112
8.1 Introduction 112
8.2 Objectives of Consultation 112
8.3 Stakeholder Consultation Strategy and Plan 112
8.4 Stakeholders Consulted 116
8.5 Outcome of Stakeholder Consultations carried out during ESIA Preparation 116

CHAPTER NINE: RECOMMENDATIONS AND CONCLUSION 119
9.0 Conclusion & Recommendations 119
9.1 Recommendations 119
9.2 Conclusion 119

References 121
Annex 1: Questionnaire 122
Annex 2: Occupational Health & Safety (OHS) Plan 124
Annex 3: Sample Company Code of Conduct 128
Annex 4: General Environmental Management Conditions for Maintenance/Maintenance Contracts 137
Annex 5: Project Traffic Management Plan (Sample) 144
Annex 6: Contingency and Emergency Response Plan (Sample) 147
Annex 7: Waste Management Plan 153
Annex 8: Cultural Heritage Management/Chance Find Procedure 155
Annex 9: Labour Influx Plan 158
Annex 10: List of Persons Met During Study 161
Annex 11: Camp Management Plan 163
Annex 12: Security Management Plan (Sample) 171
Annex 14: Certificate of Laboratory Report..... **Error! Bookmark not defined.**
Annex 15: Air quality standards along 40km Gujba-Ngalda road 182
Annex 16: Physico-chemical properties of water along 40km Gujba-Ngalda road 184
Annex 19: Sample Copy of Grievance Procedure for Stakeholders
Annex 20: Chain of Custody for Sampling 189

List of Figures

Figure 1: Map of Yobe State showing 40km Gujba-Ngalda road 11
Figure 2: Map showing 40km Gujba-Ngalda road 12
Figure 3: Engineering design showing 40km Gujba-Ngalda road 16
Figure 4: Engineering design showing typical cross section of road 17
Figure 5: Map of Yobe State; Source-INEC 26
Figure 6: Noise Level along 40km Gujba-Ngalda road Corridor 31
Figure 7: Surface Water Quality along 40km Gujba-Ngalda road Corridor 32
Figure 8: Ground Water Quality along 40km Gujba-Ngalda road Corridor 34
Figure 9: Texture composition of soil along 40km Gujba-Ngalda road Corridor 36
Figure 10: Sub-soil Quality along 40km Gujba-Ngalda road Corridor 36
Figure 11: Map of 40km Gujba-Ngalda road showing Environmental & Social Sensitivities 41
Figure 14: Socioeconomic features of project area 47
Figure 15: Flow Chart for GRM 111
Figure 16: Pictures from Stakeholder Consultations 117

List of Tables

Table 1: Relevant Federal/State Policies, Legislations, Regulations & Guidelines....4
Table 2: International Treaties and Conventions on Environment to which Nigeria is a Party....6
Table 3: Potential Safeguard Policies Triggered....7
Table 4: Description of 40km Gujba-Ngalda road location....11
Table 5: Design standards of Gujba-Ngalda road....12
Table 6: Activities for 40km Gujba-Ngalda road Rehabilitation Work....13
Table 7: Project activities by phases....18
Table 8: Air quality standards along 40km Gujba-Ngalda road....29
Table 8: Nigeria's Standard Noise Levels (FEPA, 1991)....30
Table 9: Baseline Environmental & Social Conditions of sub-projects....38
Table 11: Socioeconomic characteristics of project area....43
Table 12: Socioeconomic characteristics of project area....47
Table 13: Project Phases & Activities....53
Table 14: Evaluation of potential positive impacts.....54
Table 15: Environmental and Social Management and Monitoring Plan....58
Table 16: Institutional Arrangement for ESMP Implementation....97
Table 17: Contractual Measures....99
Table 18: Capacity building plan for implementation of the ESMP & permit conditions....101
Table 19: Implementation Schedule....103
Table 20: ESMP Budget....104
Table 21: Breakdown of Disclosure process....104
Table 22: GRM Framework for 40km Gujba-Ngalda road Construction Work....108
Table 23: Stakeholders Engagement Strategy....113
Table 24: Concerns raised and how they were addressed....117

Acronyms and Abbreviations

ACHPR-	African Charter on Human and Peoples' Rights
ACRWC-	African Charter on the Rights and Welfare of the
CAT-	Convention against Torture
CBO-	Community Based Organization
CEDAW-	Convention on the Elimination of All Forms of Discrimination against Women
CERC-	Contingency Emergency Response Component
C-ESMP	Contractors Environmental and Social Management Plan
CoC-	Code of Conduct
CRA-	Child Right Act
CRC-	Convention on the Rights of the Child
CRPD-	Convention on the Rights of Persons with Disabilities
DO	Dissolved Oxygen
ESHS--	Environmental and Social Health and Safety
ESMF-	Environmental and Social Management Framework
ESMP-	Environmental and Social Management Plan
ESSU-	Environmental and Social Safeguard Unit
FGD-	Focus Group Discussion
FMEnv-	Federal Ministry of Environment
FMF-	Federal Ministry of Finance
FMWASD-	Federal Ministry of Women Affairs and Social Development
FPMU-	Federal Project Management Unit
GBV-	Gender Based Violence
GHGs-	Green House Gases
GRC-	Grievance Redress Committee
GRM-	Grievance Redress Mechanism
GRS-	Grievance Redress Service
HSE-	Health Safety and Environment
IASC	Inter Agency Standing Committee
ICCPR-	International Covenant on Civil and Political Rights
ICESCR-	International Covenant on Economic, Social and Cultural Rights
INGO	International Non-Governmental Organisations
LGAs-	Local Government Areas
MCRP-	Multi-sectoral Crisis Recovery Project
MOH	Ministry of Health
MOJ	Ministry of Justice
MSAWD	Ministry of Women Affairs and Social Development
NDHS-	Nigeria Demographic and Health Survey
NEDC-	North East Development Commission
NESREA-	National Environmental Standards and Regulations Enforcement Agency
NGO-	Non-Governmental Organization
OHS-	Occupational Health and Safety

PAD	Project Appraisal Document
PAP-	Project Affected Person
PC -	Project Coordinator
PCU-	Project Coordinating Unit
PCU-	Project Coordinating Unit
PDO-	Project Development Objective
PIU-	Project Implementation Unit
PPE-	Personal Protection Equipment
RAAMP-	Rural Access and Agricultural Marketing Programme
RAP-	Resettlement Action Plan
RPF-	Resettlement Policy Framework
SARC	The Sexual Assault Referral Centre
SEA-	Sexual Exploitation and Abuse
SPC-	State Project Coordinator
SPCU-	State project coordinating Unit
SPIU-	State Project Implementation Unit
SPU-	State Project Unit
TA-	Technical Assistance
TDS	Total Dissolved Solids
TC-	Technical Committee
TPH	Total Petroleum Hydrocarbon
UN	United Nations
UNFPA	United Nations Funds for Population Activities
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
VAPP-	Violence against Persons Prohibition
VAWC	Violence against women and children
VES-	Vehicle Exhaust Screening
VET-	Vehicle Emission Testing
WB-	World Bank
VAWG	Violence Against Women Group

Executive Summary

ES 1: BACKGROUND

Federal Government of Nigeria has received financing from the World Bank (WB) for the implementation of Multi Sectoral Crisis Recovery Project (MCRP) currently in three States of Borno, Adamawa and Yobe. The Project Development Objective (PDO) of the MCRP is to "support the Government of Nigeria towards rehabilitating and improving critical service delivery infrastructure, improving the livelihood of conflict and displacement-affected communities, and strengthening social cohesion in the States of Borno, Adamawa and Yobe.

Yobe State MCRP is proceeding to undertake the rehabilitation of the 40km Gujba – Ngalda road and this proposed project when completed will deliver better transport access and create employment opportunities for skilled and unskilled labour during the construction and operational phases. Also, there are indirect employment opportunities such as 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.

Notwithstanding these positive impacts, the project is envisaged to have negative environmental and social impacts due to nature of civil works and has triggered four of the World Bank Operational Policies: Environmental Assessment OP 4.01; Natural Habitats OP/BP 4.04; Physical Cultural Resources OP/BP 4.11 and Involuntary Resettlement OP/BP 4.12.

The Yobe State Project Coordinating Unit (PCU) has prepared this Environmental and Social Impact Assessment (ESIA) as an instrument whose objective is to address the environmental and social safeguard concerns for the proposed Gujba-Ngalda road by identifying the potential negative impacts and proffering mitigation for the impacts as well as assigning responsibilities for mitigation and monitoring.

Project Rationale

Although the MCRP is rated Category B, the impacts of the 40km Gujba-Ngalda road rehabilitation are likely to have direct and widespread impacts (large category B project), as such it is important that these impacts be adequately mitigated, planned, executed and monitored to ensure holistic management of envisaged environmental and social impacts. The nature of this sub-project is likely to represent a large-scale intervention cutting across 5 communities of Gujba LGA (Gujba, Wagir, Nyakire, Bukkiyel & Mutai) and will not fundamentally change the environment if adequately mitigated. In this instance, the appropriate safeguard instrument to use here is an Environmental and Social Impact Assessment (ESIA) given the fact that the exact nature of the works associated with rehabilitation of 40km Gujba-Ngalda road are large and not site specific.

ES 2: PROJECT DESCRIPTION

The transport sector - 40km Gujba-Ngalda road rehabilitation sub-project has been selected for intervention under this phase of the MCRP rehabilitation work. The location of this road is shown in table ES1.

Table ES1: Location of 40km Gujba-Ngalda road Intervention Sub-Project

Sub-projects	LGA	Location
Rehabilitation of 40km Gujba-Ngalda road -	Gujba LGA	Start – N10.53072 E0 13. 27713 End - N10.26757 E0 13. 29283

Scope of Works

- Provision of reinforced concrete line drain (80 x 70 x 0.15) m and (1 x1x 0.15) m using grade concrete
- Maintenance of erosion control structures, fencing walls screens and other environmental barriers
- Laying of 50mm thick asphalt wearing course on carriage section of 7.3m for 40km Gujba-Ngalda road
- Routine maintenance and replacement Road civil works generally including:
    - Site clearance;
    - Ground works & earthworks;
    - Excavate for all culverts, concrete side drains to any depth in any material except rock including back filling to 100% B.S. compaction and dispose of surplus material as directed (including dewatering).
    - Provide sandcrete block connecting drain; fill block hollows and capping with grade 15 concrete and good rendering finish.

- Carry out pavement and surfacing work as follows:
    - Provide, spread, shape and compact to 100% West African Standard Compaction naturally occurring laterite as base in carriageway and shoulders in layers of 150mm of compacted thickness (Haul inclusive).
    - Provide, haul any distance, spread, shape and compact approved material (crushed rock, wet or dry) in carriageway base as specified to a compacted thickness of 150mm
    - Provide and lay prime coat using MCI cut - back bitumen at 1.2 litre per sq.m including blinding with river sharp sand or quarry fines
    - Provide, spread, shape and compact asphaltic concrete wearing course to carriageway to a compacted thickness of 40mm as specified.
    - Provide and set in concrete Grade 25 and paint standard triangular section concrete kilometer post as per drawings or as directed.
    - Excavate for, provide and lay approved type precast concrete kerbs 450mm x 150mm set in 1:3:6 concrete bedding 225mm wide by 100mm backing to full height, chamfered back at 45^{o} from back of kerb and to show 125mm face in high embankments, urban areas and medians or as directed.

The engineering design for the road and culvert is shown in Figure 2 and 3, respectively.

ES 3: ANALYSIS OF ALTERNATIVES

The objective of the MCRP is to support the Government of Nigeria towards rehabilitating and improving critical service delivery infrastructure, improving the livelihood of conflict and displacement-affected communities, and strengthening social cohesion in the States of Borno, Adamawa and Yobe. Consequently, the different alternatives and options that were considered for the proposed project were in line with the overall objectives of the project in Yobe State. These alternatives include taking no action, using alternative travel modes and alternative alignment construction as other methods of achieving the objectives of the sub-project. The 'No Project' Development, 'Delayed Project' Development and Immediate Project Development have been extensively contemplated under Chapter 3 of this ESIA report.

ES 4: DESCRIPTION OF THE PROJECT ENVIRONMENT

Yobe state lies mainly in the dry Savannah belt; hence the state is dry and hot for most the year except in the Southern part of the State, which has a milder climate. The distinctly hilly nature of the terrain in Yobe presents a general topography that has significant impact on the local variations and pattern of rainfall. There are two distinct seasons; the dry and wet season. The climate of Yobe State is hot and dry for most periods, of the year. The rainy season usually ends in the month of November, which indicates the beginning of the dry season. The geology of Yobe principally comprises crystalline and sedimentary rocks, underlain by basement complex rocks.

The 40km Gujba-Ngalda road sub-project transcends a route through Gujba LGA of Yobe State. Majority of the people in the villages such as Gujba, Wagir, Nyakire, Bukkiyel & Mutai communities are farmers. Other forms of occupation carried out include trading and artisanship. Agriculture is therefore, the mainstay of the economy. Crops grown include guinea corn, millet, maize, rice, wheat, groundnut, cassava, beans and cowpeas. Others are vegetables, onions, okra and tomatoes.

Mitigation measures for envisaged impacts such as dust, noise, traffic disturbance, waste management, health and safety of workers, communities and risk associated with labour influx and sexual exploitation and abuse (SEA) during construction have been addressed in this ESIA.

ES 5: POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

The potential positive environmental and social impacts are listed in Table ES2:

Table ES2: Environmental & Social Impacts of 40km Gujba-Ngalda road Rehabilitation/Construction sub-project

No.	Impact	Key receptor(s)	Evaluation
1	Improved transport infrastructure Improved motorable access to communities along the road route	Community leadership and users of transport infrastructure	The proposed project when completed will deliver these benefits: Better road access Improved transportation services for people in communities Strengthen social cohesion through increased community access, inter groups and inter communal relations. Reduced travel time for motorist travelling from Gombe to Damaturu and Maiduguri who will bypass Potiskum axis.
2.	Improved access to education	Children of school age	Pupils of secondary school age can now be able to attend and return from school due to reduced travel time along the road leading to Gujba where the only secondary school in the area is situated.
3.	Improved access to farmlands & markets	Farmers in neighboring communities	Livelihoods restoration by increasing access to farmlands for agricultural productivity as well as nearby markets for commercial activities.
4.	Increase access to health services	Community members	Improved access for general population including pregnant women, children and people with disability in emergency situations
5.	Employment generation	Community members	The proposed rehabilitation/construction sub-project activities will create employment opportunities for skilled and unskilled labour during the construction and operational phases. Also, there are indirect employment opportunities such as 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.
6.	Improvement in local and national economy	Neighboring communities, LGA and national economy	The creation of direct and indirect job opportunities during the construction and operational phases of the project will boost the

No.	Impact	Key receptor(s)	Evaluation
			local and national economy
7.	Stakeholders' engagement	State Government, LGAs	Improvement of public goodwill and satisfaction towards governance in Yobe State.
8.	Improvement in management of resources	Neighboring communities, State Government, MDAs	Provision of a lead way to drive the State Government towards ensuring improved infrastructure
9.	Optimal utilization of Ngalda/Garin Chindo irrigation scheme	Farmers/communities	The rehabilitation of Gujba-Ngalda road in the area will boost the economy and increase sources of income to the people
10.	Capacity building and strengthening of institutions	State Government, MDAs	Capacity building through: Strengthening of facility rehabilitation works and supervision systems of personnel involved in sub-project activities, including improvement in institutional responsibilities for construction and maintenance. Transfer of skills

The potential negative environmental impacts include mainly impacts on air quality, soil quality, noise levels, water quality and Occupational health and safety while social impacts include risks of labour influx, child labour, sexual exploitation and abuse, GBV and conflict. These are elaborated in the report.

ES 6: ENVIRONMENTAL AND SOCIAL MITIGATION AND MONITORING

Detailed environmental and social mitigation measures for pre-construction, construction and operational phases have been provided in table below. The environmental and social management actions is estimated at Sixteen Thousand, Two Hundred and Sixty Five Thousand, Seven Hundred Naira Only (₦16,265,700.00), and a Dollar equivalent of Fifty Three Thousand, One Hundred and Fifty Six Dollars Only ($53,156.00). This is as shown in Table 18 of this report. The cost of mitigation by the Contractor will be included in the contract as part of the implementation cost by the Contractor. The Yobe MCRP SPCU will coordinate the implementation of this ESMP in conjunction with the relevant State Ministries. This is shown in Table ES3 for ESIA mitigation & monitoring.

Table ES3: Budget for ESIA mitigation & monitoring

#	Item	Total*	
		Local ₦	**US$**
1	Mitigation (Including the cost of PPEs)	9,185,000	30,015
2	Capacity Building (including training on Code-of-conduct)	1,150,000	3,758

3	GBV, STIs and HIV Mitigation	750,000	2,451
4	Grievance Redress Mechanism	750,000	2,451
5	Consultations	500,000.00	1,634
6	Monitoring (including the cost of hand-held monitoring instruments)	1,452,000	4,314
7	Disclosure	1,000,000	3,268
	Sub-Total	**14,787,000**	**48,324**
8	**Contingency (10% of sub Total)**	1,478,700	4,832
	Grand Total	**16,265,700**	**53,156**

Currency Unit = Nigerian Naira
US$1 = N306

ES 7: GRIEVANCE REDRESS MECHANISM

The likelihood of disputes to occur during the sub-project implementation will be greatly reduced because consultations have already been carried out with some of the affected persons. Nevertheless, in the event that grievances arise, this redress mechanism has been prepared. A Grievance Redress Mechanism (GRM) is provided in chapter 7, which is anchored on the need to provide a forum locally to receive, hear and resolve disputes arising from construction activities and implementation in the best interest of all parties to forestall the lengthy process of litigation, which could affect the progress of project.

Even though a GRM has been developed for the entire MCRP, however this GRM will be for the implementation of the road construction & rehabilitation sub-project in Yobe State and will take direction from the MCRP GRM.

ES 8: STAKEHOLDERS CONSULTATION

Extensive consultation was conducted with relevant stakeholders with details in chapter 6. The Stakeholders Consultation meeting was carried out from January 22nd – 26th 2020 in Gujba, Wagir, Nyakire, Bukkiyel & Mutai communities within the project area. Concerns centred mainly on time for commencing the civil works as well as involvement of members of the community as skilled and unskilled labour during the civil works. Concerns were noted and responses provided by consultant. Consultation with the stakeholders will continue throughout the life cycle of the project. Summary of issues raised and how they were addressed is contained in Table ES4.

Table ES4: Issues & Concerns raised & how they were addressed

S/n	Issues raised during consultations	How they were addressed
Issues raised in general forum	Disruption of movement during construction phase since this is the only road linking communities in the area	Alternative route will be created for motorists and pedestrians during construction phase to ease movement of people, goods and services
	Project to take cognizance of existing ponds and earth dams used for livestock farming in the area.	Project activities will not affect any pond or earth dam as revealed by screening and reconnaissance. All natural formations in the areas will prevail since the road is in existence and will only be rehabilitated.
	MCRP to consider extending the project up to Ngalda instead of taking only 40km.	The project financial envelope will allow for only 40kms now. However, this will be against subsequent year if the available funding will accommodate. Communities were advised to engage policy makers in the state on the need for state government to take the remaining part from Mutai to Ngalda.
	Expansion of existing culvert at the entrance of Wagir	Component 2 manager responded that the design consultant has made the recommendation for the expansion has been captured in the design
Issues raised during meetings with Women	At a dedicated session with women, there were concerns about gender based violence (GBV), violence against women and children and sexual exploitation and abuse likely to be exacerbated by the project activities.	Contractors will be trained on GBV prevention and all their staff will sign code of conduct against engaging in sexual exploitation and abuse as well as violence against women. Project has established GRM with GBV sensitive channels to offer referral pathways for survivors. Project safeguard team will closely monitor activities of contractors and their staff during implementation phase to ensure compliance. The team advice the community members, particularly parents to monitor their children (girl child) and continue to warn them to be careful with those who will lure them into such activities.
	Women have raised	Labour influx management plan

	concern about job opportunities to be created by the project during construction phase, especially for their children who are staying idle without job.	will be developed as part of the ESIA for contractor's compliance to ensure community members are considered in the recruitment of staff on the project.
Issues raised during meetings with Youths	The youths have expressed concern about employment opportunities during the project implementation.	Contractors will be trained on how to manage labour influx. Part of the strategy for managing labour influx is to look inward for various skills within the communities, unless such are not available before resorting to external source. Therefore, the project will provide job opportunities to the teeming youth, especially those who are disposed to road construction related works
Issues raised during meetings with elderly persons	Community elders advocated for construction of additional road from Gujba to Goniri to connect more communities in the area,	The team responded that Gujba – Gonir road is entirely a new project while MCRP is focusing on rehabilitation of existing infrastructure
	Extension of the project up to Ngalda (95kms) to cover more communities in the area	This will be considered when funding is available. The community members were advised to advocate with the state government, north east development commission for the execution of the project
	Contractors to exercise caution during construction to ensure safety of animals, children, women, aged and other vulnerable people who will be routinely moving around to pursue their daily needs	Traffic management plan will be developed as part of the ESIA. Dangerous and hazardous areas will be cordoned off during construction phase to safeguard the lives and well-being of human beings and animals

ES9 CONCLUSION

The ESIA has provided in detail the mitigation measures for identified potential adverse impact for the various phases of the project, and a monitoring program to ensure compliance. In concluding, with adequate application of mitigation measures the impacts identified and anticipated will be avoided, reduced or mitigated.

CHAPTER ONE: INTRODUCTION

1.1 Background

The Yobe State Project Coordinating Unit (PCU) has prepared this Environmental and Social Impact Assessment (ESIA) as an instrument whose objective is to address the environmental and social safeguard concerns for the proposed Gujba-Ngalda road by identifying the positive and also the potential negative impacts and proffering mitigation for the impacts as well as assigning responsibilities for mitigation and monitoring.

The Federal Government of Nigeria has received financing from the International Development Association (IDA) (the ''Bank'') in the form of a credit towards the cost of the Multi Sectoral Crisis Recovery Project (MCRP). The Government of Nigeria is implementing the Multi Sectoral Crisis Recovery Project (MCRP) in an effort to support recovery and stability in the North East, which is financed by the World Bank. The MCRP was initiated in 2014 and is targeted at three states: Borno, Adamawa and Yobe (BAY) while being monitored at the Federal Level by the MCRP Federal Project Coordinating Unit (FPCU) and implemented through the MCRP State Project Coordinating Units (PCU).

The PDO of this project is supporting the Government of Nigeria towards rehabilitating and improving critical service delivery infrastructure, improving the livelihood opportunities of conflict and displacement-affected communities, and strengthening social cohesion in the North East Participating States of Borno, Adamawa and Yobe; In the event of an eligible crisis or emergency, the provision of immediate and effective response to said eligible crisis or emergency, through the proposed Contingent Emergency Response Component (CERC).

Yobe State is proceeding to undertake the rehabilitation of the 40km Gujba-Ngalda road intervention under this phase of the MCRP intervention work. The proposed project when completed will deliver better road access; will create employment opportunities for skilled and unskilled labour during the construction and operational phases. Also, there are indirect employment opportunities such as 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.

Notwithstanding these positive impacts, the project is envisaged to have limited negative environmental and social impacts due to the nature of civil works and has triggered four of the World Bank Operational Policies: Environmental Assessment OP 4.01; Natural Habitats OP/BP 4.04; Physical Cultural Resources OP/BP 4.11 and Involuntary Resettlement OP/BP 4.12

Although the MCRP is rated Category B, the impacts of the 40km Gujba-Ngalda road rehabilitation are likely to have direct and widespread impacts (large category B project), as such it is important that these impacts be adequately mitigated, planned, executed and monitored to ensure holistic management of envisaged environmental and social impacts. The nature of this sub-project is likely to represent a large-scale intervention cutting across 5 communities (Gujba, Wagir, Nyakire, Bukkiyel & Mutai communities) and will not fundamentally change the environment if adequately mitigated. At this instance, the appropriate safeguard instrument to use is an Environmental and Social Impact Assessment (ESIA) given the fact that the exact nature of the works associated with rehabilitation of 40km Gujba-Ngalda road are large and not site specific.

1.1.1 Technical Approach and Methodology to the ESIA

The methodology used in the preparation of the Environmental and Social Impact Assessment (ESIA) for the project is based on guidelines proposed by the:

- Federal Government of Nigeria EIA Law and subsequent Federal Ministry of Environment standard procedures for conducting EIA in Nigeria
- World Bank Environmental Assessment Operational Policies OP 4.01

The general approach includes:

1.1.2 Desktop Research

Desktop research was carried out on roads in Yobe State, specifically, similar projects as implemented in Nigeria and elsewhere, and the impacts of such projects as well as its mitigation measures. It was carried out to establish the environmental and social baseline information. Other materials consulted include:

- Project Appraisal Document (PAD) for the MCRP
- Detailed Engineering Design
- World Bank Safeguards Policies
- Federal and State Environmental Laws, Regulations, Policies and Guidelines

1.1.3 Reconnaissance Survey and Field Visits

A reconnaissance survey was first undertaken to familiarize the consultants with the 40km Gujba-Ngalda road and to commence fieldwork. The survey was conducted along with the Yobe PCU staff from January 8th-9th 2020. The Key activities undertaken during the survey include:

1.1.3.1 Stakeholders Consultation

The result of the stakeholder consultation during the reconnaissance survey formed the basis for further consultation with other key

stakeholders. These consultations had to be conducted with consideration for the security timelines provided by armed forces that require the roads are opened from only 7am - 5pm, daily. The stakeholders consulted for this project include but are not limited to:

- Yobe State Ministry of Environment
- Yobe State Ministry of Works
- Traditional and community leaders
- Communities along the proposed routes (Gujba, Wagir, Nyakire, Bukkiyel & Mutai communities)
- Other Agencies whose activities relate to the project.

1.1.3.2 Biophysical Sampling

Baseline data gathering and laboratory analysis of samples of soil, ground and surface water, air and noise taken or measured in the field (in-situ) at selected sites along the project road to verify and complement information obtained from literature. The fieldwork covered all the relevant aspects of the traffic survey, ecological, community health and socio- economic environment.

1.1.3.3 Socio-Economic Assessment

Socio-economic data was collected through key informant interviews, Focus Group Discussion (FGD), direct observation, administration of structured questionnaire and collection of primary sources of data. The data collected were analyzed and the results are presented under Chapter 4 of this ESIA Report.

1.2 Applicable Laws and International Regulatory Framework

A number of national and international environmental guidelines are applicable to the operations of the MCRP. This ESIA is prepared in consonance with relevant Yobe State and Federal Government policies, laws, regulations, guidelines, and applicable World Bank Operational Policies (See MCRP PAD). The relevant Federal and State policy and regulatory instruments are summarized in the Table 1.

Table 1: Relevant Federal/State Policies, Legislations, Regulations & Guidelines

S/N	Policy Instrument	Year	Provisions
1	National Policy on the Environment	1989 revised 1991	Describes the conceptual framework and strategies for achieving the overall goal of sustainable development in Nigeria.
Legal/Regulatory Instrument			
2.	Environmental Impact Assessment (EIA) Act No. 86	EIA Act CAP E12 LFN 2004	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	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.	Forestry Act	1994	Provides for the preservation of forests and the setting up of forest reserves.
5.	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
6.	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.
7.	National Guideline and Standard for Environmental Pollution Control	1991	Provide guidelines for management of pollution control measures
8.	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.
9.	Urban and Regional Planning Decree No. 88	1993	Planned development of urban areas (to include and manage waste sites).
10.	Workmen Compensation Act	1987 reviewed 2010	Occupational Health and Safety
11.	Child Rights Act	Act No. 26 of 2003	Best interests of a child are to be paramount in all actions and clearly states the rights of the

			child.
12.	Yobe State Environmental Protection Law	-	Making and enforcing environmental and health polices and laws

1.3 International Treaties and Conventions on Environment

Some of the international Treaties and Conventions on environment to which Nigeria is a party are summarized in Table 2 below.

Table 2: International Treaties and Conventions on Environment to which Nigeria is a Party

S/N	Treaties and Conventions	Year	Agreement
1.	The United Nations Environmental Guidance Principles	1972	Provide guidelines for protecting the integrity of the global environment and the development system
2.	Montreal Protocol on Substances that deplete the Ozone Layer	1987	An international treaty to eliminate Ozone depleting chemical production and consumption.
3.	United Nations Convention on Biological Diversity	1992	Places general obligations on countries to observe sustainable use and equitably share the plants and animals of the earth
4.	United Nations Framework Convention on Climate Change	1994	It calls on developed countries and economies to limit her emissions of the greenhouse gases which cause global warming
5.	Convention on International Trade in Endangered Species of Wild Fauna and Flora	1973	Restricts the trade of fauna and flora species termed as endangered Species
6.	Convention on Conservation of Migratory species of Wild animals (Bonn Convention)	1979	Stipulates actions for the conservation and management of migratory species including habitat conservation
7.	Vienna Convention for the Protection of the Ozone Layer	1985	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.

1.4 Environmental Safeguards Issues

Nigerian EIA laws and the World Bank Environmental and Social Safeguard Policies by which the activities of the MCRP project have triggered four out of the ten environmental & social safeguard polices: Environmental Assessment OP 4.01; Natural Habitats OP/BP 4.04; Physical Cultural Resources OP/BP 4.11 and Involuntary Resettlement OP/BP 4.12 is shown in Table 3.

Table 3: Potential Safeguard Policies Triggered

Policy	Yes	No	Applicability due to	How this Project Addresses Policy Requirements
Environmental Assessment (OP 4.01)	X		Construction & civil works on the 40km Gujba-Ngalda road will trigger site-specific impacts. Potential impacts include construction impacts on environment etc.	As targeted sites have been identified, a proper assessment has been carried out to determine actual environmental and social issues in project area.
Involuntary Resettlement (OP 4.12)	X		Project impacts that may arise in loss of assets, loss of access to livelihood or disturbances.	A RAP shall be prepared for specific project locations to identity Project Affected Persons (PAPs) in the project area.
Natural Habitats OP/BP 4.04	X		From conversion or degrading of natural habitats.	The project includes mitigation measures acceptable to the Bank. Such mitigation measures include, as appropriate, minimizing habitat loss.
Physical Cultural Resources OP/BP 4.11	X		The project may include sites having archaeological (prehistoric), paleontological, historical, religious, and unique natural values.	The project includes measures to assist in their preservation, and to seek to avoid their elimination.

1.5 Gender-Based Violence

Nigeria has ratified or acceded to the core international human rights treaties and is a party to the major regional human rights instrument which obliged States to respect, protect and fulfil human rights of all persons within the territory and subject to the jurisdiction of the State, without discrimination. Rape may violate several human rights obligations enshrined in the instruments ratified by Nigeria and is also a form of gender-based violence and a manifestation of violence against

women. As a State party to the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa (the "Maputo Protocol"), Nigeria has made legally binding commitments to exercise due diligence to combat gender-based violence and discrimination.

1.5.1 International Treaties Relevant to GBV

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

1.5.2 Regional Treaties Relevant to GBV

- The African Charter on Human and Peoples' Rights (ACHPR) (1982)
- The African Charter on the Rights and Welfare of the Child (ACRWC) (2007)
- The Protocol to the ACHPR on the Rights of Women in Africa (the "Maputo Protocol") (2007)

1.5.3 National Polices Relevant to GBV

- The National Action Plan for the Implementation of United Nations Security Council Resolution 1325 (2009)
- The National Gender Policy (2010)

1.6 International Treaties Relevant to Social Protection

Some relevant international treaties on social protection include

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.

Generally, with regards to environmental and social management issues, legislation is in a continuing process of development in Nigeria. Nevertheless, in the event of divergence between the two, the World Bank safeguard policy shall take precedence over Nigeria EA laws, guidelines for these intervention projects.

CHAPTER TWO: DESCRIPTION OF THE PROJECT

2.0 Project Description

This chapter describes the details of the 40km Gujba-Ngalda road intervention sub-project.

2.1 Description of the MCRP 40km Gujba-Ngalda road rehabilitation activities

This intervention sub-project is located in Gujba LGA of Yobe State. Some of the villages along this road are Gujba, Wagir, Nyakire, Bukkiyel and Mutai communities. The location details of the 40km Gujba-Ngalda road are as shown in Table 4, while Figures 1 & 2 show the location map of the road in the State.

Table 4: Description of 40km Gujba-Ngalda road location

S/n	Description	Coordinates	
1.	Road start point (Gujba Community)	N11.2946.92	E11.565.78
2.	Wagir Community	N11.2124.41	E11.4839.10
3.	Nyakire Community	N 11.209.42	E11.4625.31
4.	Bukkiyel Community	N 11.193.76	E114359.60
5.	Mutai Community	N 11.1610.13	E11.4329.86
6.	End of road	N11.25188	E11.71268

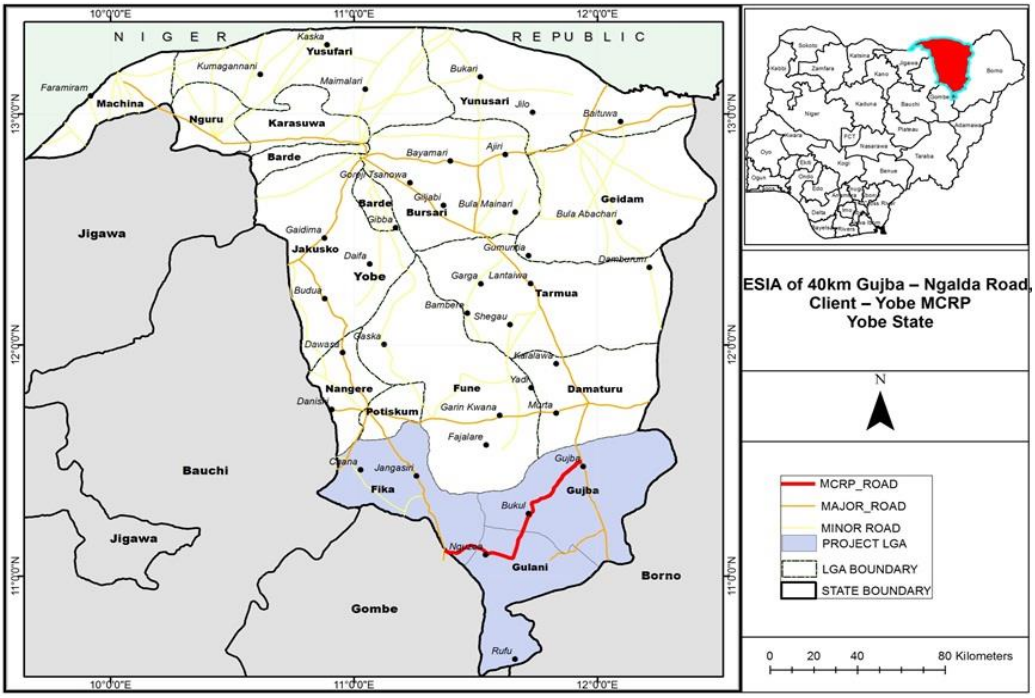


Figure 1: Map of Yobe State showing 40km Gujba-Ngalda road

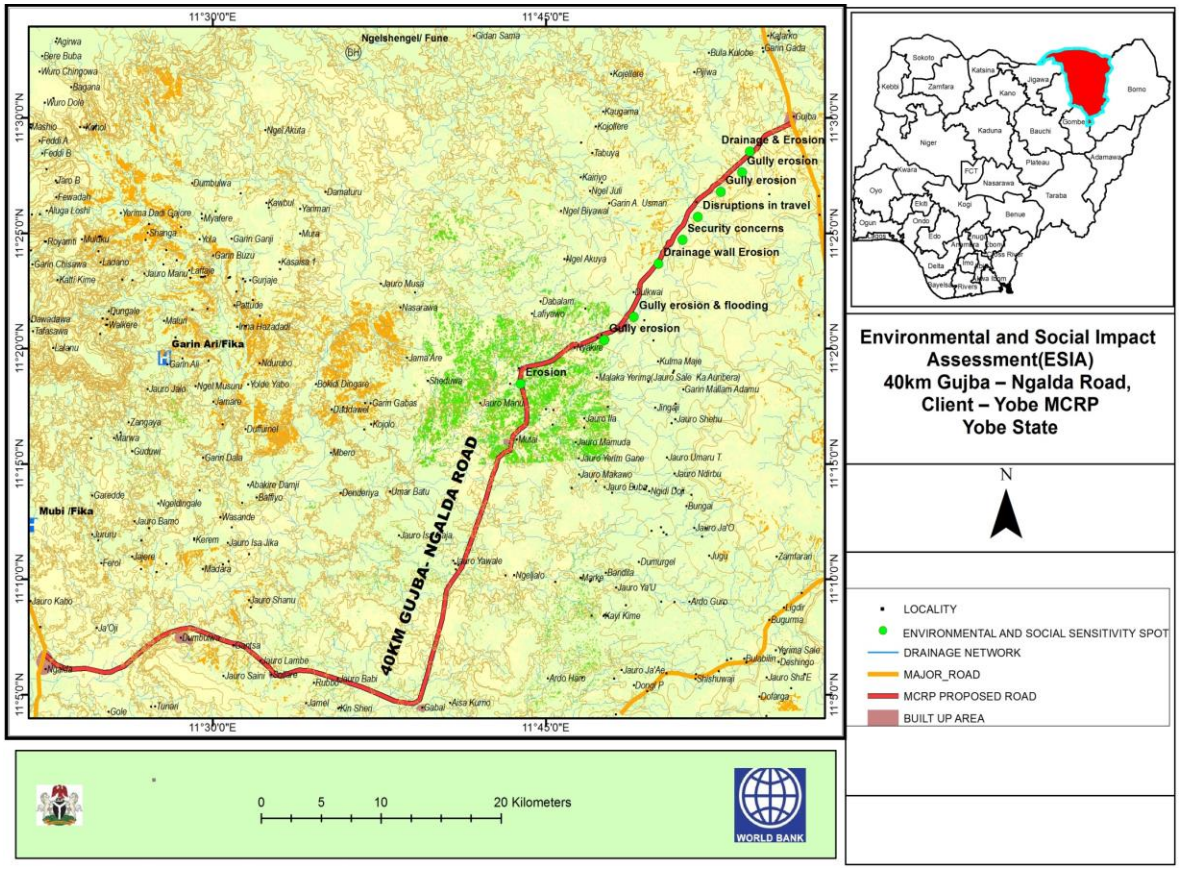


Figure 2: Map showing 40km Gujba-Ngalda road

2.1.1. Design Standards

The design standards for this road are shown in Table 5.

Table 5: Design standards of Gujba-Ngalda road

Standard	Description
Type of road	Single carriageway
Right of Way	50m
Road width (carriageway)	7.3m
Road shoulders	1.5m (each)
Design speed	100km/hr (50km/hr built up areas)
Maximum grade	4.0%
Cross slope	1.5%
Minimum curve length	150m
Crest	50m
Sag	35m
Surfacing	50m
Road base	175m

2.2 Description of MCRP Intervention Activities

The activities involved in this 40km Gujba-Ngalda road rehabilitation work are as shown in Table 6:

Table 6: Activities for 40km Gujba-Ngalda road Rehabilitation Work

Project Phase	Proposed Intervention Work		Activities
Pre-construction	Construction / Rehabilitation of 40km Gujba-Ngalda road	Marking Clearing Mobilization	• Marking of road right of way (ROW) by surveyors • Clearing of shrubs • Preparation of staging area • Mobilization of plant, equipment & personnel to site
Construction		Road works: Groundworks	• Scarification • Sub-grade preparation • Earthworks • Preparation of burrow pit
		Pavement & Surfacing	• Provide, spread, shape and compact laterite material • Provision of Box Culverts at designated locations • Provision of reinforced concrete line drain (80x70x0.15)m and (1x1x0.15)m using grade concrete • Construction of stone pitches or side drainage in areas • Provision of first coat surface dressing for entire length of road • Provision of second coat surface dressing • Laying of 50mm thick asphalt wearing course on carriage section of 7.3m

			• Provide concrete kerbs as directed • Provide triangular section concrete kilometre post as directed
		Side drains	• Construction of drainage structure and facilities • Construction of retaining walls and earthfilling • Other ancillary works
		Culverts & River Crossing	• Excavation • Piling • Construction of pile caps
Operation		Road, culverts & river crossing/bridge maintenance works	• 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) • Maintenance of road traffic controls
Demobilization		Site demobilization activities	• Landscape restoration and rehabilitation • Burrow pit restoration work

2.3. Scope of Civil Works

The scope of civil works to be carried out on the 40km Gujba-Ngalda road sub-project includes:

- Rehabilitation/construction on existing alignments as well as realigned portions where required
- Road civil works generally including:
    - Site clearance;
    - Ground works & earthworks;
    - Excavate for all culverts, concrete side drains to any depth in any material except rock including back filling to 100% B.S. compaction and dispose of surplus material as directed (including dewatering).
    - Provide sandcrete block connecting drain; fill block hollows and capping with grade 15 concrete and good rendering finish.
- Carry out pavement and surfacing work as follows:
    - Provide, spread, shape and compact to 100% West African Standard Compaction naturally occurring laterite as base in carriageway and shoulders in layers of 150mm of compacted thickness (Haul inclusive).
    - Provide, haul any distance, spread, shape and compact approved material (crushed rock, wet or dry) in carriageway base as specified to a compacted thickness of 150mm
    - Provide and lay prime coat using MCI cut - back bitumen at 1.2 litre per sq.m including blinding with river sharp sand or quarry fines
    - Provide, spread, shape and compact asphaltic concrete wearing course to carriageway to a compacted thickness of 40mm as specified.
    - Provide and set in concrete Grade 25 and paint standard triangular section concrete kilometer post as per drawings or as directed.
    - Excavate for, provide and lay approved type precast concrete kerbs 450mm x 150mm set in 1:3:6 concrete bedding 225mm wide by 100mm backing to full height, chamfered back at 45^{o} from back of kerb and to show 125mm face in high embankments, urban areas and medians or as directed.

The engineering designs for the 40km Gujba-Ngalda road and culvert are shown in Figures 3 and 4, respectively, while the different phases of project activities for the rehabilitation work is shown in Table 7.

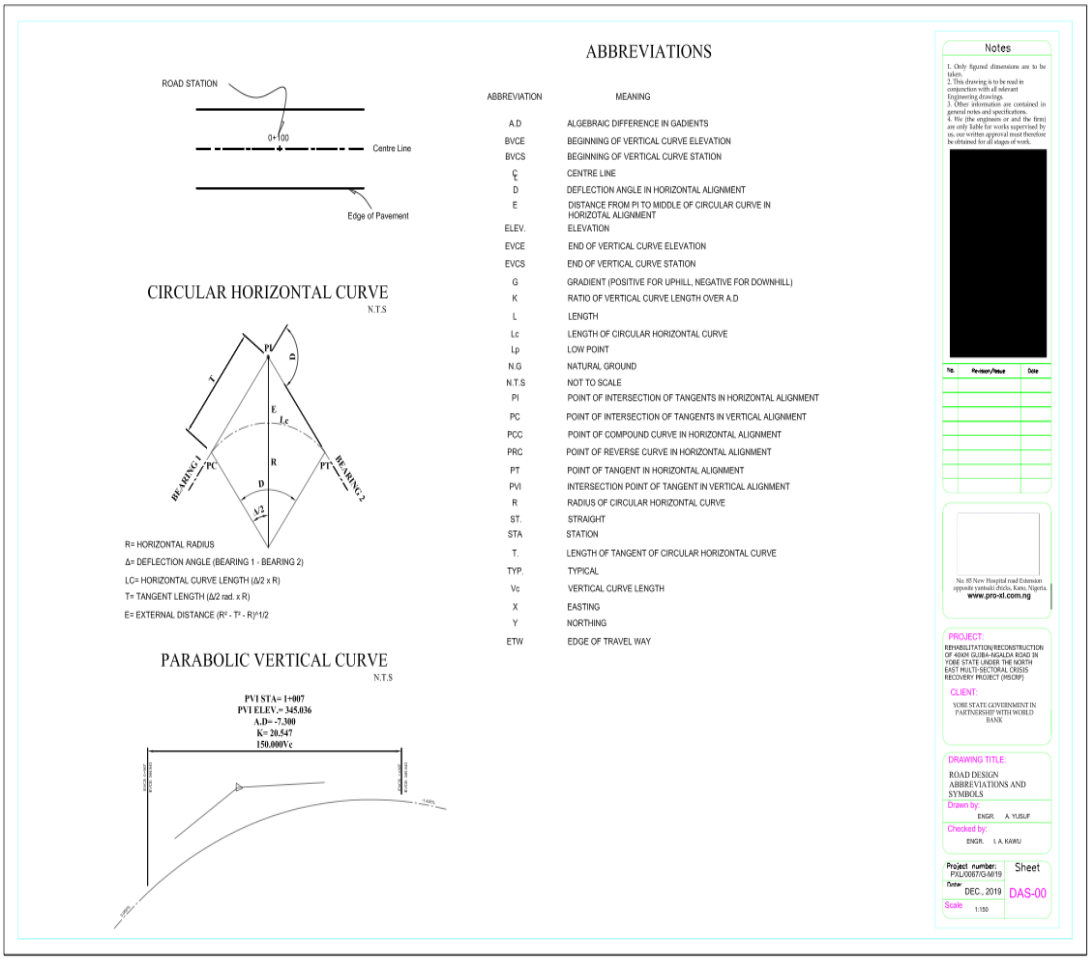


Figure 3: Engineering design showing 40km Gujba-Ngalda road

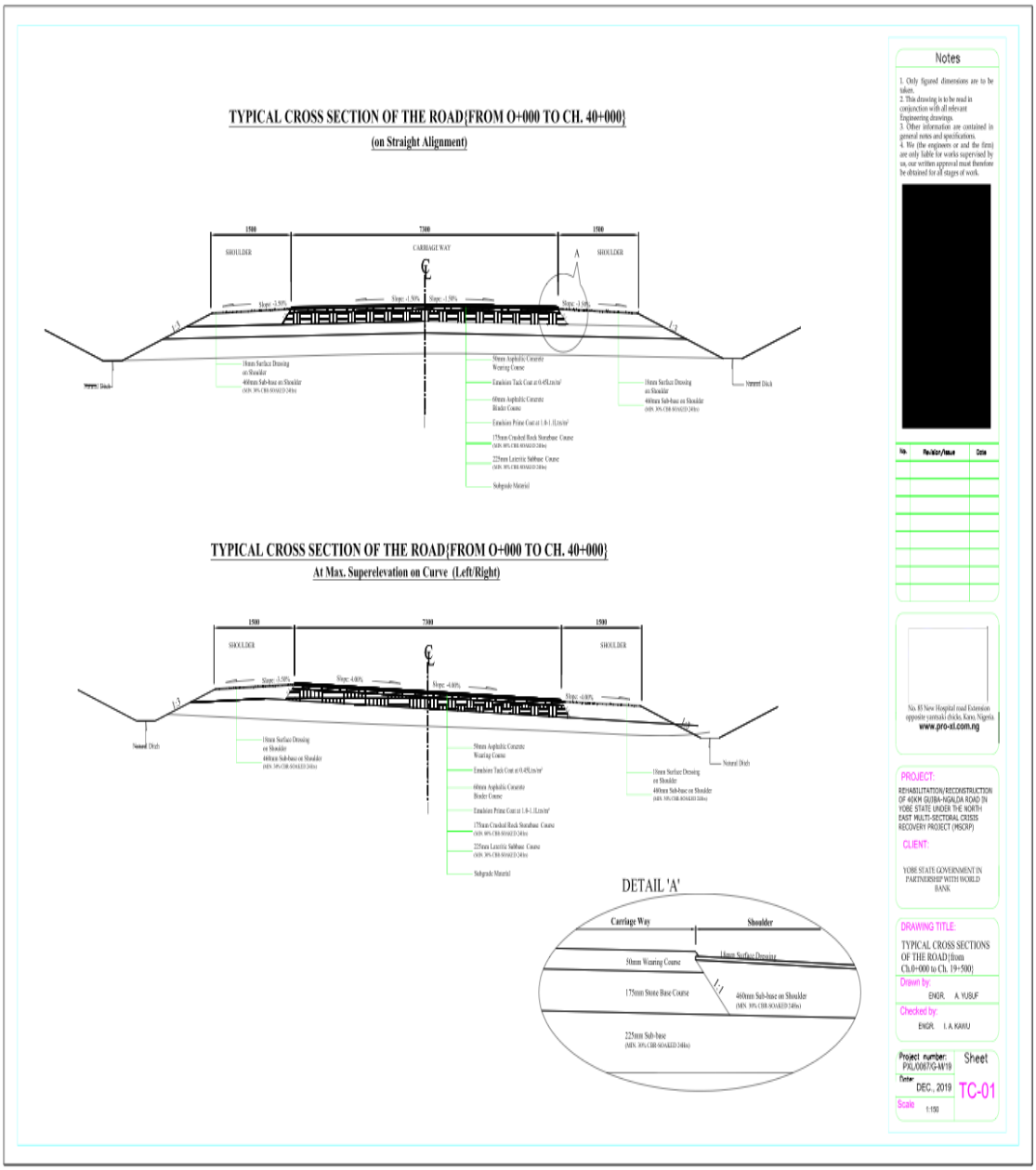


Figure 4: Engineering design showing typical cross section of road

Table 7: Project activities by phases

Project Phases	Activities
Preconstruction Phase Activities	Preconstruction phase activities include among others: Siting of workers camp Mobilization of workforce and signing of the code of conduct Training of workforce on OHS Establishment of health camps Provision of first aid equipment Procurement of PPEs Removal of trees and vegetation Assessment of existing project location, selection of beneficiary institutions, field studies and environmental screening; Preparation of environmental and social screening reports, Environmental and Social Management plan and preparation and implementation of the Resettlement Action Plan; Statutory permitting activities from Yobe WMA/ Yobe State MCRP PCU
Construction Phase Activities	Construction phase activities include among others: Earthworks Rehabilitation work; Mobilization of equipment, materials and personnel to site Pipelaying & reticulation activities Identification of storage area for construction material; Transportation and handling of materials and equipment; Civil & Construction Works Construction of waste bin bays (where applicable); and Disposal of construction waste/rubble and waste in general. Installation of safety signage
Operations and Maintenance Phase Activities	Operations and maintenance phase activities include: Housekeeping; Waste management (collection and disposal); Maintenance and repair works; and Materials management and storage (including personal protective equipment, etc.).
Decommissioning	Removal of construction equipment;

Phase	Disposal of construction spoil and waste in general; Dismantling of temporary work camp of the contractor; and Waste management. Compensatory tree planting where necessary

2.4 Raw Material Supply

Major inputs in this Yobe State MCRP road intervention sub-project include the various construction equipment and machinery for vegetation (bush) clearing, earth (soil) movement, topographic leveling, alignment and re- alignment of road segments, creation of road drainage, gravel and fill material usually excavated on site from burrow pits that may be established for this purpose.

2.4.1 Process Inputs

Road pavement is usually of lateritic materials stabilized with crushed stone as base course. Quarry and crushed rock aggregates that meet the requirements stipulated in relevant sections of the Federal Ministry of Works General Specification are not visible around the Gujba-Ngalda road, however, this can be sourced from the nearby quarry with close proximity to the site. In addition, the type of sand to be used should be free of clay and silts, being composed of angular quartz grains with low percentage of fine (silt) particles. This quality of sand can be sourced in economic quantity around the site, while borrow materials can be sourced along the Damaturu-Potiskum road. This should be tested to confirm their suitability for use as road fill materials. The public safety considerations for the haulage and conveyance of these materials have been properly articulated in the ESMP (Table 15) of this ESIA.

2.4.2 Sources of Energy Available to the Project

Energy will be provided from generating set machines dependent on petroleum products, which include motor gasoline, dual-purpose kerosene, and automotive gas oil, which represent major energy sources in Yobe available to the project.

2.5 Labour, Manpower and Human Resource

The project will require specialized (skilled) and unskilled human resource and labour. The contractor's workforce will mostly consist of skilled personnel such as engineers, surveyors, and technicians, environmental and social safeguard officers, health and safety officer, etc. Majority of the ancillary workforce will comprise of local labour.

2.6 Campsite & Staging Areas

To ensure ease of coordination of operations, a site office and campsite will be established for this sub-project, while the contractor will be

required to identify a staging area for plant & equipment that will be in conformity with the requirements of this ESIA.

The location for the establishment of the contractor's and the Resident Engineer's camps and sites should be determined in consultation with the Resident Engineer, the PCU and the local communities, taking into account the following aspects:

- Be located outside the protection zone of watercourses (100 m) and wetlands;
- Be located within an acceptable distance from existing residential areas, school field or around where little children gather;
- Not located in areas with intact vegetation;
- The contractor must first obtain the necessary licenses and consents from the relevant local government actors or from the owner of the needed area;
- Although it is the contractor's decision, it is recommended that whenever possible the camps should be handed over to the administrative or community authorities for future use;
- The contractor must submit for the prior approval of the Resident Engineer, the implementation design and other project structures and specifications related to the camps and sites that are intended to be built;
- The contractor shall take all necessary measures and precautions to ensure that the execution of the works is carried out in accordance with environmental, social, legal and regulatory requirements, including those set out in this document;
- The contractor shall take all measures and precautions to avoid any disturbance in the local communities and among the users of the road, as a result of the project execution;
- The contractor shall, whenever possible, apply measures to reduce or eliminate any sources of disturbances;
- The contractor shall follow the provisions of this document, as well as the applicable legislation and standards, during the use, operation and maintenance of the camps and sites, in particular with regard to water supply and sanitation, solid waste management, handling and storage of dangerous substances, etc., and
- The areas occupied by the camps and sites must be recovered at the end of the project, when the contractor is demobilized, through the replacement of previously existing conditions, unless other uses are intended.
- The contractor must develop and implement a camp management plan

2.7 Sourcing of water & other materials

Naturally occurring construction materials such as water, fine sand and aggregates are available in the project area; where applicable

approvals may be required for the extraction of raw materials. Materials that will be used are:

Water: Water for the proposed road rehabilitation and construction works can be sourced from streams/rivers within the vicinity of the 40km Gujba-Ngalda road.

Fine Sand: Like water, river sand can be sourced from some of the rivers along the project area. The river sand may be compensated with fine aggregates (quarry dust) if river sand is found not to be in sufficient quantity for the roads' rehabilitation and construction.

Aggregates: Aggregates (coarse sand) and laterite can be purchased and stock piled from existing quarries in the local government areas of the State. The aggregates must meet the requirements stipulated in relevant sections of Federal Ministry of Works General Specification, Vol. II (Roads and Bridges).

Bitumen: Bitumen is also available in the State and can be purchased.

CHAPTER THREE: PROJECT ALTERNATIVES AND OPTIONS

3.0 Introduction

The objective of the MCRP is to support the Government of Nigeria towards rehabilitating and improving critical service delivery infrastructure, improving the livelihood of conflict and displacement-affected communities, and strengthening social cohesion in the States of Borno, Adamawa and Yobe. Consequently, this chapter contemplates the different alternatives and options that were considered for the proposed project in line with the overall objectives of the project in Yobe State. These alternatives include taking no action, using alternative travel modes and alternative alignment construction as other methods of achieving the objectives of the sub-project. The options considered include the 'No Project' Development, 'Delayed Project' Development and Immediate Project Development.

3.1 Analysis of Alternatives

The study alternatives considered here have properly examined the need for the project and the option that best suits the project purpose. Potential alternatives include:

(1) taking no action;
(2) using alternative travel modes;
(3) alternative alignments construction; and,
(4) construction of new roads.

In comprehending the development options and scenarios, the following main factors were also considered:

- availability of raw materials,
- process facilities,
- cost effectiveness and more effective utilization of resources

3.2.1 No-Action Project Alternative

A no-project or no-development scenario is one in which the 40km Gujba-Ngalda road intervention project is not executed. With the "no-project" option, this road will typically continue to be in use with the existing weak agricultural marketing service levels being experienced.. This coupled with the safety concerns and the increasingly worsening security challenges in the project area, will further contribute to inadvertently driving prices of basic items high and probably beyond the reach of the rural dwellers. Inadvertently, this would have an undesirable impact on the local and national economy, as these prices are highly sensitive to availability of a good road network. This option is therefore unsuitable, as it would inhibit meeting the MCRP development objectives and the nation's growing transport needs.

3.2.2 Using Alternative Travel Modes

Other modes of efficient passenger travel and goods movement over long distances include; air, rail, transit, and marine. With regards to

goods movement in this part of the country the only realistic alternative to trucking that has the advantage of cost effectiveness and preservation of the quality of goods, is rail. Nevertheless, the ongoing insurgency is a worrisome situation in the northeast and has continued to be a deterrent to such investment decisions as currently, there is no passenger and goods rail service that would offer this extensive linkage between the neighboring communities identified that would be serviced by this road intervention project. Furthermore, the other modes of travel are not seen as effective alternatives.

3.2.3 Alternative Alignments

Alternative alignment options can be achieved from modification or changes to the engineering design. However, this could be more expensive as this implication would attract more costs in terms of additional raw materials required for the work. Also, it would be more disruptive as a result of the likelihood of physical and economic displacement, prolonged road closures and traffic diversions, which can lead to loss of revenues from this diverted traffic and increased costs from additional construction materials. There is also a possibility of very high costs for property acquisitions from land take and compensation claims, lost employment and reduced access. This alternative is not suitable as the likelihood of additional cost implications is high.

3.2.4 Construction of new Road

The Nigeria road network is relatively dense consisting of about 194,000 km of roads. This includes 34,000 km of federal roads, 30,000 km of state roads and 130,000 km of registered rural roads[1]. The road density is about 0.21 km of roads per square kilometre. In spite of the relatively high road density, the rural accessibility index for Nigeria (defined as the proportion of the rural population living within 2 kilometres away from an all-weather road) is low, at only 25.5 percent, leaving about 92 million rural dwellers unconnected. Rural access is limited where the poor population is concentrated.

The 40km Gujba-Ngalda road under consideration in this sub-project is already in existence, however, due to deteriorating conditions, over time, there is an increasing demand for its rehabilitation and the conservation of road/transport assets network in Yobe State, as most are no longer in their proper state. Unfortunately, a new road will likely attract additional costs related to the terrain; the attendant budgetary provision required for the construction translates to a higher aggregated expenditure on costs such as security personnel to protect construction team due to the insurgency (depending on road route eventually selected), the fuel for running equipment and bituminous product prices locally, technology used in road works, contract

[1] RAMP2 Project Appraisal Document (PAD)

management practices, and the availability and quality of road construction materials.

Consequently, considering the urgency and of the need of this sub-project by the communities, the proponent considers that embarking on the construction of an entirely new road, as opposed to rehabilitation of this existing Gujba-Ngalda road would attract significantly higher intervention costs, that will undoubtedly require more materials and will in the long run take a longer time before the benefits of the project can be enjoyed by these communities. Thus, the option of constructing an entirely new road is not practicable, in this regard.

3.3 Development Options

3.3.1 No Project Development

This option assumes the status quo is maintained with no development of the proposed road intervention works. Ultimately, the adoption of this option will imply that the envisaged socioeconomic and health benefits of the project will not be realised. With the increasing focus of the government at both the Federal and State levels on the agricultural sector, a lack of development of the roads infrastructure to enhance the transport linkages in Yobe State could hamper the envisaged socioeconomic development of the State and the neighboring States to which Yobe has strong economic ties (such as Borno & Taraba States). Inadvertently, rural dwellers especially in Gujba, Wagir, Nyakire, Bukkiyel & Mutai communities would continue to experience losses from the poor motorability of the Gujba-Ngalda road, while the forces of demand and supply would mean that the prices of the agricultural items will remain high in the markets and may remain uncompetitive in comparison with goods from other States, thereby stifling the potentials of economic growth. Furthermore, travel time will continue to be long and arduous due to the current terrible condition of the road. Consequently, the 'No development' option is not appropriate on the basis that the road is of absolute necessity for transport of people, goods and is therefore vital for enhancing socioeconomic growth.

3.3.2 Delayed Project Development

This option implies that this planned road intervention sub-project will be delayed until a much later date. Adopting this option would suggest that there is a strong likelihood that population within the project area will continue to be denied a very good alternative route as opposed to the otherwise longer route out of Gujba. Also, with the current poor motorability of this road, travel time and travellers security along this road will continue to worsen. This would be further exacerbated during the wet season when the motorability along the road would be more difficult. Unintentionally, this will continue to challenge socio-economic development, as other alternative routes would take longer travel time and are therefore not as economically favorable. In addition, the delay

may also result in unnecessary increase in the cost of the intervention project in the future, especially considering the impact of the inflationary forces on prices of materials further worsened by the security challenges in and around Yobe State. For these reasons, a "delayed Project Option" is unsuitable.

3.3.3 Road Surfacing Alternative

Roadway surfacing is an increasingly relevant consideration for road interventions. Consequently, three major roadway-surfacing options have been proposed for this MCRP road intervention project. The Road Economic Decision (RED) model has been used to select the most viable options. These three options are:

- Laterite Gravel Road Base
- Single Coat Bituminous Surface Treatment
- Double Coat Bituminous Surface Treatment

The third option using asphaltic concrete wearing course with thickness specified after the determination of base course bearing capacity has been selected for this road.

3.3.4 Immediate Project Development

This option implies that the project will go ahead as planned. In general, all the interactions with the communities to determine the perceived impact of this road were positive. In fact, these stakeholders wanted the project to commence in earnest. The results of the public meetings and the completed questionnaires supported the project and considered it a necessity to promote economic development and reduce poverty in the region.

The "immediate project development" option will ensure that the construction and rehabilitation of this road will be carried out, by mobilising all materials, plant and equipment necessary for execution of intervention work. This would attract multiple benefits of improved transport access and enhanced road motorability, thereby providing an opportunity to shorten the travel distance, especially for travelers from Gombe to Damaturu or Maiduguri who can now bypass Potiskum. This would derive additional benefits such as improved local economy from encouraging trade among neighboring communities, restoring and growing confidence of the people in their security as they travel, while business, trade and conveyance of farm produce to and from Gujba is unrestricted.

So, the rural communities in these areas will begin to enjoy the environmental, social, economic and health benefits of this intervention project as highlighted in this ESIA report. This option is therefore considered the most viable and is therefore most suitable for implementation.

CHAPTER FOUR: DESCRIPTION OF THE PROJECT ENVIRONMENT

4.1 Overview of the Project Environment

Situated in the North Eastern flank of Nigeria, Yobe State occupies a landmass of 45,502 square kilometers. Yobe State shares borders with Borno State to the East, Gombe State to the South, Bauchi and Jigawa States to the West and Niger Republic to the North. Yobe State lies between 12°00'N & 11°30'E. The State has 17 Local Government Areas with Damaturu as the capital city. This road intervention project is in Gujba LGA. Map of Yobe is shown in Figure 5.

Figure 5: Map of Yobe State; Source-INEC

4.1.1. Gujba LGA

The road intervention project starts from Gujba LGA, which has its headquarters in the town of Buni Yadi at 11°16′08″N 11°55′49″E towards the south of the area; the town of Gujba lies in the north of the area. It has an area of 3,239 km^2 (1,251 sq. mi).

The project area of Yobe State is typical of Savannah vegetation with the guinea savannah towards the southern part and Sahel savannah in the North.

4.2.1. Climate

Yobe state lies mainly in the dry Savannah belt; hence the state is dry and hot for most the year except in the Southern part of the State, which has a milder climate. Climate is determined by the interaction of the warm moist Tropical Maritime air mass and the hot and dry Tropical Continental air mass. The two air masses converge along the Inter-Tropical Convergence Zone (ITCZ), which moves in response to the seasonal disposition of the overhead sun.

4.2.2. Rainfall

The distinctly hilly nature of the terrain in Yobe presents a general topography that has significant impact on the local variations and pattern of rainfall. There are two distinct seasons; the dry and wet season. Rainfall in the State is highly irregular in space and time, which makes farming difficult since small differences in the amount and timing of rain received at a site may determine the success or failure of critical stages in vegetation development and hence crop production. The rains commence from around April till between the months of August and September with levels between 760mm – 1051mm. The rainfall sometimes produces hailstorms.

4.2.3. Temperature

The climate of Yobe State is hot and dry for most periods, of the year. The rainy season usually ends in the month of November, which indicates the beginning of the dry season. The State falls within the North Eastern part of the country that has experienced a 1.2°C increase in average temperature in studies carried out with data collected between 1900 and 2005[2]. The State exhibits a remarkably high annual range of mean monthly temperatures.

Nevertheless, mean daily temperature could be as low as 20°C during the months of December and January when the cool dry Harmattan wind blows in from the Sahara Desert.

[2] Odjugo, P.A. (2009). Regional Evidence of Climate Change in Nigeria. Journal of Geography and Regional Planning Vol. 3(6), pp. 142-150, June 2010

4.2.4 Geology

The geology of Yobe principally comprises crystalline and sedimentary rocks, underlain by basement complex rocks. The crystalline rocks are represented by older granites found in pockets of places in the southern part of the State. Another crystalline rock formation of younger age is located in the northwestern tip of the state in the Machina area. The older granite is Precambrian in origin consisting of metamorphic structures of gneiss and amphibolite's. The Biu basalts found in the southern end of the state are believed to have been extruded during the Tertiary/Quaternary periods as lava flows. However, the influence of climatic fluctuations is reflected in the superficial deposits overlaying most of Yobe State. This, for instance, has led to the deposition of series of longitudinal and traverse dunes around Yunusari, Yusufari, Machina, Geidam and Bade local government areas.

4.2.5 Drainage

Yobe State generally lies between 300m and 600m above sea level, except in the southern part of the state where volcanic rocks occur. The rock formation also contains water-bearing aquifers from which much of the water supply in the state is derived. The River Yobe, from which the state derived its name, is the biggest river in the state. It flows eastwards and drains into Lake Chad. It has a few tributaries, one of the most important being River Alkalam, where the famous yearly Bade fishing and cultural festival takes place

4.2.6 Agriculture

Yobe State is noted for agricultural production such as farming, fishing and livestock rearing, which provides employment to over 80% of the States population. This area falls within the Sudan and Guinea Savannah vegetational zones. While Yobe state is an agricultural state it also has rich fishing grounds and mineral deposits of gypsum, kaolin, and quartz. The State's agricultural products include: gum Arabic, groundnuts, beans, cotton. Yobe is also said to have one of the largest cattle markets in West Africa located in Potiskum.

4.2.7 Vegetation

There are two vegetation zones in the State. These are the Sahel in the North and the Sudan Savannah in the South. Vegetal cover is sparse as the grass grows in individual tufts leaving bare surfaces in-between. The grasses in the Sahel are short and tussocky, 0.5m to 1.0m high. They are interspersed with sand dunes are the most common types in Yobe. The acacia is a thorny, narrow leafed tree, fairly short and some times umbrella shaped. In the Sudan Savannah, the actual vegetation is made up of short grasses, 1.5m to 2.0m high, and some stunted tress. Typical trees include the Acacia, dum palm, silk cotton and baobab.

4.2.8 Ecological Problems

The increasing incidence of desertification is one of the most disturbing ecological problems faced in Yobe State. Wind Erosion is found to aggravate the problem by creating sand dunes in the northern parts of the state, especially in Yunusari, Yusufari, Geidam, Nguru and Machina areas. This has aiso led to soil degradation resulting to lower agricultural yields. Consequently, the social impact is that the communities and people living in these areas are seriously threatened such that the trend in migration is southwards. Furthermore, the poor management of the fragile land resources through deforestation, overgrazing, over-cultivation, bush burning, and adverse climatic conditions are identified as some of the factors responsible for the growing menace of desert encroachment. The more frequently experienced flooding events from torrential rains & flash floods have also continued to be a concern in Yobe.

4.3 Analysis of Environmental Media in Project Area

This section contains the results of analysis of one-season environmental media samples obtained from project site and thereafter tested to determine air, soil & water quality. Analysis of samples were undertaken at the Federal Ministry of Agriculture & Rural Development Laboratory in Kaduna (accredited by FMEnv), as the nearest laboratory to the project area because Maiduguri was inaccessible as at the time of conducting this study due to the security challenges that persisted along the Maiduguri-Damaturu road. Chain of custody that guided the quality control for sampling is contained in Annex 20. Constraint to this study was predominantly that of security concerns from the current insurgency that necessitates closure of the road from 4pm till 9am the following day.

4.3.1 Air Quality

Air quality assessment was conducted using MSA ALTAIR® 5x Multi Gas detector. All values of major air quality parameters were within FMEnv limits. The air quality levels from samples taken at three locations each for the 5-different villages along the 40km Gujba-Ngalda road were assessed and the outcome of the air quality tests showed that values were below the FMEnv standards for all the parameters considered (SPM, CO, NO_2, VOC). This is as represented in Table 8.

Table 8: Air quality standards along 40km Gujba-Ngalda road

Description	SPM mg/ms	CO PPM	NO2 PPM	H23 PPM	302 PPM	VOC PPM
Gujba	0.21	0	0	0.02	0.01	0.03
Ngalda	0.2	0	0	0	0.01	0.01
Bukkiyel	0.23	0	0	0	0	0

Mutai	0.17	0	0	0.01	0.01	0.01
Wagir	0.17	0	0	0.01	0.01	0.01
FMEnv	0.25	0.02	0.06	0.05	0.26	0.15

Source: Field Survey, 2020

4.3.2. Noise

Noise is ''unwanted sound'' while sound is periodic fluctuation of air pressure. The noise level within the project area corridor was measured on site. A total of five samples (three composites) noise quality study sites were selected and the measurement was done using Deselbe meter model PCEmsL1. FMEnv standard noise levels are presented in Table 8.

Table 9: Nigeria's Standard Noise Levels (FEPA, 1991)

Duration per Day, hour	Permissible Exposure Limit, dB (A)
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25 or less	115

The noise levels of 40km Gujba-Ngalda road corridor showed mean noise values around Wagir were highest at 49 dB (A), which is still below the FMEnv limit. Maximum limit must have resulted from vehicular traffic, which were operational at the time of measurement. In general, the noise level of 40km Gujba-Ngalda road corridor was below the FMEnv maximum Limit. This is as shown in Figure 6, while Annex 16 presents table of measurements obtained.

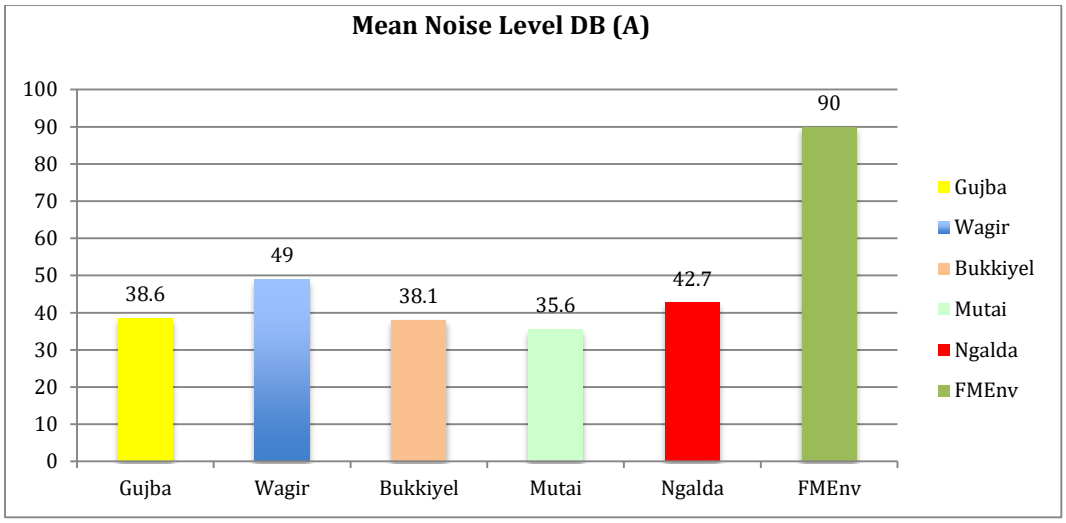


Figure 6: Noise Level along 40km Gujba-Ngalda road Corridor

4.3.3. Water Quality

A total of eleven water samples; comprising nine samples with two control samples were collected using a 1-liter glass stopper to check for Physico-chemical qualities and 1-liter plastic cover to check for heavy metals. Groundwater samples were collected from the wells in each of different communities of Gujba, Wagir, Bukkyel, Mutei & Ngalda. Analysis of water samples for non-metals was carried out using the US-EPA 600/4-79-020-preparation procedure and method and water samples were analyzed using 100 Cary UV-VS spectrophotometer, while heavy metals in water were analyzed using Perkin Elmer Pinacle 500 Flame Atomic absorption spectrometer. Quality assurance measures that guided the sampling chain of custody presented in Annex 20.

The values for the surface water quality tests conducted are as presented in Figures 7 and 8. The values are all slightly higher than the acceptable limit of neutral showing an alkaline medium and if this water is used for the construction work it will cause damage to the roads as bituminous and asphalt layers performs better at pH 6. Water having pH of 11 and above as in the project area is aggressive towards the materials.

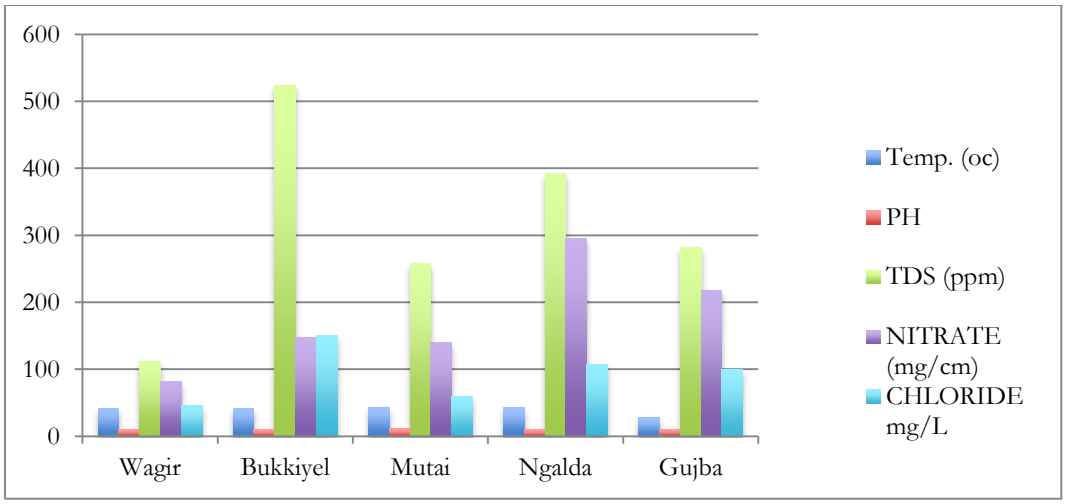


Figure 7: Surface Water Quality along 40km Gujba-Ngalda road Corridor

The pH values of groundwater in the study area ranges between 7.00 - 7.35, which is slightly basic. While the pH of the surface water ranges between 7.10 - 7.35 which is also slightly basic. This suggests that the surface water and ground water have a point of contact with one another. Also, the depth of the existing wells where groundwater is sourced is less than a few meters on average. This is in support of the thin nature of the chad formation within this axis. FMEnv maximum limit of pH in water is between 6.5-8.5.

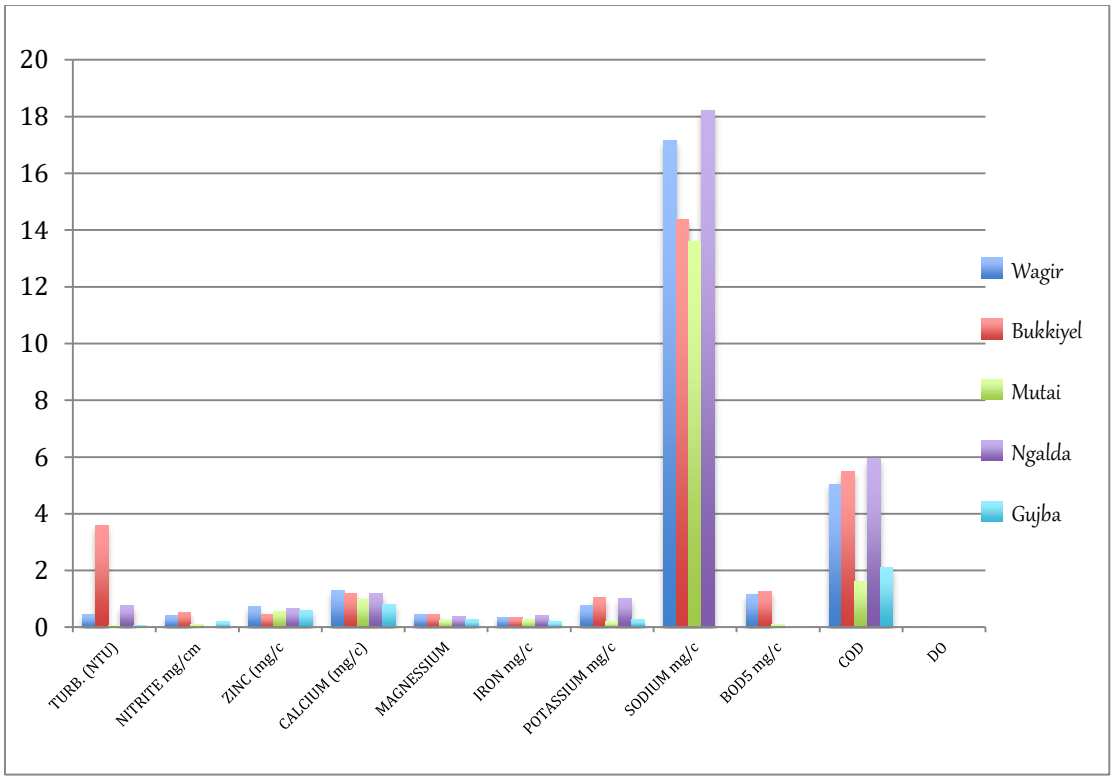


Figure 8: Ground Water Quality along 40km Gujba-Ngalda road Corridor

4.3.3.1 Total dissolved solids (TDS)

The measure of the sum of the cations and anions dissolved in water is refers to as its total dissolve solid (TDS). The measured values of TDS of ground water in this corridor ranges between 66-416ppm, while that of the surface water ranges between 336-316ppm. 500ppm is FMEnv maximum limit of TDS for water.

4.3.3.2 Dissolved Oxygen

Dissolved oxygen measured in the groundwater samples in the project area ranges between 2.4 - 4.1, while the surface water samples ranges between 1.0-3.5. These values are lower than the FMEnv maximum value for DO in water, which is 7.5.

4.3.3.3 Exchangeable Cations

Presence of exchangeable bases in water contributes to shifts in the pH of the water to basic region of the scale and makes the water saltier. Basic pH adversely affects asphalt, which forms the pavements of the roads. While contact of salty water destroys the binding properties of concretes which forms the foundation of embankments of roads. exchangeable bases in surface and ground water in the area are high but the values are lower than maximum permissible limit of FMEnv.

4.3.3. 4Heavy metals

Contact between water and rocks or soil are the principal source of heavy metal ions in water naturally. Heavy metals can also be found in water as a result of pollution. Cadmium was not detected in any of the water sample; however, Lead was found in ground water samples near Gujba and the up-stream surface water in Bukkiyel. There was presence of zinc in all water samples. The range of concentration is between 0.370-0.450 in ground water. Surface water has zinc concentration range from 0.215-0.436ppm and the values are less than permissible limit of <1 in water sample. Iron was also present at concentration bellow 10ppm recommended by FMEnv.

4.3.3.5 Hydrocarbons

Total petroleum hydrocarbon (TPH) was not present in this corridor at extractable level. This was expected because the communities in the corridor hardly engage in activities that contribute to an increment of hydrocarbon in the environment.

4.3.3.6 Microbiology of Water

The most probable number of microorganisms (MPN) in ground water per 100ml ranges between 180-310/100ml while that of surface water ranges from 605-722/100ml. E.coli was absent in ground water but was present in surface water and this calls for health precautions for the construction/contractor staff as they may decide to use this water as an alternative for drinking. *Salmonella sp*. was present in Ngalda and absent in the other communities, while *Shigella sp*. was present only in water samples of Bukkiyel and Ngalda communities.

4.3.4 Soil Quality

Soil samples were collected at depths of 0-30cm (top-soil), and 30-60cm (sub-soil). Generally, the soils on the surfaces of the road are sandy and silty. The characteristics of the soil in the project area are presented in Figure 9, while Annex 14 shows details of values obtained from analysis of soil samples.

4.3.4.1 Textural composition

In roadways construction soil with high aggregate base course (ABC) are desirable in use under asphalt pavement, backfill materials and embankment works including underground utilities work within the roadways. Soil with moderate to high percentage of sand in the composition was observed for the 40km Guiba –Ngalda road as represented in Figure 10.

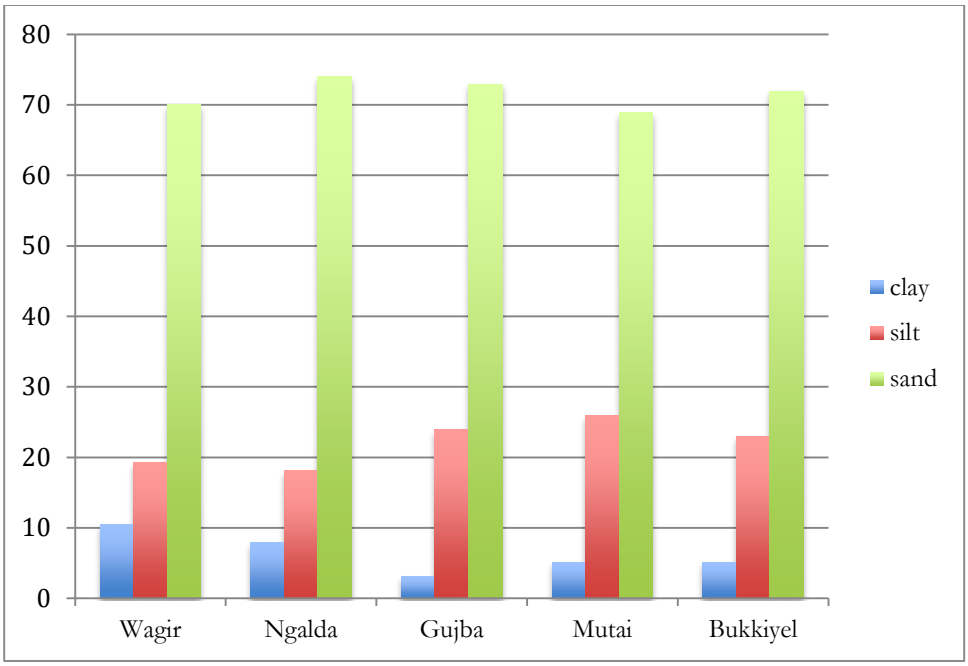


Figure 9: Texture composition of soil along 40km Gujba-Ngalda road Corridor

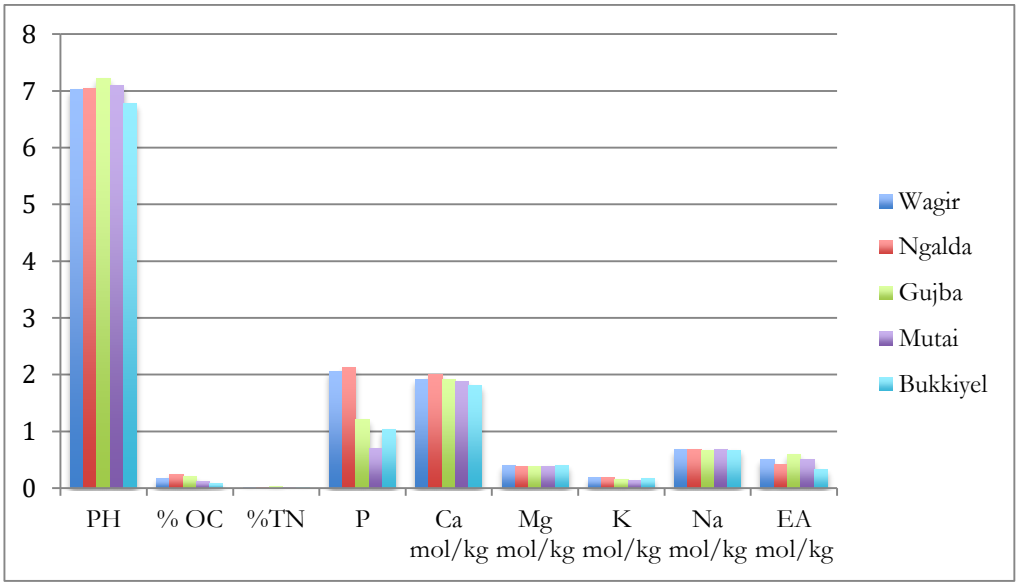


Figure 10: Sub-soil Quality along 40km Gujba-Ngalda road Corridor

4.3.4.1 Soil Properties

The pH of both top and sub soil taken from the study area ranges from 6.60-7.45 indicating a range from slightly acidic to slightly basic, which is a good soil for roadway construction since asphaltic admixture and bitumen emulsion used in road construction are acidic. Soil plasticity which is its ability to undergo deformation without cracking depends partly on the moisture content and also the mineral composition of the

soil. The moisture content of soils in these corridor ranges from 3.1-10.2%, which is favorable for road construction.

The conductivity level of 4μs/cm corresponds to osmotic pressure of 3.5 atm in the soil solution. In the project area, the conductivity of soil ranges from 0.0609-0.2641ds/m.

The Total Organic Matter (TOM) of soil sample collected in 40km Percentage organic carbon in the road corridor ranges between 0.019 - 0.323%, this values are lower than FMEnv limit of 5%, while Total Petroleum Hydrocarbon (TPH) was present in all the soil samples but was undetectable in the sediments. The TPH range in the soil samples are between 14.8 - 22.6 and this is lower than FMEnv maximum acceptable limit in soil. However, generally, in the test for heavy metals, the concentrations of lead were higher than FMEnv Limit at places where they are present. Chromium zinc and cobalt were equally above the limit. However, Manganese concentration was below the limit. The sources of these trace heavy metals are likely from vehicular emissions that ply the Gujba-Ngalda road and the high values may be from the low-lying trajectory and topography of the surrounding area, which allows run-off from the road side soils to wash off heavy metals and deposit them in low lying areas.

The heterotrophic bacteria (HB) encountered in 40km Gujba-Ngalda road soil were proteus, pseudomonas, micrococcus, klebseila, bacillus and actinomycetes. The hydrocarbon utilizing Bacteria (HUB) were; pseudomonas, micrococcus, Bacillus, and Actinomycetes; while the heterotrophic fungi (HF) include Botrycis, Aspergillus, penicillium, mucor, candida and tricoderma. Hydrocarbon Utilizing Fungi (HUF) in the area includes Penicillium, Aspergillus, and mucor. (The microorganism count of 40km Gujba-Ngalda road corridor, at the period of sampling).

4.3.5 Flora and Fauna

The vegetation along the study area is predominantly of the Sudan savannah type, with scattered acacia trees. There is also an area of Sahel savannah, consisting of sandy soils and thorn scrub, which is located in the far north. The Sudan Savannah is characterized by the coexistence of trees and grasses. Dominant tree species predominantly belong to the Combretaceae and Caesalpinioideae, The dominant grass species were Andropogoneae, especially the genera *Andropogon* and *Hyparrhenia*, on shallow soils also *Loudetia* and *Aristida*. Much of the Sudan Savannah region is used in the form of parklands, where useful trees, such as shea, baobab, locust-bean tree and others are spared from cutting, while sorghum, maize, millet or other crops are cultivated beneath.

Wild animals found in the study area include lions, leopards, and cheetahs, as well as elephants, giraffes, rhinoceroses, and numerous varieties of antelope. Several species of monkeys are found in the forests. Resident birds include bustards, guinea fowl, and storks. Reptiles include crocodiles and various lizards. Insect life is abundant, and the tsetse fly is found south of latitude 12° N whenever suitable conditions occur. include elephants, giraffe. Domestic animals include drought resistant animals like camel, cattle, donkeys and sheep.

4.4 Site Specific Environmental & Social Conditions

Site visits for reconnaissance have been carried out to assess the sub-project environmental & social baseline conditions along the 40km Gujba-Ngalda road. Some environmental sensitivities observed are gully formation concerns, potholes, drainage & erosion issues while social sensitivities observed include delays in travel time & security concern along the road. Most of the commuters use cycles, tricycles and occasionally cars, Lorries and trucks. Other observations are as shown in Table 9, while Figure 11 is a map of 40km Gujba-Ngalda road indicating the environmental & social sensitivities.

Table 10: Baseline Environmental & Social Conditions of sub-projects

Type of environmental Sensitivity	Type of intervention	Location	Picture
Drainage & Erosion	Hydraulic structure - The existing culvert to be upgraded to effectively discharge water	N 11.461711 E 11.888612	
Gully erosion	Damage to side drain due to gully erosion. Construction of proper side drainage basins on the northern side to prevent edge depression of the pavement from being completely eroded	N 11.454497 E 11.880776	

Gully erosion	Road borders have been washed away the culvert. Construction of side drainage on the northern side of the road will aid channeling of water away from road.	N 11.452354 E 11.879379	
Erosion of drainage walls	Side drain: Construction of side drainage on the northern side of the road will prevent road damage.	N 11.403975 E 11.838451	
Gully erosion & flooding	Erosion forces have completely washed away the road at the entrance of Wagir community. The existing culvert is unable to accommodate the volume of water flooding the area. 4 ring culverts will be constructed to effectively discharge floodwater.	N 11.357654 E 11.811362	
Gully erosion	Hydraulic structure - Construction of new culvert for discharge of rainwater to prevent build up or flooding events.	N 11.343824 E 11.793790	

Erosion	Expansion of the existing culvert to enable passage of higher run-off water volume & provide effective channelization of run off.	N 11.307858 E 11.7310316	
Safety	Disruptions in travel times between communities	N 11.454497 E 11.880776	
Security	Security concerns from travel delays deepened by flooding of roads.	N 11.357654 E 11.811362	

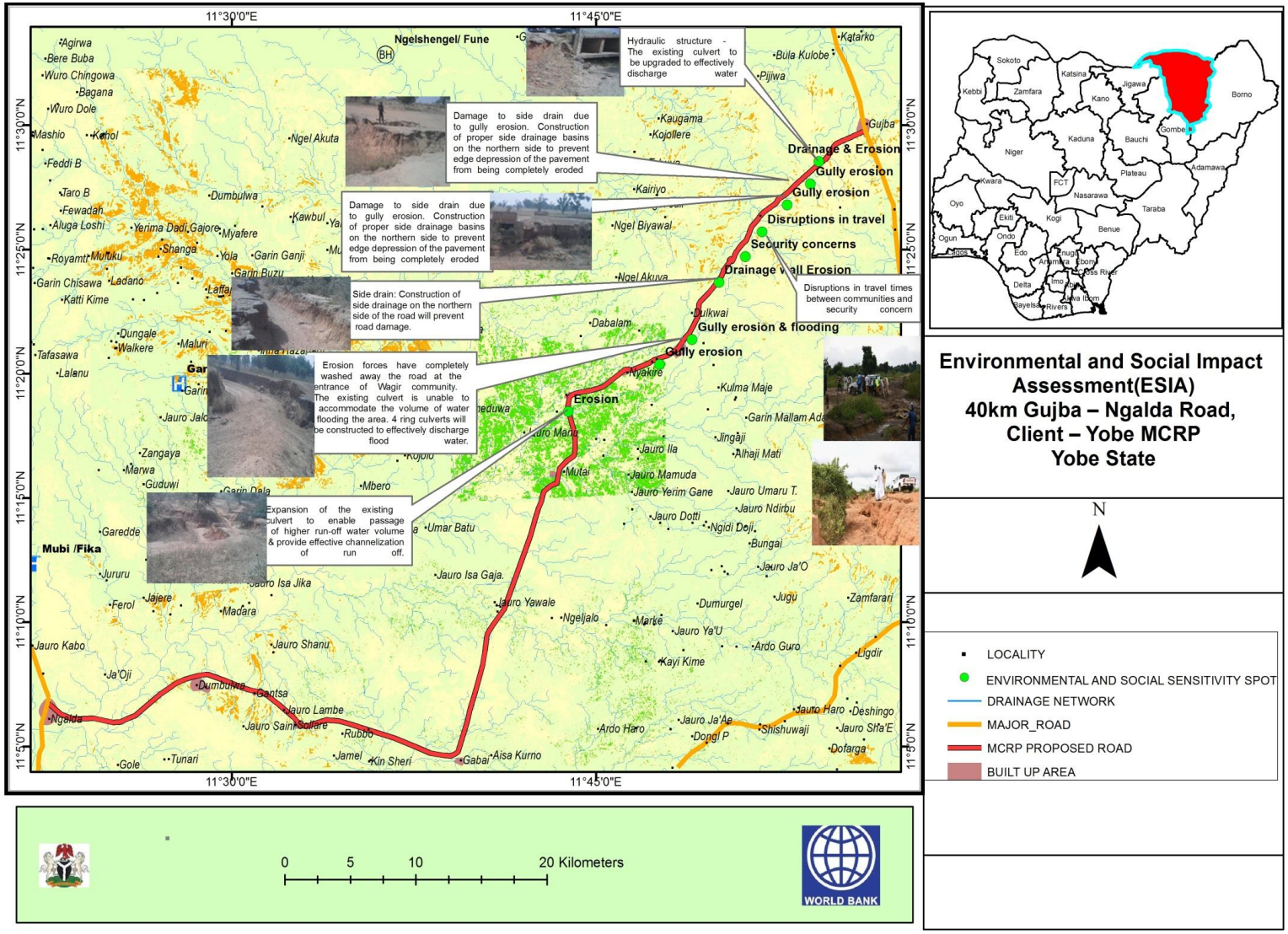


Figure 11: Map of 40km Gujba-Ngalda road showing Environmental & Social Sensitivities

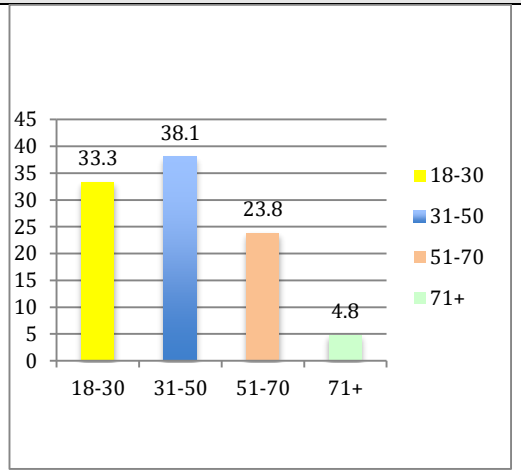
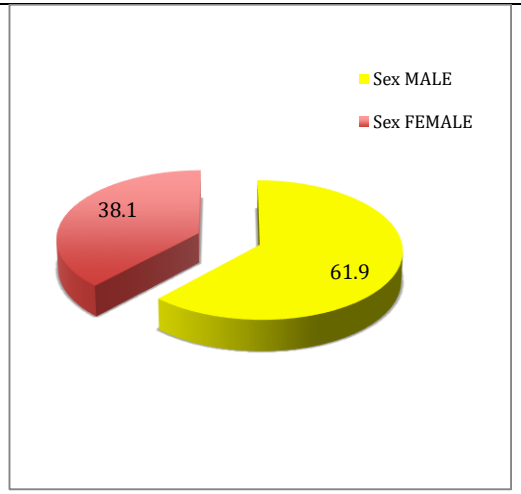
4.5 Description of The Socio-economic Environment

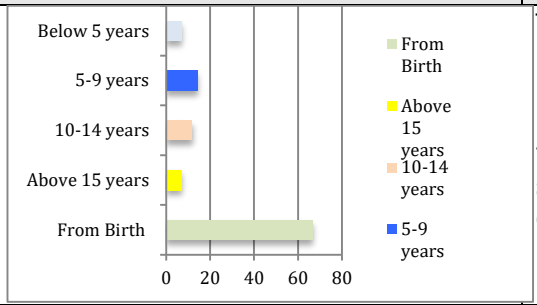
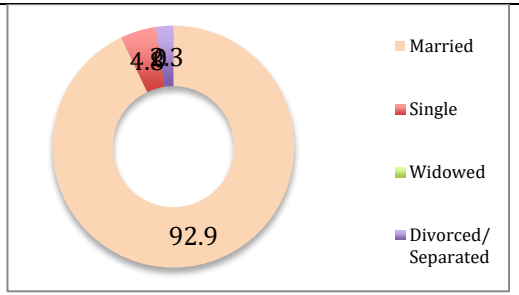
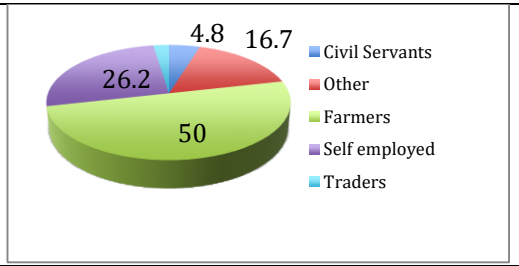
In achieving the objectives of the study, a socio-economic survey was carried out in order to collect the baseline information of the project area. The approach adopted involved a combination of the following:

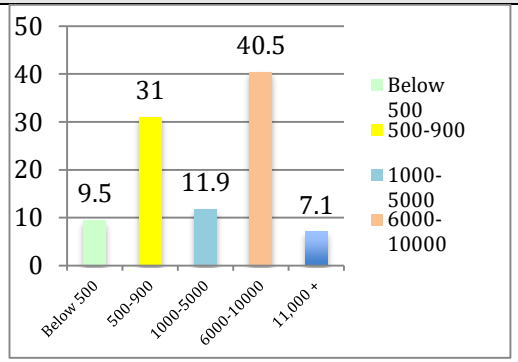
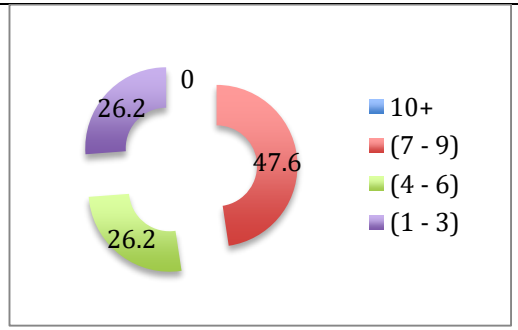
- 50 questionnaires were administered for data collection on existing livelihood opportunities, income, gender characteristics, age profile, health and transport access. Out of this number four were returned. Quality assurance measures taken include different samples taken from men, women and youth groups.
- Focus group discussion (FGD), conducted to obtain information about the analysis of existing formal and informal grievance redress mechanisms, the fears and expectations of the people. Separate sessions were held for the women to ensure that they were free enough to communicate gender related issues without fear of retribution. Pictures of the FGDs conducted are shown in Figure 15.
- Key informant interviews to elicit in-depth information about community structure, norms and values, among others
- Participant observation and estimation

A summary of socio-economic survey carried out in the project areas is summarized in the Table 10, while socioeconomic features of project area is shown in Figure 14.

Table 11: Socioeconomic characteristics of project area

Description	Category	No.	Percentage	Chart	Remarks
Age	18-30	14	33.3		This reveals that more than half of the persons interviewed are in the productive age band of between 18-50yrs (71.4%) and so offers a labour pool from which contractors can source for workers for the sub-projects.
	31-50	16	38.1		
	51-70	10	23.8		
	71+	2	4.8		
Sex	MALE	26	61.9		This indicates that the higher proportion of the men in the population interviewed (61.9%) will provide sufficient human capital from the communities that the contractor can recruit personnel for the execution of this project.
	FEMALE	16	38.1		

Description	Category	No.	Percentage	Chart	Remarks
Length of Stay in Community	From Birth	28	66.7		This implies that with 85.7% of respondents have lived in the project area for over 10 years; there is every tendency that they will be familiar with environmental and social challenges facing their communities.
	Above 15 years	3	7.1		
	10-14 years	5	11.9		
	5-9 years	6	14.3		
	Below 5 years	3	7.1		
Religion	Islam	42	100		Results show that all of respondents were Muslims.
	Christianity	0.0	0.0		
	Others	0.0	0.0		
Marital Status	Married	39	92.9		Results obtained indicates that majority (92.9%) are married and this indicates the high positive impact this road project will have on the households in these family units
	Single	2	4.8		
	Widowed	0.0	0.0		
	Divorced/Separated	1	2.3		
Occupation	Civil Servants	2	4.8		This suggests that two-thirds (76.2%) are either farmers or self employed, the sub-project will boost the local and national economy by creating opportunities for suppliers & vendors
	Other	7	16.7		
	Farmers	21	50.0		
	Self employed	11	26.2		
	Traders	1	2.4		

Description	Category	No.	Percentage	Chart	Remarks
Income Level (weekly)	Below 500	4	9.5		This implies that an improvement in the local economy will further enhance the earning capacity & income of persons in the project area.
	500-900	13	31.0		
	1000-5000	3	11.9		
	6000-10000	17	40.5		
	11,000 +	3	7.1		
Household Size	10+	0.0	0.0		73.8% of families interviewed are between 4-9 persons in size. This implies that the sub-project will have significant impact on the persons in these family units.
	7-9	20	47.6		
	4-6	11	26.2		
	1-3	11	26.2		
Educational Level	FSLC/non-formal	10	23.8		Almost half of the persons interviewed have formal education (49.3%), while the other half (51.7%) have Islamic studies background and therefore consultation strategy will take this into consideration when planning future engagements.
	WASC/SSCE	6	14.3		
	Higher Certificate	2	4.8		
	Islamic Studies	24	57.1		

4.5.1 Population

The approximate population in the project area is 559,169 based on the 2006 National census with annual growth rate of 3.5%. The inhabitants are predominantly Hausas and Kanuri's, while majority of them are Muslims with an average household size of eight (8) persons and living under nuclear and extended families; hence monogamy and polygamy family systems are being practiced.

4.5.2 Community Administration

Traditional and native systems of administration still prevail in the area under the jurisdiction of the Local Government Councils, being the third tier of government. Community leaders (Bulamas) exercise authorities in their domain which help in settling family disputes and communal conflicts. The Bulama's are directly answerable to the ward heads (Lawans), who also report to the District heads.

4.5.3 Land Use

The entire area falls under Gujba LGA, which was one of the worst affected by the activities of Boko Haram insurgency. The major communities along the Gujba-Ngalda road, within 40kms span from Gujba are Gujba, Wagir, Nyakire, Bukkiyel and Mutai and the people are predominantly farmers. Along the proposed road are some small villages such as Taashan Deffo, mostly inhabited by herdsmen of Fulani extraction who practiced trans-humans and seasonal migration. The entire LGA and the neigbouring Gulani were under the control of Boko Haram Terrorists (BHT) from November 2014 up to March 2015, when the area was liberated by the Nigerian troops. Nevertheless, in the rural areas where the project is located, land use is basically agricultural and residential with a small commercial and cultural mix; which would consequently imply that land acquisition concerns would have more impact on farmland, economic crops & residential properties.

4.5.4 Land Tenure

Agriculture is the mainstay of the economy in the area due to the soil fertility, which is suitable for guinea corn and beans production. Men and women engage in rain fed subsistence and commercial farming to meet their staple food needs and for commercial purposes. They supply markets within and outside the state and the northeast region with their farm products. Land tenure system is based on family lineage; hence farmlands are owned by families. In addition to farming, family members rear animals, particularly cattle, camels and small ruminants (Socioeconomic features of project area is shown in Figure 14), while women engage in petty trading such as ground nut oil extraction, sewing and local food and beverages production as means of livelihood.

4.5.5 Transportation

Transportation means of people in the project area are mostly lorries and, except in few cases where tricycles are utilized. The use of motorcycle has been banned in the area since 2013 by the government security forces as a means of curtailing the activities of Boko Haram insurgents, while due to the muddy nature of the soil in the area; this terrain makes it difficult for people to ride bicycles, especially during the rainy season. These issues have further compounded the poor transportation situation, especially for vulnerable people going about their usual social and economic pursuits such as farming, schooling, accessing health facilities and markets etc.

Camels along Gujba -Ngalda road

Herds of cattle and small ruminants around Mutai

Farm produce at Wagir ready for transportation to markets

Figure 12: Socioeconomic features of project area

4.5.5.1 Issues affecting Transportation

The major problems affecting transportation in the project areas include erosion, flooding of roads by nearby rivers and adjacent flood plains, sand piles, vegetation encroachment, potholes, and gullies. One-on-one interviews with community members revealed that even though the road is important as a route to connect Gujba to Ngalda with average vehicular traffic at 1552/day (from 9am – 4pm) from the traffic survey conducted as shown in Table 12, the bad state of the road has continued to make travel slow, unsafe and hinder access to the communities.

Table 12: Socioeconomic characteristics of project area

Description	Gujba - Ngalda			Daily Average	Percentage (%)
	Day 1	Day 2	Day 3		
Heavy truck	28	65	110	68	4.3
Medium truck	76	88	111	92	5.9

Small truck	93	134	150	126	8.1
Large bus	2	29	95	42	2.7
Mini bus	177	154	129	153	9.9
Car	646	621	573	613	39.5
Tricycle	189	313	175	226	14.6
Bicycle	231	231	142	201	13.0
Push cart	16	30	48	31	2.0
Total	**1458**	**1434**	**1,533**	**1552**	**100**

Source: Traffic Survey, 2019

4.5.6 Infrastructure

The assessment conducted revealed that there are no structures within the impact corridor of the project area that would be physically displaced /demolished and neither are there any project affected persons that would be economically displaced by loss of access to business or livelihood as existing road alignment will be maintained in built up areas.

There are eight (8) educational institutions in the area: five (5) primary schools, two (2) junior secondary schools and one (1) senior science secondary school. The only senior science secondary school is situated in Gujba town. This few number educational institutions can be attributed to the general response to education caused by poor school enrolment, retention and completion as children from poor background, coupled with the bad nature of the road could not attain secondary level of education. Most of the inhabitants have only completed primary school and some have attended Qur'anic schools, while only few were able to complete secondary education and in exceptional cases tertiary school.

In addition, the project area has five (5) primary health care centres (PHCs) at Gujba, Wagir, Nyakire, Bukkiyel and Mutai where ante-natal and Routine immunizations services are being provided for women and children as well as other basic health care services for the other population. Cases that require serious medical attention are referred to either general hospital, Buni Yadi or Damaturu, both within the radius of 65kms.

4.6 Gender and Gender-Based Violence Information

Nigeria ranks 118 out of 134 countries on the Gender Equality Index.[3] Women's disadvantaged position and lack of decision-making power in

[3] British Council Nigeria. Gender in Nigeria report 2012; UNDP Human Development Report 2016. See: http://hdr.undp.org/en/content/gender-inequality-index-gii.

the social, economic and political spheres are reflected in policies, laws and resource allocation that thwart progress towards gender equality in the country. More than 70 percent of women live below the poverty line, and maternal mortality ratio is among the highest in the world at 576 per 100,000.[4] More than half of people living with HIV (3.2 million) are women (55 percent).[5] Girl enrolment in school lags behind boys, and represents one third to one quarter of classroom participants depending the state; and two-thirds of the 10.5 million out-of-school children, are girls.[6]

The wide diversity and distinct socio-economic, cultural and political contexts across Nigerian geopolitical regions and states results in different gender related vulnerabilities. While gender inequitable norms prevail throughout the country, these vary by region and interact with other structural, community and individual factors exposing women, girls and boys to some forms of GBV more than others. The socioeconomic status of women and girls in the northern zones lags behind those in the south: only 3 percent of girls in the North complete secondary school, over two-thirds aged 15-19 years are unable to read compared to less than 10 percent in the South, and 76 percent are married by age 18 in the northwest.[7] Child marriage, acceptance of wife beating, restricted movement of women and girls are more pronounced in the North, and the prevalence of sexual violence, conflict related GBV and SEA is higher than in the South. In the South FGM, IPV, physical violence by any perpetrator, trafficking and harmful widowhood practices are more prevalent.

The term 'gender-based violence' reflects the underlying and systemic gender inequality which is a key driver of violence. Gender inequality exists in Nigerian households and communities, as in every society in the world; it results in women and girls experiencing limited choices, as well as restricted access to resources and opportunities compared to men and boys. The unequal distribution of power between men and women, along with engrained norms and rigid expectations on gender roles are the core drivers of GBV. GBV cuts across culture, level of education and income, religion, ethnicity, and other demographic indicators.

Nigeria's national government has taken steps to penalize and address GBV and SEA, although a clear leadership with the leverage to garner multi sectoral support to address this complex problem seems absent. The institutional champion of women's and children's rights and GBV issues within the government is the Federal Ministry of Women Affairs and Social Development (FMWASD). But it has limited influence on

[4] The 2013 Nigeria Demographic and Health Survey (NDHS). See: https://dhsprogram.com/pubs/pdf/PR41/PR41.pdf.
[5] UNAIDS 2017 Data. See: http://www.unaids.org/sites/default/files/media_asset/20170720_Data_book_2017_en.pdf.
[6] NDHS 2013.
[7] NDHS 2013; British Council Nigeria, 2012.

sectoral ministries who need to enforce policy, insufficient budgetary resources[8] and insufficient institutional capacity to enact its mandate.

The regulatory framework to address GBV, SEA and VAC is uneven because the Nigerian legal system is plural, and different legal systems co-exist, namely, the statutory law, Sharia law in the northern regions, and customary law in rural areas. The simultaneous application of this three-tier system creates differentiated degrees of protection to women's and children's rights[9] which varies in every state and its enforcement is weak. There is a lack of clear mandates regarding which institutions oversee child protection and the design and implementation of violence prevention strategies and provision of services. Insufficient budget allocation both at national and state levels, coupled with inadequately trained and staffed structures to provide social welfare, justice, education and health services that are women, child and survivor centered. While efforts to provide GBV survivors with basic response services is concentrated in the NE by international non-governmental organizations or the UN system, there are very limited government or non-governmental services in the rest of the country, those that exist are for the most part unregulated, uncoordinated and unpredictable.[10] This is aggravated by a generalized lack of trust of citizens, particularly women, in the criminal justice system to enforce the existing laws. Moreover, lack of awareness of laws and knowledge of rights, amidst a context dominated by social norms that legitimate the perpetration of abuse, stigma and underreporting, results in the consequent impunity of perpetrators, possible re-victimization of survivors and the reproduction of the cycle of violence.

Two key national laws address GBV, the Child Rights Act (CRA, 2003), and the Violence Against Persons Prohibition Act (VAPP, 2015) which have been passed by the Federal Capital Territory (FCT) but not by many of the 36 states, making them inapplicable in those that haven't adopted them. While CRA has been passed in 24 states, VAPP has been passed in 4 states in addition to the FCT. Where laws are domesticated, implementation remains weak as institutional capacities are weak (social welfare, police, family courts). In practice, the legal and judicial systems provide women and children with little protection against violence, and timely and adequate support services are scarce and often ill equipped to respond to survivors' needs.

4.6.1 Gender and Gender-Based Violence Information in Yobe State

There is a Gender Based Violence (GBV) working group in Yobe state co-chaired by the State ministry of women Affairs and social

[8] UN Women data from 2011.
[9] UN CEDAW 2017.
[10] UNICEF 2018.

development (MWASD) and the United Nations Funds for Population Activities (UNFPA). The forum, which comprises of state and non-State stakeholders such as United Nations (UN) agencies, International Non-Governmental Organizations (INGOs) and civil societies monitors trend and coordinate responses to violence against women and children (VAWC). However, there is little or no information as to the functionality, credibility and capacity of these entities to provide the needed responses to GBV, especially at the community level. Most stakeholders do not have the capacity to provide services. FIDA, the Ministry of Health (MOH), Ministry of Justice (MOJ) and MWASD are not exceptions. Key agencies supporting these actors in service provision are UNFPA, UNHCRC and to some extent UNICEF when it comes to child protection. However, some of the biggest challenges in the state are lack of reliable data on service availability, human resources, ineffective management of primary health facilities and inability to link with secondary healthcare centres.

The Sexual Assault Referral Centre (SARC) was commissioned in September 2016 to deal with cases of rape and other sexual assault in the state. However, SARC staff do not yet seem linked to other Violence Against Women Group (VAWG) stakeholders in the state and there seems to have been no work done on creating awareness among communities, including women's groups, about its existence and how to access it to date. Outside Damaturu, women and girls have serious barriers in accessing healthcare due to inequality exacerbated by power imbalance in favour of men.

The main stakeholders doing psychosocial work in Yobe are UNFPA, UNICEF and MOWASD and local Non-Governmental Organizations (NGOs) who serve as partners to UN agencies. The UNFPA assesses the level of services as not up to Inter Agency Standing Committee (IASC) standards. Another key gap when it comes to psychosocial care is the lack of support given to the counselors. Many counselors come from the communities concerned and may have been experiencing low levels of trauma themselves, which can be further compounded by secondary trauma. The only support they receive is that which they provide to each other which risks recycling trauma within the same group.

There is also a need to conduct mapping of GBV service availability in the state to identify the service providers. The mapping should also assess the availability and quality of their services, institutional capacities as well as human resources availability to deliver the services. This is in line with World Bank good practice note in addressing Gender Based Violence (2018) aimed at strengthening response for project exacerbated GBV

CHAPTER FIVE: DESCRIPTION OF ENVIRONMENTAL AND SOCIAL IMPACTS

5.1 Background

This chapter identifies the potential environmental and social benefits and related negative impacts likely to be associated with the proposed Yobe MCRP intervention sub-project.

5.2 Project Area of Influence

The immediate geographical area of influence of work is the area identified for the sub-project. The larger geographical area of influence covers Yobe 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 (especially vegetation) 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 acquisition of land, physical or economic displacement and mobilization of workforce with accompanying challenges such as labour influx, Increase in spread of Communicable diseases, STDs such as HIV/AIDS and other STIs GBV, impact on the connectivity network within the community as soon as roads are rehabilitated.

It is essential to note that as people migrate, their risk of exposure to crime increases. By increasing mobility and access often in hitherto remote areas can inadvertently facilitate increase in crime and human trafficking. The construction phase of the projects can inadvertently, increase human trafficking risks. As labourers arrive, the demand for commercial sex workers may increase thus placing pressure on the surrounding communities. Local people many of whom may be faced with temporary or permanent displacement, with concomitant breakdown in social networks and social capital are at increased risk of exploitation.

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; namely preconstruction; construction; operations/maintenance and decommissioning phases as shown in Table 13.

Table 13: Project Phases & Activities

Project Phases	Activities
Preconstruction Phase Activities	Preconstruction phase activities include among others: Siting of workers camp, Mobilization of workforce and signing of the code of conduct Training of workforce on OHS Establishment of health camps Provision of first aid equipment Procurement of PPEs Removal of trees and vegetation Assessment of existing project location, selection of beneficiary institutions, field studies and environmental screening; Preparation of environmental and social screening reports; Environmental and Social Management plan and preparation and implementation of the Resettlement Action Plan; Statutory permitting activities from Yobe WMA/ Yobe State MCRP PCU
Construction Phase Activities	Construction phase activities include among others: Earthworks Rehabilitation work; Mobilization of equipment, materials and personnel to site Identification of storage area for construction material; Transportation and handling of materials and equipment; Civil & Construction Works Construction of waste bin bays (where applicable); and Disposal of construction waste/rubble and waste in general. Installation of safety signage

Operations and Maintenance Phase Activities	Operations and maintenance phase activities include: Housekeeping; Waste management (collection and disposal); Maintenance and repair works; and Materials management and storage (including personal protective equipment, etc.).
Decommissioning Phase	Removal of construction equipment; Disposal of construction spoil and waste in general; Dismantling of temporary work camp of the contractor; and Waste management Compensatory tree planting where necessary

5.4 Identification of Potential Positive Impacts

In the course of the safeguards studies carried out for this road, both positive and negative dimensions of project-attributable impacts were identified. A detailed impact analysis is useful for the purpose of optimizing project benefits and reducing harmful impacts of interventions. Provided in Tables 14 are the positive impacts associated with this road sub-project.

Table 14: Evaluation of potential positive impacts.

No.	Impact	Key receptor(s)	Evaluation
1	Improved access to transport infrastructure in communities	Community leadership and users of transport infrastructure	The proposed project when completed will deliver these benefits: Better road access Improved transportation services for people in communities Strengthen social cohesion through increased community access, inter groups and inter communal relations. Reduce travel time for motorist travelling from Gombe to Damaturu and Maiduguri who will bypass Potiskum axis.
2.	Improved access to education	Children of school age	Pupils of secondary school age can now be able to attend and return from school due to reduced travel time along the road leading to Gujba where the only secondary school in the area is situated.
3.	Improved access to farmlands &	Farmers in neighboring communities	Livelihoods restoration by increasing access to farmlands for agricultural productivity as well as

No.	Impact	Key receptor(s)	Evaluation
	markets		nearby markets for commercial activities.
4.	Increase access to health services	Community members	Improved access for general population including pregnant women, children and people with disability in emergency situations
5.	Employment generation	Community members	The proposed rehabilitation/construction sub-project activities will create employment opportunities for skilled and unskilled labour during the construction and operational phases. Also, there are indirect employment opportunities such as 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.
6.	Improvement in local and national economy	Neighboring communities, LGA and national economy	The creation of direct and indirect job opportunities during the construction and operational phases of the project will boost the local and national economy
7.	Stakeholders' engagement	State Government, LGAs	Improvement of public goodwill and satisfaction towards governance in Yobe State.
8.	Improvement in management of resources	Neighboring communities, State Government, MDAs	Provision of a lead way to drive the State Government towards ensuring improved infrastructure
9.	Optimal utilization of Ngalda/Garin Chindo irrigation scheme	farmers/communities	The rehabilitation of Gujba Ngalda road will in the area lead to the optimal utilization of Ngalda/Garin Chindo irrigation scheme which will in-turn boost the economy and increase sources of income to the people
10.	Capacity building and strengthening of institutions	State Government, MDAs	Capacity building through: Strengthening of facility rehabilitation works and supervision systems of personnel involved in sub-project activities, including improvement in institutional responsibilities for construction and maintenance. Transfer of skills

5.5 Evaluation of Potential Adverse Impacts Associated with the Proposed Project activities

The World Bank's safeguard policies emphasizes preference for preventive measures over mitigation or compensatory measures, whenever feasible (Para 2, OP 4.01). Specifically, the mitigation hierarchy embraces a 4-step process, outlined as follows:
Step I: Anticipate and avoid risks and impacts;
Step II: Where avoidance is not possible, minimize risks and impacts;
Step III: Once risks and impacts have been minimized, mitigate; and
Step IV: Where residual risks or impacts remain, compensate for or offset, as appropriate.

The potential negative environmental impacts include mainly impacts on air quality, soil quality, noise levels, water quality, security and Occupational health and safety (OHS), while social impacts include travel disruptions, risks of labour influx, child labour, sexual exploitation and abuse, GBV and conflict. These are identified with appropriate mitigation measures proffered in the next chapter of this report.

CHAPTER SIX: ENVIRONMENTAL IMPACT MITIGATION AND MONITORING PLAN

6.1 Background

The project is envisaged to be hugely beneficial to the participating communities and the state at large. The scale of the subproject is such that severe negative impacts are not anticipated. The negative environmental and social impacts will be localized in spatial extent, short in duration and can be reduced or minimized through compliance with the implementation of the appropriate mitigation measures contained in Table 15.

Table 15: Environmental and Social Management and Monitoring Plan

No	Project Activity	Potential Impact	Proposed Mitigation Measures/ Actions	Responsibility for mitigation	Cost (NGN)	Parameters to be Measured	Method of Measurement	Performance Indicator	Frequency & Location of Monitoring	Responsibility for Monitoring	Cost of Monitoring (NGN)
I. Pre-Construction Phase											
A. Environmental											
1a.	Mobilization of construction equipment, drilling equipment, machinery, heavy duty vehicles and construction of workers' camp	Deterioration of local air quality due to the emission of dusts & gases	Maintain equipment & machinery to manufacturers' specifications by regular servicing to reduce carbon emissions. Use water to wet active areas for dust suppression. Conduct regular visual inspection of dust pollution and ensure appropriate intervention if dust levels are high. Train drivers/ workers on proper operation of vehicles and equipment to include fuel efficiency and anti-idling. Ensure no burning of waste on sites Use of tarpaulins to cover trucks transporting earth	Contractor	400,000	Air quality parameters (CO, NO_2, SO_2, CO_2, SPM) Maintenance records Driver's training records Usage	*In-situ* measurement. Visual observation of records & interviews	FMEnv permissible limit	Weekly in the surrounding communities	Environmental & Social Safeguard Officers, Yobe State Ministry of Environment (YSME)	100,000

			materials or spoil on public roads Ensure rehabilitation of disturbed areas once completed Resources/Community representatives Provide and enforce the usage of appropriate PPE			of appropriate PPE					
1b.	Siting of boreholes	Contamination	*Choice of suitable borehole location is to be jointly agreed with PCU and communities Pits should not be located too close to latrine facilities	Contractor	No additional cost	Distance from latrines to boreholes	Water quality tests	FMEnv permissible limit	Weekly site activities	Social Safeguard officers of PCU	No additional costs
2.	Mobilization of construction equipment, machinery, heavy duty vehicles and violation of workers' camp	Noise and vibration disturbances from operation of heavy-duty vehicles Traffic congestion and risk of road traffic	Select and use vehicles/equipment with lower sound power levels. Install suitable mufflers on engine exhausts and compressor components. Enforce appropriate speed limit to reduce vehicle noise levels. Restrict noise-generating activities strictly to normal working hours (i.e. 9am – 5pm). Respond promptly to noise complaints. Provide and enforce the	Contractor	100,000	Noise level Usage of appropriate PPE	*In situ* measurement	Noise level at sensitive receptors not to exceed FMEnv recommended level (90 dBA) for an 8 hour period	Weekly at Construction site and nearby communities	Environmental & Social Safeguard Officers, Yobe State Ministry of Environment (YSME)	50,000

	Use of Asphalt plant crusher	Green House gas Emissions (GHGs)	usage of hearing protection devices (ear plugs/muffs) for workers. Install appropriate safety signage and/or use signalers at strategic locations. Inform local communities in advance of road diversions & major activities likely to affect traffic. Enforce road safety standards, traffic rules including speed limits Schedule large and slow moving vehicles for off peak period Have in place a traffic Management Plan (TMP) *Maintain equipment & machinery to manufacturers' specifications by regular servicing to reduce carbon emissions. *Train drivers/ workers on proper operation of vehicles and equipment to include fuel efficiency and anti-idling *Ensure no burning of								

			waste or any material on sites. *Ensure asphalt plant operators are trained for use of equipment								
3.	Site clearing for staging area Mobilisation of drilling machine, construction machinery, Plant & Equipment	Occupational accidents and injuries to workers and risk to community health and safety Security breaches from insurgency	• Develop and implement a project specific Occupational Health and Safety Plan (OHSP). OHSP to include but not limited to: - Prohibition of drug and alcohol use by workers while on the job. - Provision of adequate first aid, first aiders, PPE, signage (English and Hausa languages). - Restriction of unauthorized access to all areas of high risk activities - Provision of specific personnel training on worksite OHS management - Ensure that staging areas for contractor equipment are adequately delineated and cordoned off with	Contractor	600,000	Clearly defined boundaries of protected areas Evidence of re-vegetation Evidence of Erosion control measures drainage	Visual observation; and Biodiversity survey	Available number and diversity of plant species within baseline conditions Implement Traffic management plan	Weekly at construction area	Environmental & Social Safeguard Officers Yobe State Ministry of Environment (YSME)	50,000

			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 signage integrated in all worksites for safety at night - Ensure security management plan is in place (Annex 12) and that employees refer to it at all times - appropriate security measures in place to		1,500,000						

			prevent harassment or kidnapping of workers								
4.	Mobilisation of personnel	Increase demand on existing community health	Establish worker's camp and provide all basic amenities (water, sanitation etc.). • Prohibit workers from unauthorized access to	Contractor	300,000	Availability of amenities in workers' camp	Visual inspection	Public perception	Monthly at project site and surrounding	Environmental Safeguards Officer	80,000

		and sanitation infrastructure	community infrastructure						communities	Yobe State MCRP Yobe LGA	
5.	Site clearing for staging area & Workers camp Mobilisation of Machinery, Plant & Equipment	Loss of vegetation, removal of trees and shrubs and habitat destruction	• Restrict removal of vegetation and trees to the area of need only. • Protect all vegetation not required to be removed against damage; • Undertake quick re vegetation of exposed soils with indigenous plant species once construction is completed. • Ensure construction of effective drainage system and use erosion protection structures such as riprap, gabions etc.	Contractor	250,000	Clearly defined boundaries of protected areas Evidence of re-vegetation Evidence of Erosion control measures drainage	Visual observation; and Biodiversity survey	Available number and diversity of plant species within baseline conditions	Weekly at construction area	Environmental Safeguards Officer Yobe State MCRP	90,000
6.	Site clearing for staging area	Landscape disruption and visual	• Ensure staging area or burrow pit site considered is in a place jointly agreed between	Contractor	300,000	Clearly defined boundaries of	Visual observation; and	Available number and	Monthly at construction	Environmental Safeguards &	

	Mobilisation of Machinery, Plant Burrow pit sourcing	intrusion	PCU and community • Restrict removal of vegetation and trees to the area of need only. • Protect all vegetation not required to be removed against damage. • Wherever possible, avoid the removal of existing mature trees, which form important visual focal points. • Ensure rehabilitation of disturbed areas once completed to restore the visual and landscape integrity of the area. • Remove all temporary structures, waste, equipment and vehicles from site immediately after construction			protected areas Evidence of re-vegetation	Biodiversity survey	diversity of plant species within baseline conditions Site restoration and zero no of materials & equipment on site after construction	area	Social Safeguards Officer Yobe State MCRP	
B. Social											
7.	Siting of workers camp	• Unauthorized movements of construction workers,	• Pay full compensation for land acquired if land is privately owned, leasehold or other legally binding rental payment • Explore all available	Contractor	500,000	No of grievances/ Disputes reported,	Implementation of RAP	Record of grievances resolved	Weekly site activities	Social Safeguard officers of PCU Grievance	100,000

	Land acquisition for camp	construction equipment, machinery and heavy duty vehicles (during and after working hours) could result in trespassing, • Conflict arising from land acquisition • Damage to local land and property and create amongst local	options while selecting worker's camp with the objective of avoiding or minimizing negative impacts on communities and maintaining constructive relationships between local communities and worker's camp • Enforce a 'closed' camp policy unless otherwise agreed and approved. • Workers shall comply with the agreed camp closure hours. • Contractor shall implement suitable measures to maintain the closed camp policy, which may include perimeter security fences, security controls and guardhouses, monitoring transfer of goods into and out of camps for contraband and stolen goods. *Contractor shall have a Project Security			signed code of conduct by contracts and his workers				Redress Committee	

		residents a sense of their privacy being invaded. • Residents may feel vulnerable and there may be increasing incidents of crime and or violence and threats to the safety of community members. • Disparity of pay, increase	Management Plan and should refer to it always. *Contractor, as appropriate, shall provide adequate recreation facilities for workers to reduce incentive for leaving camps during leisure time. *Contractor shall limit workers interaction with the community when outside the camp e.g., by organizing transport directly to and from the worksite. If community members or local businesses express grievances in relation to camp related activities/operations, the Project shall respond to the grievance in accordance with the grievance procedure outlined in the GRM and the Community Grievance Procedure contained in the Stakeholder Engagement Plan (SEP).								

		in disposable income and potential availability of illegal substances, illicit or culturally inappropriate lifestyle choices, leading to increased tension between local communities and the workers at camps.									

8.	Preparation of Staging areas	Increased security risks due to storage of materials and equipment on site	• Deploy competent security personnel to secure project site. • Provide adequate training of security personnel. • Disclose site security arrangements to the Police and host communities.	Contractor	200,000	No of security personnel engaged	Records and Interviews	Zero security incidents	Monthly at Construction site and surrounding communities	Environmental & Social Safeguard officers of PCU Local Vigilante Police	50,000
9.	Labour influx from employment on project	Threat to community culture, safety and security due to presence of workers, Gender Based Violence risks	Ensure community have priority opportunity to employment for skilled and semi-skilled work Promote equal opportunities for employment for all (both male & female) Develop an induction program including a code of conduct for all workers. The code of conduct will address the following aspect: Respect for local residents; No hunting or unauthorized taking of products or livestock; Zero tolerance of illegal activities such as child sexual exploitation and underage sex, prostitution,	Contractor	350,000	Workers manual, employment codes etc. Level of awareness of local culture by migrant workers. Grievance Redress	Visual observation and interviews	Community perception and level of satisfaction.	Monthly at Construction site and surrounding communities	Social Safeguards Officer – PCU Yobe LGA Police	75,000

			harassment of women, gender based violence, purchase or use of illegal drugs, fighting; Disciplinary measures and sanctions (e.g. dismissal) for infringement of the code of conduct and/or company rules; Commitment / policy to cooperate with law enforcement agencies investigating perpetrators of crimes including gender-based violence. Provide cultural sensitization training to improve awareness of workers to local cultures, traditions and lifestyles. Prohibit child and forced labour. • Ensure contractor staff are informed of legal consequences of child labour to discourage practice • Ensure non-compliance cases have severe consequences • Employment process to include procedures for			System Ratio of migrant to local workers Presence of security personnel					

			engagement where ID showing verified date of birth are mandatory Implement community-based Grievance Redress Mechanism • Limit the number of migrant workers by engaging local workers. • Engage competent security personnel.								
II. Construction Phase											
A. Environmental Issues											
10.	Use of Workers Camp	Generation of sanitary waste from worker's camp	• Ensure provision of sanitary facilities on site for workers and enforce usage. • Ensure usage of Yobe SWMA approved waste vendor for waste evacuation & disposal.	Contractor	250,000	Presence of functional sanitary facilities on site Waste vendor licenses and waste evacuation documentation	Visual Observation Interview	National Environmental Protection (Management of Solid and Hazardous Wastes) Regulations 1991.	Weekly at Project Site	Environmental & Social Safeguard Officers YOBE SWMA	75,000

11.	Use of haulage trucks for sand & materials supply	Public safety, road accidents leading to injuries and fatalities	• Train drivers on defensive driving • Conveyance of materials to site shall be by appropriate transportation means to prevent damage or accidents • Provide road signs and flag persons to warn of dangerous conditions of conveying materials such as the water trucks	Contractor PCU Safeguards Team	No additional cost	Availability of up to date drainage maps of metropolis/ project area	Visual Observation	Complaints on disruptions	Weekly at project site	Environmental & Social Safeguard Officers Drainage dept. of Yobe Ministry of Environment	No additional cost
12.	Use of drilling equipment, Earthworks, Groundworks & Excavation, road rehabilitation activities Sourcing of materials (also from burrow pits)	Public safety, road accidents leading to injuries and fatalities affecting host community population, which could lead to conflict/ unrest	• Develop and implement a project specific Occupational Health and Safety Plan (OHSP). OHSP • Ensure QA/QC control is established on inspection of materials, which are to be of best quality to prevent defective outcomes on construction sites • Use tarpaulins to cover sand and other loose material when transported by trucks • Ensure burrow pits are used for extraction of	Engineering Consultant /Ministry of Works & Transport Environmental Safeguards	80,000	Availability of an Occupational Health and Safety Plan (OHSP). Availability of QA/QC plan for the works	Procurement planning procedures		Daily at project site	Environmental & Social Safeguard Officers	40,000

	Use of generators for power supply	and stoppage of activities.	material only for project purposes and not commercial • Ensure generators are operated by dedicated trained personnel • Carry out regular servicing of generator to reduce release of harmful emissions	Specialist							
13.	Construction of lined and unlined drains	Aggravated soil erosion, rain fall runoff and road breakages	Stabilize road sections that are prone to rainfall run off, erosion and road breakages prior to drain construction	Contractors	150,000	Compliance to engineering designs for drains	Visual observation Meeting minutes, and agreements	Reduced vulnerability to erosion and road breakages Compliance to provisions of minutes and agreements	Project roads	Twice Monthly	
14.	Groundworks and earthworks works	Soil impacts and sediment transport	• Vegetation (grasses) shall be cleared only when contractor is fully mobilised for construction. • Vegetation clearance	Contractor/	No additional cost	Developed site Reclamation Plan	Visual observation	Materials sourced from licenced quarries	Quarterly at material borrow sites and	Environmental & Social Safeguard Officers	

		Risk of exacerbating erosion concerns Land degradation and increased susceptibility to erosion due to sourcing of construction materials	(where necessary) and excavations shall be limited to the demarcated construction site. • Backfill with excavated soil material where appropriate. • Ensure that heaped sand delivered for concrete mixing/construction works is covered with tarpaulin to prevent wind and water transport of soil particles.	Engineering Consultant		Spoil management			Project site	Yobe State Ministry of Environment (YSME)	
15.	Groundwork & levelling, Drilling; Transportation of materials and equipment;	Air quality deterioration	• Deliver equipment necessary for construction and other materials when community is less likely to be impacted by dust from moving machinery, such as in the evenings or on weekends. • Impose a speed limit	Contractor	See I.A.1	Air quality parameters (CO, NO_2, SO_2, CO_2, $SPM_)$ Maintenance	*In-situ* measurement. Visual observation of records & interviews	FMEnv permissible limit	Weekly in the surrounding communities	Environmental & Social Safeguard Officers, Yobe State	See I.A.1

	Earthworks		for all vehicles and construction equipment shall be less than 30km/h within the transmission pipelines premises and less than 50km/h within communities. • Haulage trucks carrying sand shall be covered with tarpaulin. • Develop proper excavation procedures for workplace • Hydraulic concrete mixing machines shall be used as much as possible and regularly service all construction equipment and machinery. • Fit all heavy equipment and machinery with air pollution control devices, which are operating correctly.			records Driver's training records Usage of appropriate PPE				Ministry of Environment (YSME)	
16.	Transportation of materials and equipment	Vibration and noise nuisance	• Hydraulic concrete mixing machines shall be used as much as possible and regularly service all construction	Contractor	See I.A.2.	Noise level Usage of approp	Noise measurement	Noise level at sensitive receptors not to	Weekly at Construction site and nearby	Environmental & Social Safeguard Officers	See I.A.2.

			equipment and machinery. • Minimize noise from construction equipment by using vehicle silencers, fitting jackhammers with noise-reducing mufflers • Maintain maximum sound levels not exceeding 80 decibels (dba) when measured at a distance of 10m or more from vehicles, plants and machinery. • Train the operators on proper use and maintenance of tools, proper positioning of machinery on site • Maintain noise levels below 80 dB			riate PPE		exceed FMEnv recommended level (90 dBA) for an 8 hour period	communities	Yobe State Ministry of Environment (YSME) Engineering Consultant	
17.	All road construction & rehabilitation phase activities	Visual intrusion Dust	• Ensure good housekeeping at the construction site. • Ensure an acceptable post-construction site as per provisions in the contract. • Remove all construction equipment from the site after	Contractor	No additional cost	Document housekeeping procedures & plans for site	Visual observation	Quality Control/ Quality Assurance Standards	Daily on Site	Environmental & Social Safeguard Officers, Yobe	

			completion of work. • Consult with State PCU on the designated areas for stockpiling of soil, gravel, and other construction materials; • Excavate the foundations at the same time as the access roads (if needed) are built so that dug material is used immediately, avoiding the need to stockpile on site; • Keep exposed soil and stockpiles damp by spraying with water when necessary during dry weather; • Use tarpaulins to cover sand and other loose material when transported by trucks; and • Fit all heavy equipment and machinery with air pollution control devices, which are operating correctly.							State Ministry of Environment (YSME)	
18.	Movement of plant &	Soil contamin	• Develop and implement a site-specific Waste	Contractor	150,0	Emergency	Visual observation	FMEnv Soil	Monthly at	Environmental &	50,000

	equipment to and from staging area to site	ation	Management Plan (WMP) • Prepare and implement an Emergency Response Plan to respond to incident of spillage. • Ensure fuel storage tanks are installed in a bonded area and checked daily. • Ensure regular maintenance of vehicles to avoid leaks of oil. Prevent unregulated dumping of fuel waste • Ensure local communities are sensitized on need to avoid tampering with waste bins		00	Response Plan for spillage developed Soil quality parameters	Laboratory testing	Quality Standards	Project Site	Social Safeguard Officers, Yobe State Ministry of Environment (YSME) Yobe State Environmental Protection Agency (YOBE SWMA)	
19.	Use of plant and equipment with internal combustion engines	Release of Green House Gas emissions (drivers of global warming)	• Maintain equipment & machinery to manufacturers' specifications by regular servicing to reduce carbon emissions. • Ensure that the	Contractor	200,000	Maintenance records Training records	Visual Observation Interview	FMEnv permissible limit for air emission	Weekly at Project Site	Yobe State Ministry of Environment (YSME)	80,000

			mitigation measures in B3 are carried out. • Train drivers/ workers on proper operation of vehicles and equipment to include fuel efficiency and anti-idling. • Ensure no burning of waste or any material on sites.			Evidence of waste burning				Yobe State Ministry of Environment	
20.	Use of workers camp	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 construction and domestic waste at the approved dumpsites and in the approved manner. • Ensure all trenches or excavations made during the construction works do not collect stagnant water, which could breed mosquitoes. • Ensure access to toilets	Contractor / Engineering Consultant Environmental Safeguards Specialist	300,000	Presence of functional sanitary facilities on site Waste vendor licenses Waste evacuation documentatio	Visual Observation Interview	National Environmental Protection (Management of Solid and Hazardous Wastes) Regulations 1991.	Weekly at Project Site	Yobe State Ministry of Environment (YSME) Yobe State Environmental Protection Agency (YOBE SWMA)	

			for construction crew or provide temporary toilets (mobile toilets) for use where there are no existing ones. • Ensure mobile toilets/sanitary provisions are provided to reflect gender types. • Ensure regular toolbox meetings are held among contractor workers to offer awareness on transmission of contagious or communicable diseases.			n					
21.	Operation of Machinery & Equipment Movement of materials Earthworks	Occupational accidents and injuries to workers and risk to community health and safety	• Develop and implement a project specific Occupational Health and Safety Plan (OHSP). OHSP to include but not limited to: - Prohibition of drug and alcohol use by workers while on the job. - Provision of adequate first aid, first aiders, PPE, signage (English and Hausa languages).	Contractor	220,000	OHSP developed No of trained first Aiders Usage of appropriate PPE	Visual observation	Compliance with Factory Act, 1990 Compliance with ISO 14001 Occupational Health	Monthly at Construction Site	Environmental & Social Safeguards Officer	100,000

			- Use only trained personnel for welding activities - Restriction of unauthorized access to all areas of high risk activities - Provision of specific personnel training on worksite OHS management - Ensure that staging areas for contractor equipment are adequately delineated and cordoned off with reflective tapes and barriers - Any uncovered work pits should have appropriate signage and protection around them - Workers should get a daily induction/toolbox before going on the site and a refresher of what happened on site a day before - Adequate safety signage on construction sites			Usage of signage and demarcations		& Safety Standards			

			should be installed to alert community/drivers/pedestrians - Lighting and/or reflective tapes and signage integrated in all worksites for safety at night • appropriate security measures in place to prevent harassment or kidnapping of workers								
22.	Construction of culverts, drainage basins/culverts Construction	Occupational accidents and injuries to workers and risk to community health and safety **Erosion** Risk of erosion and flood as a	• Ensure location is properly cordoned off before construction activities are carried out • Create awareness in neighbouring communities to ensure road users are aware of road intervention work • As much as possible, ensure community minimises movement around the site and should be informed before this type of work is carried out • Use appropriate	Contractor	300,000	OHS Procedures developed No of trained first Aiders Usage of appropriate PPE Usage	Visual observation	Compliance with Factory Act, 1990 Compliance with ISO 14001 Occupational Health & Safety Standards	Monthly at Construction Site	Environmental & Social Safeguards Officer/ Engineering Consultant	60,000

		result of a lack of proper drainage	signage along road to show work in progress • Use of flagmen to divert traffic where required			of signage and demarcations					
23.	Rehabilitation and construction of box and pipe culverts.	Disruption in current flow of streams and rivers	• Construct temporary diversions or re-channel streams and rivers temporarily • Sensitise communities along road of work	Contractor; Supervision Consultant	150,000	Water Pollutants	Water quality tests	Routine testing procedures are being conducted	Daily	PCU ESS Unit; Yobe State Ministry of Env.	
24.	Construction /borehole drilling work activities	Generation of construction waste including spoils, debris and concrete	• Develop and implement a site-specific Waste Management Plan (WMP) to include the following: • Ensure segregation of waste to facilitate reuse and recycling opportunities. • Ensure hazardous wastes are stored in labeled closed containers with secondary containment with 110% of storage containers. • Ensure no burning of waste on site. • Ensure usage of YOBE	Contractor	200,000	Contractor's WMP Evidence of waste segregation Waste storage facility Waste vendor licenses and waste	Visual Observation Interview	National Environmental Protection (Management of Solid and Hazardous Wastes) Regulation 1991.	Weekly at Project Site	Environmental & Social Safeguards Officer YOBE SWMA	50,000

			SWMA approved waste vendor for waste evacuation, processing & disposal.			evacuation documentation					
B. Social Issues											
25.	Construction and rehabilitation of road around markets, schools, community structures, etc.	Possible destruction of road side market shops, schools, petty trading shops and houses existing on the project roads or on the ROW Grievances Disruptions to school	Early notification and sensitization of PAPs Limit demolition to temporary structures and utility lines on the ROW • Implement GRM Regular community consultations to ensure updates on school calendar, which would be aligned with work schedule to prevent closures or disruptions	Contractor; PCU ESS Unit; GRC	400,000 No additional cost	Contractors' Compliance	Visual Observation	Compliance with proffered mitigation measures.	Monthly	PCU ESS Unit; Supervision Consultant	

		calendar									
26.	Road rehabilitation, borehole drilling, groundworks & construction activities	Increase in spread of Communicable diseases, STDs such as HIV/AIDS and other STIs	▪ Ensure access into construction site is restricted ▪ Free testing kits ▪ Provision of condoms ▪ Vaccinating workers against common and locally prevalent diseases; ▪ Monitoring of local population health data, in particular for transmissible diseases. ▪ Implementation of HIV/AIDS education program; • Information campaigns on STDs among the workers and local community in collaboration WITH relevant HIV/AIDS management organizations in Yobe State.	Contractor / Engineering Consultant; Yobe State Ministry of Health		Evidence of inclusion in the bid advert and contractor Records of training and awareness conducted and evidence of GBV track protocol prepar	Records inspection	Documentation	Check and evaluate during bid evaluation Once annually	Social Safeguards Officer - PCU Supervision consultant and GBV Specialist	780,000

						ed					
27.	Road rehabilitation, borehole drilling, groundworks & construction activities	Risk of GBV/SEA and VAC as a result of Labour Influx	• Commitment / policy to cooperate with law enforcement agencies investigating perpetrators of gender-based violence; • Provision of opportunities for workers to regularly return to their families; • Provision of opportunities for workers to take advantage of entertainment opportunities away from rural host communities. • Capacity building for local law enforcement and the Yobe State ministry of Women Affairs and child development to act on GBV complaints; • Information and awareness raising campaigns for community members, specifically women and girls;	Contractor Contractor	300,000	Evidence of inclusion in the bid advert and contract Records of training and awareness conducted and evidence of GBV track protoco	Records inspection	Documentation	Check and evaluate during bid evaluation Once annually	Social Safeguards Officer - PCU Supervision consultant and GBV Specialist	80,000

			• Provision of information to the project corridor about the contractor's policies and Worker Code of Conduct (where applicable). • Enforcement of laws on sexual violence and human trafficking. • Include in the bid document and also in the contract the need for contractor to draft and sign the following: • Company's code of conduct for prevention of GBV and VAC; • Manager's code of conduct for prevention of GBV and VAC • Individual's code of conduct for prevention of GBV and VAC • Community and workers' training and community sensitization on GBV/SEA/VAC; • Developing a specific internal "Reporting and Response Protocol and			l prepar ed					

			GBV sensitive GRM" to guide relevant stakeholders in case of GBV/SEA/VAC incidents								
C. Operational Phase											
28.	Operation of workers camp prior to demobilisation of facilities	Generation of sanitary waste from worker's camp	• Ensure provision of sanitary facilities on site for workers and enforce usage. • Ensure usage of YOBE SEPA approved waste vendor for waste evacuation & disposal.	Contractor	250,000	Presence of functional sanitary facilities on site Waste vendor licenses and waste evacuation documentation	Visual Observation Interview	National Environmental Protection (Management of Solid and Hazardous Wastes) Regulations 1991.	Weekly at Project Site	Environmental & Social Safeguards Officer - PCU Supervision consultant and GBV Specialist YOBE SWMA	50,000
29.	Commissioning of borehole & road tests	Generation of construction waste and debris	• Develop and implement a site-specific Waste Management Plan (WMP) to include the following: • Ensure segregation of	YOBEMOWR/ Contractor	Part of Maintenance cost	WMP for maintenance activities.	Visual observation	Management of Solid and Hazardous	Daily during maintenance works at project	YSME YOBE SWMA	Part of operation cost

			waste to facilitate reuse and recycling opportunities. • Ensure hazardous wastes are stored in labelled closed containers with secondary containment • Ensure no burning of waste on site. • Ensure usage of Yobe SWMA approved waste vendor for waste evacuation, processing & disposal. • Site visit to site at the completion of project to ensure no waste is left behind.			Waste vendor licences Waste documentation		Wastes Regulations of 1991.	site		
Social Issues											
30	Creation of borrow pits	Public health from formation of stagnant pools for mosquito larvae breeding	*Ensure current system can handle improved drainage (prevent runoff erosion/ reservoir overflow) to prevent water stagnation. *Coordinate construction phases with dry season • *Develop and implement plan to deal with impacts	Contractor	No additional costs	Evidence of Occurrence Reported incidence of flooding/	Complaints received, resolution documented	PCU Safeguard Specialist	Quarterly At the beginning of the Maintenance -	PIU Engineering Consultant	No additional cost

						reduced drainage capacity during construction Plan in place & Executed					
31.	Interactions between Contractors and community	Child labor and school drop out	• Ensuring that children and minors are not employed directly or indirectly on the project by having in place an auditable & verifiable employment process mandating provision of identification to demonstrate date of birth (DoB) • Enforcement of legislation on child labor	Contractor	200,000	Recruitment Reports of contractor	Complaints	Child Rights Act 2003	Monthly	Yobe Social Safeguards Officer	50,000

			• Ensure periodic meetings with vulnerable groups to ensure not marginalized								
D. Decommissioning											
I. Environmental Issues											
32.	Demobilisation of facilities, plant & equipment	Risks of occupational accidents and injuries to workers.	• Develop & implement a project specific Occupational Health and Safety Plan (OHSP) to include but not limited to: - Prohibition of drug and alcohol use by workers while on the job. - Provision of adequate first aid, first aiders, PPE, signage (English and Hausa languages). - Restriction of unauthorized access to all areas of high-risk activities. - Provision of specific personnel training on worksite OHS management - Ensure that staging areas for contractor equipment are	Contractor	Part of Maintenance cost	OHSP developed No of trained first Aiders Usage of appropriate PPE Usage of signage and demarc	Visual observation	Compliance with Factory Act, 1990	Monthly at Construction Site	ESMWR	

			adequately delineated and cordoned off with reflective tapes and barriers - 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 signage integrated in all worksites for safety at night • appropriate security measures in place to prevent harassment or kidnapping of workers			ations					
33.	Reconnection of surface pipeline network	Water contamination	All surface pipelines disconnected prior to the expansion work to be properly reconnected before handover of project.	YOBE MOW / Contractor	Part of operational cost	Regular inspections of pipelines	Visual observation	Compliance with Factory Act, 1990	Monthly at Construction Site	Yobe State Ministry of Water Resources	Part of operation cost

34.	Burrow pit decommissioning	Public health	*Level out hollow area of burrow to reduce ponding of water & stagnation *Revegetate area around the burrow pit to re-introduce natural habitat formation *Maintain drainage channels of burrow to reduce water collection in hollow *Use of brickets in stagnant pond formation areas to eliminate insect breeding *carry out burrow pit reclamation according to remediation plan (annex 16)	Contractor / Engineering Consultant	300,000	Plan in place & Executed	Complaints received, resolution documented	PCU Safeguard Specialist	Once during decommissioning	PCU/Social Safeguards Specialist	40,000
35.	All decommissioning activities	Waste management	* Re-vegetate areas around workers camp & Maintenance equipment sites to restore the landscape. * Ensure that any remaining waste streams created during	Contractor	500,000	Availability and proper use of PPEs - Availab	Transport for monitoring Records on frequency and location of waste disposal site	Community road for maintenance	Weekly	Contractor/ Engineering Consultant PCU/Soci	50,000

			Maintenance activities and waste generated during decommissioning activities are collected from the project sites and properly disposed before handing over the project.			ility and proper use of warnin g signs	of domestic and road maintenance waste			al Safeguar ds Specialist	
Sub-Total Mitigation			**8,350,000.00**		**Sub-Total Monitoring**					**1,320,000.00**	

6.2 Additional Mitigation for Gender Based Violence (GBV)/ Sexual Exploitation and Abuse (SEA).

The specific measures to reduce and mitigate the risk of GBV/SEA in the project will include:

a) GBV/SEA assessment of project.
b) Mandatory signing of Code of Conduct on sexual harassment by Contractor's and their employees
c) Appointment of NGO to monitor GBV/SEA in all projects/subprojects implemented by Yobe MCRP.
d) Community and workers' sensitization on GBV/SEA
e) Developing a specific internal "Reporting and Response Protocol and GBV sensitive GRM" to guide relevant stakeholders in case of GBV/SEA/VAC incidents,
f)
g) Provision of referral units for survivors of GBV/SEA.
h) Provision in contracts for dedicated payments to contractors for GBV/SEA prevention activities.
i) Contractor and SPCU requirement to ensure a minimum target of female employment with incremental rewards for the attainment of this target.

The following actions are recommended for immediate implementation:

- Hiring a dedicated GBV/SEA specialist for the project.
- Preparation and Implementation of a GBV sensitive GRM for reporting cases of GBV
- Hiring NGOs at the state level to manage social risks associated with GBV/SEA in the project.
- Building and improving FPMU/SPCUs, local communities and other relevant stakeholders' capacities to address risks of GBV/SEA by developing and providing guidance, training, awareness and dissemination of relevant GBV/SEA materials to communities.
- Strengthening operational processes of Yobe state MCRP on GBV/SEA.
- Identifying development partners and cultivating pragmatic partnership on GBV/SEA prevention measures and referral services.
- Developing Code of Conduct for civil works contractor with prohibition against GBV/SEA.
- Strengthening consultations and making operational GBV/SEA specific grievance redress mechanism.
- Providing financial support for implementation of the GBV/SEA actions described here-in including training and awareness building for various stakeholders.
- Establishing the inter-ministerial committee to advance GBV/SEA actions described above.

Overall, GBV risks in the project area might include Intimate Partner Violence (IPV), public harassment including harassment, verbal insults, physical abuse, rape, harmful widowhood practices and women and child trafficking. Targeted support to women under the program could likely exacerbate these risks. Development and implementation of specific GBV risk prevention and mitigation strategies tailored to local contexts will be

critical. Guidelines for situation analysis of GBV and safe reporting guidelines in line with international best practices will be implemented. Further, all risks related to labour influx will have to be mitigated by participation of project beneficiaries/communities and involvement of project contractors and contractors' workers and consultant employees in identifying mitigation and implementing measures, including developing mitigation instruments such as 'Labour Influx Management Plan' (See Annex 15) or Camp Management Plan.

6.3 Measures for Non-compliance to the ESMP in this ESIA

If the Contractor fails to perform any of these ESHS obligations or work under the Contract, the value of this work or obligation, as determined by the Project Manager, may be withheld until the work or obligation has been performed, and/or the cost of rectification or replacement, as determined by the Project Manager, may be withheld until rectification or replacement has been completed. In case of recurrence, the Resident Engineer (supervision) may decide other appropriate measure as contained in the contract including advising the client to call the Performance Security.

Failure to perform includes, but is not limited to the following:

a) failure to comply with any ESHS obligations or work described in the Works' Requirements which may include: working outside site boundaries, excessive dust, failure to keep public roads in a safe usable condition, damage to offsite vegetation, pollution of water courses from oils or sedimentation, contamination of land e.g. from oils, human waste, damage to archeology or cultural heritage features, air pollution as a result of unauthorized and/or inefficient combustion. Specific monitoring plan is shown in Annex 13;
b) failure to regularly review C-ESMP and/or update it in a timely manner to address emerging ESHS issues, or anticipated risks or impacts.
c) failure to implement the C-ESMP e.g. failure to provide required training or sensitization;
d) failing to have appropriate consents/permits prior to undertaking Works or related activities;
e) failure to submit ESHS report/s (as described in Appendix C), or failure to submit such reports in a timely manner;
f) failure to implement remediation as instructed by the Engineer within the specified timeframe (e.g. remediation addressing non-compliance/s).
g) A written notification from the resident engineer 10 days after the agreed date for the submission of the monthly environmental reports if there is no written explanation submitted by the environmental officer of the contractor.
h) Failure to submit a declaration of methods for the operations that request it, the Resident Engineer shall immediately suspend activities that are occurring without this approved document.

The employer shall be financially penalized if his workers at the workplace do not have their personal protective equipment (gloves, jackets, boots, etc.).
The contractors be penalized by a written note if they do not comply with the methodology approved for the work. In case of recurrence, the Resident

Engineer may decide other appropriate measure as contained in the contract including advising the client to call the Performance Security

6.3 Institutional Arrangements

The successful implementation of the ESMP contained in the ESIA depends on the commitment and capacity of various institutions and stakeholders to implement the ESMP effectively. Thus, the arrangement as well as the roles and responsibilities of the institutions and persons that will be involved in the implementation, monitoring and review of the ESMP are presented in Table 16 below.

Table 16: Institutional Arrangement for ESMP Implementation

S/N	Category	Roles & Responsibilities
1	Federal Ministry of Environment	Approve disclosure of ESIA/ESMP in country Environmental monitoring to ensure country standards is complied with
2	Yobe State Ministry of Environment	Environmental monitoring and compliance overseer at the State level Site assessment and monitoring of ESIA/ESMP implementation.
3	Federal Safeguards Unit	Ensuring approval & disclosure of Environmental and Social safeguards instruments to the public Facilitate M&E implementation and monitoring functions; Responsible for coordination to ensure that parties responsible for implementation carry out their functions as and when due
4	PCU	Ensuring approval of fund for Environmental and Social safeguards unit and M&E implementation and monitoring functions; Ensure that the ESIA/ESMP is disclosed to the public Responsible for coordination to ensure that parties to implementation carry out their responsibilities as and when due. Ensure that World Bank safeguards policies and country standards are adhered to by contractor and workers through supervision and funding of mitigation measures/ESMP
5	Environmental & Social Safeguard Units of the PCU	Environmental Safeguards Officer Carry out supervision functions during construction to ensure that contractor and workers adhere to mitigation measures in the ESIA/ESMP; Collate environmental baseline data on relevant environmental characteristics for monitoring and auditing Ensure that project activities are implemented in accordance with good practices and guidelines set out in the site specific ESIA/ESMP; Identify and liaise with all stakeholders involved in environment related issues in the project; and be responsible for the overall monitoring of mitigation measures and the impacts of the project during implementation. Social Safeguards Coordinate and ensures the implementation of the social aspects of the ESIA/ESMP Identify and liaise with all stakeholders involved in social related issues in the project; Conduct impact evaluation and beneficiary's assessment; and Establish partnerships & liaise with organizations, Community Based Organizations (CBOs), Civil Society Organizations (CSOs).
6	Contractor	Compliance to BOQ specification in procurement of material and

		construction Implement ESMP during project implementation Develop C-ESMP Ensuring staff good behavior/ practices including the use of PPEs and zero gender violence Compliance to BOQ specification in procurement of material and construction Hire Safeguards personnel implement ESIA/ESMP during project implementation Mitigate environmental and social Impacts Implementation of code of conduct for all staff Develop contractor ESMP (C-ESMP) Preparation of work plans for environmental and social management in line with the ESMP Ensure any changes during construction process that may have a significant environmental and social impact are communicated to ESO in time and managed accordingly. Maintain records of environmental incidents as well as corrective and preventive actions taken Supervision of implementation of all the measures and preparation of required Monitoring report Contractor should ensure that the safety officer conducts a Job Hazard Analysis (JHA) prior to the commencement of work to identify the hazards associated with the job activities Ensure all contractors and workers sign the Code of Conduct (CoC) and are routinely trained on the contents of the CoC Provide adequate basic amenities and PPEs to workers, and ensure that workers at work wear the PPEs. Prepare and maintain records and all required reporting data as stipulated by the ESIA/ESMP, for submission to the Supervising Consultant
7	Supervising Consultant	Supervise the implementation of the ESMP by the Contractors; Review the Contractors Environmental and Social Implementation Plans (CESMP) to ensure compliance with the ESMP Review site-specific environmental enhancement/mitigation designs worked out by the Contractor. Develop of good practice construction guidelines to assist the contractors in implementing ESMPs. Prepare and submit regular environmental monitoring and implementation progress reports. Continuous interaction with the Engineer/ESSU regarding the implementation of the environmental/social provisions in the ESIA/ESMP Provides an independent oversight ensuring contractor adhere strictly to the engineering specifications and provide frequent reports on contractor/ Clients compliance Preparation and implementation of the Environmental and Social Monitoring Plan during construction Supervision of contractor performance of implementation of the Construction and Work Camp Management Plan Hire Safeguards personnel implement EISA/ESMP Thorough supervision of the mitigation of the environmental and Social impacts such as labour influx and GBV Reporting any incidents or non-compliance with the EISA/ESMP to the PCU Ensuring adequate training and education of all staff involved in environmental supervision

		Making recommendations to the PCU regarding ESMP performance as part of an overall commitment to continuous improvement Supervise contractor performance of implementation of the Construction Campsite/Staging area Camp Management Plan/CESMP Prepare monthly safeguards report including recommendations to the PCU regarding ESMP performance as part of an overall commitment to continuous improvement
8	Yobe State Environmental Protection Agency	Inspection of project premises in order to ensure strict compliance with sanitation and waste management standards in the state. Collaboration with other MDAs at the State and Federal level, NGOs and Donor Agencies in environmental protection and management especially in areas of waste recycling etc.
9	Yobe LGAs (Gujba LGA)	Provision of oversight function across project within its jurisdiction for ESMP compliance. Monitoring of activities related to public health, sanitation, waste management amongst others.
10	Affected Community and Public	Promote environmental awareness. Review environmental and social performance report made available by PCU. Provide comments, advice and/or complaints on issues of nonconformity. Attend public meetings organized by the PCU to disseminate information and receive feedback. Identify issues that could derail the project and support project mitigation measures and awareness campaigns.
11	CDA	Ensure community participation by mobilizing, sensitizing community members;
12	NGOs/CSOs	Assisting in their respective ways to ensure effective response actions, conducting scientific researches alongside government groups to evolve and devise sustainable environmental strategies and techniques.
13	World Bank	Overall supervision and provision of technical support and guidance. Disclosure of ESIA/ESMP at World Bank external site Supervision mission to monitor PCU's implementation and performance of ESMP

The Yobe MCRP, 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 (C-ESMP) has been approved and integrated into the overall planning of the works.

6.4 Contractual Measures

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 17 as well as the detailed general environmental management conditions during civil works.

Table 17: Contractual Measures

Action	Remarks
The measures as described in this ESIA shall be included in the tender	The non-inclusion of these measures in the proposal will lead to a

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.	disqualification of the proponent; The contract with the successful bidder should contain these environmental and social management measures as firm conditions to be complied with.
Specifically, the measures should be translated into a suite of environmental specification that are written in the same language style and format as the rest of the contract document	This approach will ensure that the environmental and social controls integrate seamlessly into the tender document and are presented in a familiar form to the Contractor
Cost of mitigation measures be added to the cost of the contractual document	The contactor must take into account and put the cost for the environmental and social requirements specified in the ESMP.

6.5 Capacity Building for Implementation of ESMP and Permit Conditions

An initial assessment indicates that the capacity of the PCU for implementing this ESIA will require strengthening, especially in the area of implementing the World Bank's environmental safeguards policies, and the application & management, therefore requiring strengthening in order to close these gaps.

Consequently, a training Workshop will be organized to guide the implementation of the ESIA and topical areas of discussion would include the Permit Schedule, World Bank's Safeguards Policy triggered and environmental management. The training on the EISA implementations 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, ESIA monitoring and reporting. The capacity building will also involve sensitization of workers on issues such as zero tolerance on child labour, sexual exploitation and abuse, labour influx, Gender Based Violence, HIV/AIDS and their mitigation measures.

The capacity building plan proposed to achieve this is provided in Table 18.

Table 18: Capacity building plan for implementation of the ESMP & permit conditions

Activity	Target Group/Participants	Timeline/ Duration	Proposed Facilitator	Cost NGN
*Training Workshop on preparation of ESIA, Permit Schedule *World Bank Safeguards Policy triggered and environmental management. *Road rehabilitation safeguard requirements	*Engineering Consultant -Resident Engineer, Clerk of Works *Project Coordinator, Works Engineer, Planning Officer, Finance Officer Safeguard Officers *Contractor,	Prior to resumption/ commencement of construction works. (1/2 day)	Environmental Safeguards Specialist/ Consultant	350,000
*Sensitization of workers on zero tolerance for child labour, sexual exploitation and abuse, HIV/AIDS, labour influx, Gender Based Violence, and their mitigation measures.	contractor workers, Manager, Foreman, Engineers	Prior to resumption/ commencement of construction works. (1/2 day)	Social Safeguards Specialist/ Consultant	300,000
*Induction on occupational and public health and safety (OHS) requirements of the works and environmental management *Training on code of conduct understanding	All construction/ contractor workers	Prior to commencement of construction works. (1/2 day)	Lead Contractor/ Engineering Consultant/ HSE-OHS Consultant	200,000
*Risk assessment on road construction	All construction/ contractor workers	Prior to commencement of constructio		300,000

Activity	Target Group/Participants	Timeline/ Duration	Proposed Facilitator	Cost NGN
work projects *Conducting Health and Safety Assessments *Developing and implementing mitigation measures		n works. (1/2 day)		
Total				**1,150,000.00**

Description of cost breakdown

Description	Cost (NGN)
Professional fee for 2 Consultants for 2 days	400,000.00
Rent/Hiring of facility (for 2 day training)	200,000.00
Meals for participants - tea break	150,000.00
Meals for participants (2 days)	200,000.00
Workshop Materials	200,000.00
Total	**N1,150,000.00**

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 17 months for road construction & rehabilitation activities. The implementation schedule is presented in Table 18.

Table 19: Implementation Schedule

S/N	Activity Description	Responsible	Preconstruction (Month)					Construction (Month)											Operations Phase
			1	2	3	4	5	6	7	8	9	10	11	12	14	15	16	17	
1	Clearance and Formal Disclosure of ESIA	PCU																	
2	Inclusion of E&S Requirements in bid documents	PCU																	
3	Allocating Budget for ESMP	PCU																	
4	Appointing Support Staff for ESIA	PCU																	
5	Review & Approval of Contractor's E&S Plans	PCU																	
6	Finalization of Engineering Designs	PCU/ Consultant																	
7	Mobilization to site	Contractor																	
8	Site Clearing	Contractor																	
9	Construction Phase	Contractor																	
10	Implementation of Mitigation	PCU/ Contractor																	
11	Supervising ESMP Implementation	PCU																	
12	Monitoring & Reporting on ESMP Implementation	PCU/MDAs																	
13	Environmental and Social Training	E&S Consultant																	
14	Environmental and Social Auditing	PCU/SME /Consultant																	

6.7 Estimated Budget for ESMP Implementation

The total cost for implementing the environmental and social management actions contained in this ESIA is Sixteen Thousand, Two Hundred and Sixty Five Thousand, Seven Hundred Naira Only (₦16,265,700.00), and a Dollar equivalent of Fifty Three Thousand, One Hundred and Fifty Six Dollars Only ($53,156.00). This is as shown in Table 20 of this report.

Table 20: ESMP Budget

#	Item	Total*	
		Local ₦	**US$**
1	Mitigation (Including the cost of PPEs)	9,185,000	30,015
2	Capacity Building (including training on Code-of-conduct)	1,150,000	3,758
3	GBV, STIs and HIV Mitigation	750,000	2,451
4	Grievance Redress Mechanism	750,000	2,451
5	Consultations	500,000.00	1,634
6	Monitoring (including the cost of hand-held monitoring instruments)	1,452,000	4,314
7	Disclosure	1,000,000	3,268
	Sub-Total	**14,787,000**	**48,324**
8	**Contingency (10% of sub Total)**	1,478,700	4,832
	Grand Total	**16,265,700**	**53,156**

Currency Unit = Nigerian Naira
US$1 = N306

5.8 ESIA Disclosures

After the ESIA review and clearance by the World Bank, the information in Table 21 describes the process of disclosure.

Table 21: Breakdown of Disclosure process

s/n	Action	Remarks
1	Disclosure on 2 state newspapers	The PCU will disclose the ESIA as required by the Nigeria EIA public notice and review procedures
2	Disclosure on 2 national newspapers	The PCU will disclose the ESIA as required by the Nigeria EIA public notice and review procedures
3	Disclosure at the Yobe State Ministry of Environment	The PCU will disclose the ESIA as required by the Nigeria EIA public notice and review procedures
4	Disclosure at the Yobe Ministry of Works & Transport office	The PCU will disclose the ESIA as required by the Nigeria EIA public notice and review procedures

5	Disclosure at relevant Yobe LGAs (Gujba LGA)	The purpose will be to inform stakeholders about the project activities; E&S impacts anticipated and proposed E&S mitigation measures.
6	Disclosure at the World Bank external website	The ESIA will be disclosed according to the World Bank Operational Policy on Disclosure on the external website.

CHAPTER SEVEN: GRIEVANCE REDRESS MECHANISM[11]

7.1 Introduction

Grievance redressed mechanism is an important aspect in projects and the redress of grievance is important to avoid unnecessary legal delays and cost overruns of the project and to ensure social accountability, inclusion, sustainability and transparency in the implementation activities, the Yobe State MCRP shall establish a mechanism to receive and act on complains and grievances by beneficiaries, stakeholders or project affected parties arising from activities being conducted by the Project, in the State.

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 construction workers and community members;
iii) Unmanaged expectations;
iv) Lack of information about the project
v) Occupational Health and Safety Issues
vi) Exposure to environmental hazards
vii)

To manage these social and environmental 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.
vi) Offer GBV sensitive channels to provide referral pathways for victims

7.2 Grievance Redress Process

At the time that the 40km Gujba-Ngalda road construction is approved for implementation and contracts signed, communities will have been informed of the 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 for each sub project at the sector level.

[11] A GRM has been developed for the entire MCRP, however this GRM will be for the implementation of 40km Gujba-Ngalda road construction sub-project in Yobe state and will take bearing from the MCRP GRM.

There is no ideal model or one-size-fits-all approach to grievance resolution. The best solutions to conflicts are generally achieved through localized mechanisms that take account of the specific issues, cultural context, local customs and project conditions and scale. In its simplest form, grievance mechanisms can be broken down into the following primary components:

(i)Receive and register a complaint
(ii)Screen and assess the complaint
(iii)Formulate a response (within a specified time frame)
(iv) Select a resolution approach
(v)Implement the approach
(vi)Settle the issues
(vii)Track and evaluate results
(viii)Appeals process
(ix)Monitoring and reporting to project management to detect systemic problems;
(x) Learn from the experience and communicate back to all parties involved.

This GRM process framework is as shown in Table 22.

7.3 Grievance Redress Committee

A Grievance Redress Committee shall be constituted within the PCU to receive, and ensure satisfactory resolution of grievances. The main functions of the Committee are spelt out below:

- Receive grievances from member of the public;
- Evaluate grievances from affected persons concerning the application to them of the Entitlement Policy;
- Recommend to the Social Officer of the PCU 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 PCU whether such persons should be recognized as affected persons, and to communicate the decision of the PCU 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
- Promote establishment of GBV sensitive channels which provide survivor centered referral pathways
- Make provision for complainants to submit claims without fear of retribution.

Table 22: GRM Framework for 40km Gujba-Ngalda road Construction Work

Step	Category	Activities
1	***Reception and registration***	• Aggrieved person files complaints or grievances regarding any aspect of the project verbally, through phone call, sms, in writing or through a representative in English or local language. • The Aggrieved person first instance of complaint is the ward level through the chairman or secretary of the GRC. If the site community GRC cannot resolve the complaint, then the matter is escalated to the project office (Yobe-MCRP). If still unresolved, then a notification to the Yobe State Citizen's Mediation Centre.
		• All complaints are to be recorded by the implementing agency with the name of the complainant, address and location information, the nature of the grievance and the resolution desired. • All grievances reported must be acknowledged within 48 hours of receipt by an official authorized to receive grievances
2	***Resolution***	• All grievances referred to the appropriate party for resolution • Resolution made within 10 days after receipt of grievance. • If additional information is needed, project management can authorize additional 5 days for resolution which shall be communicated to the aggrieved person. • Results of grievances disclosed to the aggrieved person in writing with an explanation of the basis of the decision. • The Social Safeguards Specialist with the support of other YOBE-MCRP PCU staff will coordinate the resolution of the grievances.
3	***Appeals***	• Aggrieved person dissatisfied with the resolution proffered to their grievances may file an appeal to the next level (LGA) in the GRM referral hierarchy. • There will be no further redress available outside the resettlement project. In such cases, grievances would need to be pursued through the legal system.

4	***Monitoring***	• During project implementation and for at least 3 months following the conclusion of the project, the Social Safeguards officer will prepare monthly reports regarding the number and nature of grievances filed and make it available to project management.

7.4 Expectation when Grievances arise

When local people present a grievance, they 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 resolution, modification of the conduct that caused the grievance and some other fair remedies. Levels of grievance are:

a. Reception & Registration of Grievance at the first level (Community GRC)

b. Registration of Grievance at the Second level (LGA)

c. Registration of Grievance at the Third level (State)

Upon exhaustion of efforts by the GRC, LGA and State levels, aggrieved persons would be advised to seek full legal redress in a court of competent jurisdiction. This option shall as much as possible be avoided, and only resorted to as a last option and worst-case scenario.

The overall process of grievance shall take the following way:

- During consultation process, prior to construction, stakeholders are given copies of grievance procedures as a guide on how to register their 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 project with the Grievance Redress Committee, which will act on it within 10 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 15 working days, the affected person can appeal to a designated office in the PCU, which should act on the complaint/grievance within 15 working days of its filing.
- All reasonable moves shall be made to settle any arising grievance 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.
- 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.

For MCRP, it is recognized that the formal legal mechanisms for grievance redress tend to be a lengthy and acrimonious procedures, thus an informal grievance redress mechanism through the PCU Safeguard Units will be established. This unit will work with a committee comprising administrative head of local governments; community/village chiefs, NGOs/CBOs and other relevant Government organs that will be set-up to address complaints.

The grievance redress mechanism is designed with the objective of solving disputes at the earliest possible time, which will be in the interest of all parties concerned and therefore implicitly discourages referring such matters to the law courts for resolution that will otherwise take a considerably longer time. For this reason, handling grievances will begin with the State Project Coordination Unit and involve Local Government. 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 every three months during implementation in order to detect and correct systemic problems.

The PCU will establish an informal forum for the presentation and consideration of individual appeals after the administrative route has been exhausted. The informal forum will include local government, and other concerned responsible parties, as deemed appropriate. The existence, location, purpose and composition of this forum will be publicized, so that persons who may be affected by the project activities are knowledgeable about the availability of this forum for resolving any grievance. If a grievance cannot be resolved in these informal venues, the complainant may take recourse to the administrative and legal systems for satisfaction. Figure 15 shows GRM flow chart.

7.5 Grievance Log

The Project Liaison 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

As the coordinating agency for resolving grievances, a complaint desk to collate petitions, complaints, etc. from aggrieved parties shall be opened at the Yobe-MCRP office manned by the Yobe-MCRP social safeguard officer. The social safeguards officer shall refer all the issues to the Yobe-MCRP social safeguards team who ensures appropriate channel of resolution of such grievances are reached with a view to resolving the issues.

7.6 Financing the Grievance Redress Mechanism and Cost of Remediation

Yobe State government through the PCU shall be responsible for the funding of logistics for the GRC as well as the eventual compensation or remediation that aggrieved party may be entitled to. The PCU will also be responsible for the cost of the judicial process for cases that result to court for adjudication.

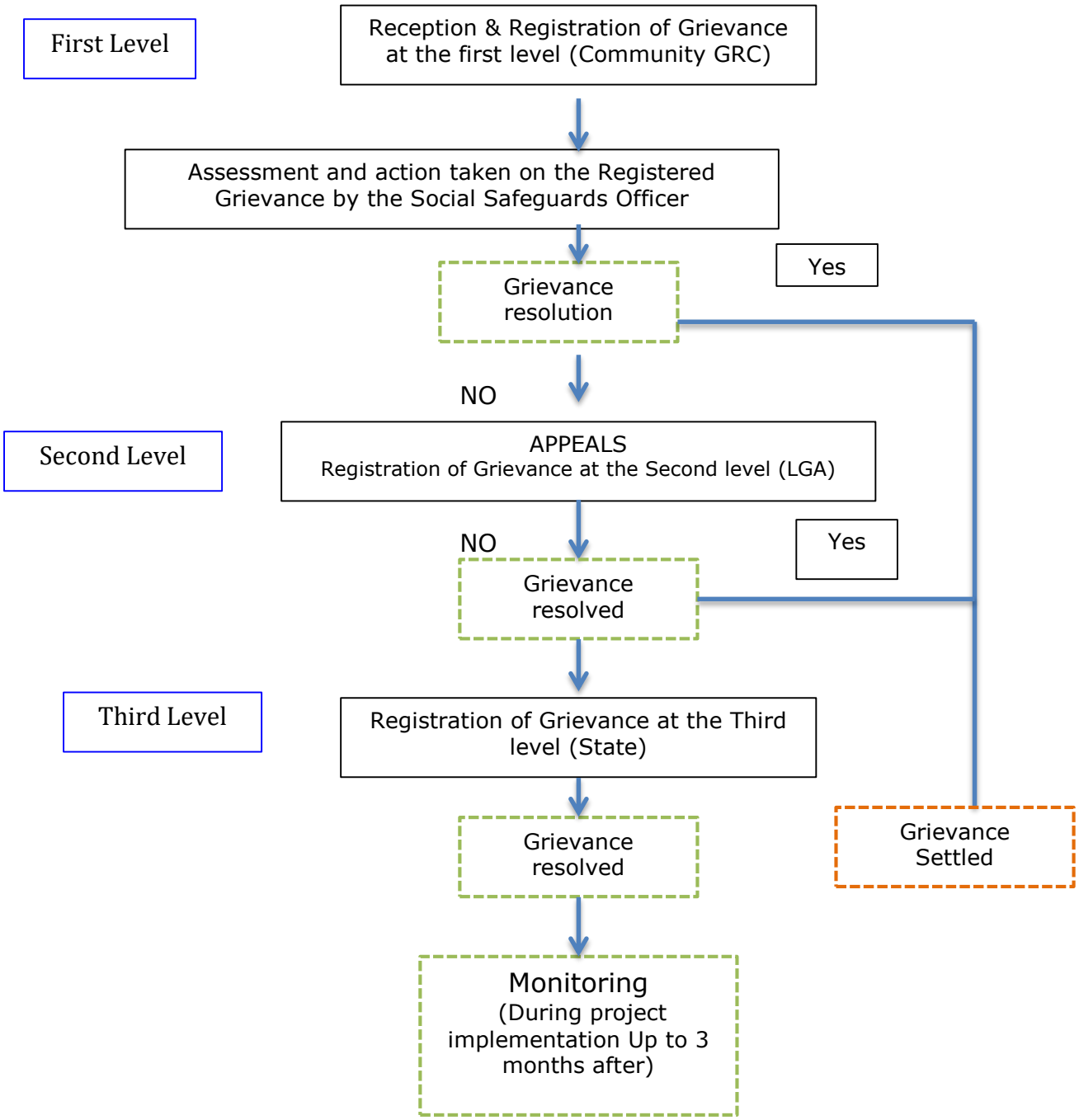


Figure 13: Flow Chart for GRM

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 are 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 ESIA study stages to its implementation. Table 23 summarizes the proposed approach for stakeholder engagement.

Table 23: Stakeholders Engagement Strategy

No.	Activity	Identified Stakeholders	Focus of Consultation/ Engagement	Timelines/ Frequency	Forms of communication	Facilitator
1	Preparation of ESIA	FPMU State Project Coordinating Unit Federal Ministry of Environment State Ministry of Environment Community and Community Based Organizations FMF World Bank	Large scale forum Key stakeholders interviews Mapping of community interests and concerns Communities need to know what the project is all about.	Throughout the ESIA study period	Focus Group Discussion/workshops Phone calls One on one interview Distribution of pamphlets Public meetings Newspapers/magazines	Yobe MCRP
2	Site preparation prior to construction work on road	PCU Contractor Supervising Engineers Consultant FME	Information Disclosure at Federal Ministry of Environment, State Ministry of Environment and Local Government level.	Two weeks prior to construction	Through Radio and Newspapers	Yobe MCRP Federal Ministry of Environment
3	Start of construction of road	PCU Contractors Supervising Engineers Consultant Suppliers Businessmen NGOs/vulnerable groups Communities	Affected Communities Government Officials World Bank	Throughout the construction period	Phone calls Newspapers Radios Pamphlets One on One	Yobe MCRP FMF WORLD BANK
4	End of construction/rehabilitation	PCU Government Officials Affected Communities	Government Officials Affected Communities	Decommissioning phase	Phone calls Televisions Radios	Government Officials Yobe MCRP

No.	Activity	Identified Stakeholders	Focus of Consultation/ Engagement	Timelines/ Frequency	Forms of communication	Facilitator
	of road Decommissioning of construction equipment & machinery	World Bank			Newspapers Emails Pamphlets	
5	Commissioning and handing over of road infrastructure	Government Officials PCU Beneficiary Communities Wagir, Nyakire, Bukkiyel & Mutai	Government Officials Benefitting Communities	Prior to operation of the facility	Newspapers Television Radio	Yobe MCRP
6	Operation and maintenance of Gujba-Ngalda road	Beneficiary Communities Wagir, Nyakire, Bukkiyel & Mutai	Beneficiary Communities Wagir, Nyakire, Bukkiyel & Mutai	During operation and maintenance period	One on one Workshops/FGD Television Radio	Yobe MCRP
		Yobe MCRP	Beneficiary Communities Wagir, Nyakire, Bukkiyel & Mutai	3 times a week	Visits	Yobe MCRP
		Yobe MCRP Government Officials Other Communities	Beneficiary Communities Wagir, Nyakire, Bukkiyel & Mutai	Fortnightly	Visits	
			Beneficiary Communities Wagir, Nyakire, Bukkiyel & Mutai	3 times a week	Visits	
			Beneficiary communities Wagir, Nyakire, Bukkiyel & Mutai	3 times a week	Visits	
		NGOs/CBOs	Beneficiary Communities Wagir, Nyakire, Bukkiyel & Mutai	Once a term	Visits	
		World Bank	Beneficiary communities	Once a term	Visits	Yobe MCRP

No.	Activity	Identified Stakeholders	Focus of Consultation/ Engagement	Timelines/ Frequency	Forms of communication	Facilitator
			Wagir, Nyakire, Bukkiyel & Mutai			

8.4 Stakeholders Consulted

Key stakeholders to the MCRP intervention sub-project were identified for consultations and these included stakeholders from the Yobe MCRP Project Implementation Unit of the Federal Ministry of Environment (FMEnv), Yobe State Ministry of Environment, Yobe State Ministry of Works & Infrastructure, Yobe State Waste Management Agency (YSWMA), village heads, local community leaders and women groups in communities. The vulnerable groups in the project areas were identified and these include:

- Children
- Old men and women
- Physically challenged individuals

8.5 Outcome of Stakeholder Consultations carried out during ESIA Preparation

Site visits were carried out to undertake physical assessment of the 40km Gujba-Ngalda road from January 22nd – 26th 2020 and meetings were held with other stakeholders such as consultations with different sector ministries such as the Ministries of Works, Water Resources, Transportation and the Federal Ministry of Environment, Yobe State Ministry of Environment, Yobe State Environmental Protection Agency and other relevant stakeholders in the project area. Pictures of consultation meetings are shown in Figure 16.

Figure 14: Pictures from Stakeholder Consultations

Key stakeholders to the MCRP intervention sub-project were identified for consultations and these included stakeholders in the communities visited such as Wagir, Nyakire, Bukkiyel & Mutai communities. Furthermore, stakeholders from the Yobe MCRP Project Coordination Unit, Federal Ministry of Environment (FMEnv), Yobe State Ministry of Environment, MCRP sector ministries such as the representatives of the Yobe State Ministry of Works & Infrastructure, village heads, local community leaders, youths and women groups in communities, were also consulted. Issues raised and how they were resolved is contained in Table 24.

Table 24: Concerns raised and how they were addressed

S/n	Issues raised during consultations	How they were addressed
Issues raised in social gatherings	Disruption of movement during construction phase since this is the only road linking communities in the area	Alternative route will be created for motorists and pedestrians during construction phase to ease movement of people, goods and services
	Project to take cognizance of existing ponds and earth dams used for livestock farming in the area.	As the road is already in existence and will only be rehabilitated project activities will not affect any pond or earth dam.
	MCRP to consider extending the project up to Ngalda instead of taking only 40kms	The project financial approval will allow for only 40kms at this time. However, this will be considered in subsequent years when funding may become available.
	Expansion of existing culvert at the entrance Wagir	Component 2 manager responded that the design consultant has made the observation and recommendation for the expansion has been captured in the design
Issues raised during meetings with Women	At a dedicated session with women, there were concerns about gender-based violence (GBV), violence against women and children and sexual	Contractors will be trained on GBV prevention and all their staff will sign code of conduct against engaging in sexual exploitation and abuse as well as violence against women. Project has established GRM with GBV sensitive

	exploitation and abuse likely to be exacerbated by the project activities.	channels to offer referral pathways for survivors. The MCRP project safeguard team will closely monitor activities of contractors and their staff during implementation phase to ensure compliance. The team advice the community members, particularly parents to monitor their children (girl child) and continue to warn them to be careful with those who will lure them into such activities.
	Women have raised concern about job opportunities to be created by the project during construction phase, especially for their children who are staying idle without job.	Labour influx management plan will be developed as part of the ESIA for contractor's compliance to ensure community members are considered in the recruitment of staff on the project.
Issues raised during meetings with Youths	The youths have expressed concern about employment opportunities during the project implementation.	Contractors will be trained on how to manage labour influx. Part of the strategy for managing labour influx is to look inward for various skills within the communities, unless such are not available before resorting to external source. Therefore, the project will provide job opportunities to the youth, especially those who are prepared to work on road construction projects.
Issues raised during meetings with elderly persons	Community elders advocated for construction of additional road from Gujba to Goniri to connect more communities in the area,	The team responded that even though Gujba – Gonir has been prioritized by the State and it is entirely a new project while MCRP is focusing on rehabilitation of existing infrastructure
	Extension of the project up to Ngalda (95kms) to cover more communities in the area	This will be considered when funding is available. The community members were advised to advocate with the State government, north east development commission for the execution of the project
	Contractors to exercise caution during construction to ensure safety of animals, children, women, aged and other vulnerable people who will be routinely moving around to pursue their daily needs	Traffic management plan will be developed as part of the ESIA. Dangerous and hazardous areas will be cordoned during construction phase to safeguard human beings and animal

CHAPTER NINE: RECOMMENDATIONS AND CONCLUSION

9.0 Conclusion & Recommendations

This chapter presents recommendations to be undertaken by the PCU to enhance the achievement of these environmental and social safeguards, while also providing a conclusion to this ESIA report.

9.1 Recommendations

This rehabilitation of 40km Gujba-Ngalda road intervention sub-project with the associated activities outlined in this ESIA will have highly beneficial impacts by improving critical service delivery infrastructure within the communities, through which the livelihood opportunities can be enhanced and social cohesion, strengthened.

Although, the rehabilitation, construction & civil works that will be implemented will lead to some limited adverse environmental and social impacts which 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 ESIA matrix table, which would be included in the contractor's agreement, good practices, adequate supervision and enforcement during project implementation. Consequently, there is therefore no major environmental or social issue to impede the implementation of the proposed project. Nevertheless, some additional recommendations that will enhance the overall sustainability of the project are:

- priority should be given to local workers to stimulate local socioeconomic activities, improve livelihood and poverty reduction in the affected communities.
- ensure opinion of persons in affected communities is given priority 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 PCU should ensure active monitoring to ensure the contractor adhere strictly to the requirements of this ESIA especially in the application of mitigation measures
- the PCU should ensure that the relevant sections of the ESIA should be made available to contractors.

9.2 Conclusion

The ESIA has provided in detail the mitigation measures for identified potential adverse impact s and risks associated with the various phases of

the project, and a monitoring program to ensure compliance. In concluding, with adequate application of mitigation measures the impacts will be avoided, reduced or mitigated, and in very few cases they may be offset

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Annex 1: Questionnaire

MULTI-SECTORAL CRISIS RECOVERY PROJECT (MCRP)

Questionnaire for the Preparation of Safeguard Instruments (ESIA & ESMP) for Yobe - MCRP

This questionnaire which is expected to take about 20 minutes to complete is aimed at eliciting your view/opinion on the social and environmental implications of the Yobe MCRP project activities in your community. Your input would assist in the preparation of an Environmental and Social Management Plan (ESMP) that would enable the PCU to manage the various project activities in a manner that guarantees socio-environmental sustainability of the project.

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
Name: ……..

PhoneNumber:……
Address(optional):
……
Age (years): <☐ ☐18-30☐ 3☐50 ☐50-70 above 70

Sex: Mal☐ ☐emale

What is your religion: ☐Christian ☐ ☐ Muslim ☐ ☐ Pagan traditionalist Others

Marital Status: ☐gle ☐ Married ☐ Separated/Divorcee

No. of children: Non ☐1-3 ☐ ☐ ☐ Above 8
Level of education: ( ) No formal educ. ( ) Govt. Secondary ( ) Secondary ( ) Tertiary ( ) others (specify) …….

What do you do for a living (your Govt. secondary 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
13. Please give your weekly( ) or monthly ( ) earnings
Below N500 ( ) N500 – N1000 ( ) N1000 – N5000 ( ) N5000 – N7000 ( ) N7000 – N10,000 above 10,000 ( )
SECTION B
11. What is your general opinion of this project?
……
12. How do you think the project will affect the community? How will it affect the individual families?
……
Pls explain the benefits or negative impacts of this project in the community?
……..

How do you seek redress when there is a grievance among people in this community? ……

Do you have any concerns about labour influx into the community when the project commences?

……
……
How far or how close is the nearest market?
……
……
Please describe the leadership structure in this community

……
……..
Please describe the health care facilities in this village. Where is the nearest hospital located?
……
……..
19. Have you had any instances of gender based violence in your community? If yes, please
explain……..

Annex 2: Occupational Health & Safety (OHS) Plan

No	Project Activity	Potential Impact	Proposed Mitigation Measures/ Actions	Responsibility for mitigation	Cost (NGN)
I. Pre-Construction Phase					
1.	Site clearing for staging area Mobilization of Machinery, Plant & Equipment	Occupational accidents and injuries to workers and risk to community health and safety	Develop and implement a project specific Occupational Health and Safety Plan (OHSP). OHSP to include but not limited to: Prohibition of drug and alcohol use by workers while on the job. Provision of adequate first aid, first aiders, PPE, signage (English and Hausa languages). Restriction of unauthorized access to all areas of high risk activities Provision of specific personnel training on worksite OHS management Ensure that staging areas for contractor equipment are adequately delineated and cordoned off with reflective tapes and barriers Any uncovered work pits should have appropriate signage and protection around them Workers should get a daily induction/toolbox before going on the site and a refresher of what	Contractor	80,000

			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 worksites for safety at night appropriate security measures in place to prevent harassment or kidnapping of workers		
II. Construction					
2.	Use of haulage trucks for sand & materials supply	Public safety, road accidents leading to injuries and fatalities	Train drivers on defensive driving Conveyance of materials to site shall be by appropriate transportation means to prevent damage or accidents Provide road signs and flag persons to warn of dangerous conditions of conveying materials such as the water trucks	Contractor PCU Safeguards Team	No additional cost
3.	Use of plant, Machinery & Equipment Movement of materials Construction work such as:	Occupational accidents and injuries to workers and risk to community health and safety	Develop and implement a project specific Occupational Health and Safety Plan (OHSP). OHSP to include but not limited to: Prohibition of drug and alcohol use by workers while on the job. Provision of adequate first aid, first aiders, PPE, signage (English and Ibo languages). Use only trained personnel for welding & metal bending activities Restriction of unauthorized access to all areas of high risk activities Provision of specific personnel training on worksite OHS management Ensure that staging areas for contractor equipment	Contractor	200,000

			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 signage integrated in all worksites for safety at night appropriate security measures in place to prevent harassment or kidnapping of workers Ensure demolition areas and areas for roof removals are properly cordoned off to prevent accidents and incidents		
III. Demobilization					
4.	Demobilization of office and camp facilities, plant & equipment	Risks of occupational accidents and injuries to workers.	Develop & implement a project specific Occupational Health and Safety Plan (OHSP) to include but not limited to: Prohibition of drug and alcohol use by workers while on the job. Provision of adequate first aid, first aiders, PPE, signage (English and Hausa languages). Restriction of unauthorized access to all areas of high-risk activities. Provision of specific personnel training on worksite OHS management Ensure that staging areas	Contractor	Part of Maintenance cost 200,000

			for contractor equipment are adequately delineated and cordoned off with reflective tapes and barriers 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 signage integrated in all worksites for safety at night appropriate security measures in place to prevent harassment or kidnapping of workers		
Sub-Total Mitigation (OHS)			**1,080,000.00**		

Annex 3: Sample Company Code of Conduct

Company's 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:

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.

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

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.

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

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.

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

Unless there is full consent12 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

12 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.

(monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered "non-consensual" within the scope of this Code.
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.
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:
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'.
All employees sign the project's 'Individual Code of Conduct' confirming their agreement not to engage in activities resulting in GBV or VAC.
Displaying the Company and Individual Codes of Conduct prominently and in clear view at workers' camps, offices, and in in public areas of the work space. Examples of areas include waiting, rest and lobby areas of sites, canteen areas, health clinics.
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.
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).
Ensuring that an effective Action Plan is developed in consultation with the GCCT which includes as a minimum:
GBV and VAC Allegation Procedure to report GBV and VAC issues through the project Grievance Redress Mechanism (GRM);
Accountability Measures to protect confidentiality of all involved; and,
Response Protocol applicable to GBV and VAC survivors and perpetrators.
That the company effectively implements the Action Plan, providing feedback to the GCCT for improvements and updates as appropriate.
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.
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 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

To ensure maximum effectiveness of the Company and Individual Codes of Conduct:

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

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.

Verbally and in writing explain the Company and Individual Codes of Conduct to all staff.

Ensure that:

All direct reports sign the 'Individual Code of Conduct', including acknowledgment that they have read and agree with the Code of Conduct.

Staff lists and signed copies of the Individual Code of Conduct are provided to the GCCT and the client.

Participate in training and ensure that staff also participate as outlined below.

Staff are familiar with the Grievance Redress Mechanism (GRM) and that they can use it to anonymously report concerns of GBV or VAC incidents.

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.

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.

Ensure that when engaging in partnership, sub-contractor or similar agreements, these agreements:

Incorporate the GBV and VAC Codes of Conduct as an attachment.

Include the appropriate language requiring such contracting entities and individuals, and their employees and volunteers, to comply with the Individual Codes of Conduct.
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.
Provide support and resources to the GCCT to create and disseminate internal sensitization initiatives through the awareness-raising strategy under the Action Plan.
Ensure that any GBV or VAC issue warranting police action is reported to the client and the World Bank immediately.
Training
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.
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.
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.
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.
Collect satisfaction surveys to evaluate training experiences and provide advice on improving the effectiveness of training.
Response
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.
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).
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.

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.
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:
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.
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 consent13 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.

13 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.

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:

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: General Environmental 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.

(g) 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.

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

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

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

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

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

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

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

Worksite/Campsite Waste Management

6. All vessels (drums, containers, bags, etc.) containing oil/fuel/surfacing materials and other hazardous chemicals shall be 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.

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

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

9. Entry of runoff to the site shall be restricted by constructing diversion channels or holding structures such as banks, drains, dams, etc. to reduce the potential of soil erosion and water pollution.
10. 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.

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.

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. Topsoil shall not be stored in large heaps. Low mounds of no more than 1 to 2m high are recommended.
22. Re-vegetate stockpiles to protect the soil from erosion, discourage weeds and maintain an active population of beneficial soil microbes.
23. Locate stockpiles where they will not be disturbed by future 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.

Water Resources Management

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

33. Abstraction of both surface and underground water shall only be done with the consultation of the local community and after obtaining a permit from the relevant Water Authority.34. Abstraction of water from wetlands shall be avoided. Where necessary, authority has to be obtained from relevant authorities.
35. Temporary damming of streams and rivers shall be done in such a way avoids disrupting water supplies to communities 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.

Traffic Management
39. Location of access roads/detours shall be done in consultation with the local community especially in important or sensitive environments. Access roads shall not traverse wetland areas.
40. Upon the completion of civil works, all access roads shall be ripped and rehabilitated.
41. Access roads shall be sprinkled with water at least five times a day in settled areas, and three times in unsettled areas, to suppress dust emissions.
Blasting
42. Blasting activities shall not take place less than 2km from settlement areas, cultural sites, or wetlands without the permission of the SE.
43. Blasting activities shall be done during working hours, and local communities shall be consulted on the proposed blasting times.
44. Noise levels reaching the communities from blasting activities shall not exceed 90 decibels.
Disposal of Unusable Elements
45. Unusable materials and 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.

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.

Repair of Private Property

52. Should the Contractor, deliberately or accidentally, damage private property, he shall repair the property to the owner's satisfaction and at his own cost. For each repair, the Contractor shall obtain from the owner a certificate that the damage has been made good satisfactorily in order to indemnify the Client from subsequent claims.
53. In cases where compensation for inconveniences, damage of crops etc. are claimed by the owner, the Client has to be informed by the Contractor through the SE. This compensation is in general settled under the responsibility of the Client before signing the Contract. In unforeseeable cases, the respective administrative entities of the Client will take care of compensation.

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

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

For the Contractor, for internal purposes, to ensure that all measures are in place for adequate EHS management, and as an operational manual for his staff.

For the Client, supported where necessary by a SE, to ensure that the Contractor is fully prepared for the adequate management of the EHS aspects of the project, and as a basis for monitoring of the Contractor's EHS performance.

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

a description of procedures and methods for complying with these general environmental management conditions, and any specific conditions specified in an EMP;

a description of specific mitigation measures that will be implemented in order to minimize adverse impacts;

a description of all planned monitoring activities (e.g. sediment discharges from borrow areas) and the reporting thereof; and
the internal organizational, management and reporting mechanisms put in place for such.

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

EHS Reporting

57. The Contractor shall prepare bi-weekly progress reports to the SE on compliance with these general conditions, the project EMP if any, and his own EHS-MP. An example format for a Contractor EHS report is 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.

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).

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 5: 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 ongoing 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 ongoing mitigation compliance, which will be submitted to SPIU as part of routine reports on progress of work.

Annex 6: 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 hereafter 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:

S/n	Actions
1.	Verify status of emergency and likely exposure of other personnel to risk, ensure ERT members are fully equipped in emergency response equipment
2.	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
3.	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.
4.	Inform supervising consultant & SPIU representative as promptly as possible in order to establish interface link with Client
5.	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
6.	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 cordoning off of area etc.
7.	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
8.	Examine cross-cutting impact of emergency on liability issues and operational continuity. e.g. media involvement in security emergencies
9.	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
10.	Review all cost implications of emergency response actions and make necessary budgetary provisions
11.	Provide the SPIU with updates immediately additional information is received.

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.

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.

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.

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.

ACCIDENT REPORT AND INVESTIGATION
(Standard report form)

Date: ---------- Time: ----------
----/AM/PM

Location: ---------- Department: ----------

Supervisor: ----------

Name of Victim: ----------

Nationality: ---------- Address: ----------

Marital Status: ---------- Occupation:----------

Date of Birth: ---------- Experience (years):--------

Equipment/tools being used when accident occurred:----------

Description of accident:----------

Name of Witness (if any): ----------

Conditions during accident: weather- dry, rain, clear, dusk, dark etc.

Unsafe acts, actions and conditions (Please describe):----------
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Report verification by:

Name: ----------Date: ----------

Annex 7: Waste Management Plan

No	Project Activity	Potential Impact	Proposed Mitigation Measures/ Actions	Responsibility for mitigation	Cost (NGN)
I. Pre-Construction Phase					
1.	Use of Workers Camp/Site Office	Generation of sanitary waste	Ensure provision of sanitary facilities on site for workers and enforce usage. Ensure usage of Yobe waste management agency approved waste vendor for waste evacuation & disposal.	Contractor	250,000
2.	Use of workers camp/site office	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 construction and domestic waste at the approved dumpsites and in the approved manner. Ensure all trenches or excavations made during the construction works do not collect stagnant water, which could breed mosquitoes. Ensure access to toilets for construction crew or provide temporary toilets (mobile toilets) for use where there are no existing ones. Ensure mobile toilets/sanitary provisions are provided to reflect gender types. Ensure regular toolbox meetings are held among contractor workers to offer awareness on transmission	Contractor/ Engineering Consultant Environmental Safeguards Specialist	150,000

			of contagious or communicable diseases.		
3.	Building rehabilitation/construction work activities	Generation of construction waste including spoils, debris and concrete	Develop and implement a site-specific Waste Management Plan (WMP) to include the following: Ensure segregation of waste to facilitate reuse and recycling opportunities. Ensure no burning of waste on site. Ensure usage of YOBE SWAMA approved waste vendor for waste evacuation, processing & disposal.	Contractor	300,000
4.	Operation of workers camp/site office prior to demobilization of facilities	Generation of sanitary waste from worker's camp	Ensure provision of sanitary facilities on site for workers and enforce usage. Ensure usage of approved waste vendor for waste evacuation & disposal.	Contractor	180,000
5.	Commissioning of Michika General Hospital Road	Generation of construction waste and debris	Develop and implement a site-specific Waste Management Plan (WMP) to include the following: Ensure segregation of waste to facilitate reuse and recycling opportunities. Site visit at the completion of project to ensure no waste is left behind.	Contractor	Part of Maintenance cost
6.	All decommissioning activities	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.	Contractor	150,000
Sub-Total Mitigation for Waste Mgt.					**1,030,000**

Annex 8: Cultural Heritage Management/Chance Find Procedure

Identification and Assessment
For Cultural Heritage Management (CHM) under the Yobe MCRP, 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 PCU 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 Yobe MCRP 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

1. The MCRP should have a standard inventory form, also available as a Standard Operating Procedure (SOP).
2. Inventory should be updated as new information comes to light, or as new technology is introduced eg. GPS plotting of sites.
3. Inventory is thematically linked and has the primary aim of revealing a hierarchy of significant places under a variety of relevant themes.
4. Inventory work focuses on geographic areas or themes where there is little recorded inventory and a potential threat exists to unrecorded sites.
5. Each road project area has assessment criteria and an assessment process, both of which have been endorsed by the PCUs Safeguard Unit and WB.
6. The MCRP PCU should maintain a CHM database containing all information relating to history and management of CHM assets with cross-reference to other state inventories.
7. 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 Yobe MCRP PCU 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. Prioritization 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 organization.
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 PCU should ensure that training in core CHM competencies are integrated into PCU training programs. (Including instruction in broad CHM principles and specific standard operating procedures)

8. Development of a suite of partnership tools to expand CHM management options eg. Local government management, community participation.
9. Regular analysis of CHM assets to ensure that each asset is managed by the MCRP PCU 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 and support active 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 MCRP 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 PCU 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 co-operation of the owner.
3. The MCRP risk management strategy addresses the need for staff training and appropriate checks and balances to minimize 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).
6. The breadth and detail of CMPs are commensurate with the needs of the place.
7. 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.
8. 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.
9. All CMPs are signed off by, at the minimum, by the PCUs Safeguard Unit (or their equivalent) to ensure organizational 'buy-in'.
10. Properly costed work specifications, together with plans, must be are prepared to relevant industry standards
11. 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.
12. 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 Yobe MCRP PCU 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 and those who prepare them.
6. Establishment of a register of contract CHM specialists that is regularly reviewed on the basis of 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 Yobe MCRP PCU 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 9: Labour Influx Plan

This plan identifies labour requirements and sets out the procedures for addressing labour conditions and risks associated with the proposed project, which is aimed at helping Yobe MCRP to determine the resources necessary to address project labor issues.

SUB-CATEGORY	WORKER IMPACTS\RISKS	PROJECT IMPACTS\RISKS	MITIGATION MEASURES	MONITORING	MONITORING FREQUENCY	RESPONS-IBILITY
Employment	Influx of many foreigners into project community	Competition on livelihood and job opportunity with locals	60 of unskilled labour shall be from the project community. Where possible qualified skilled workers on contract shall also be sourced within the community	Verify	Onset of Project and bi-weekly	ESO; SSO
Housekeeping.	The general appearance of the camp deteriorates making camp life unpleasant.	The overall camp experience is compromised which in turn leaves workers demoralised and unproductive.	Ensure that camp grounds and common areas are routinely cleaned and organised with appropriate signage in place, and that grounds are maintained (e.g., grassed areas are regularly mown). Establish easily accessible, designated smoking areas which are clearly highlighted and regularly cleaned.	Verify	Monthly	ESO; SSO
Recreation.	Workers spend most of their time in the camps and could become disenchanted and bored. They may want to leave the camps and go into the local towns and villages in search of recreation.	Tensions arise from the local communities as workers impact their activities in search of recreation. An increase in alcohol consumption and prostitution could result due to the influx of workers into local	Provide appropriate recreational facilities and activities. These should be discussed with the camp residents committee.	Assessment	Quarterly	ESO; SSO

		communities.				
Spiritual /Religion.	Workers will want access to places of worship for their chosen religion. They may leave the camps and go into the local towns and villages in search of an appropriate place of worship.	Tensions arise from the local communities as workers impact their activities.	Provide appropriate places of worship where residents express a need for this in accordance with cultural sensitivities, and assess transport arrangements on a case-by-case basis. Ensure that equipment and facilities are kept clean and well maintained.	Assessment	Quarterly	ESO; SSO
SUB-CATEGORY	**WORKER IMPACTS\RISKS**	**PROJECT IMPACTS\RISKS**	**MITIGATION MEASURES**	**MONITORING**	**MONITORING FREQUENCY**	**RESPONS-IBILITY**
Security.	Inconsistent and aggressive behaviour of security personnel towards workers can result in tensions and conflict in the workplace and a perception of human rights abuses.	Insufficient training and control of security personnel can lead to the inappropriate use of force, while protecting Project workers and assets, or inappropriate behaviour towards local populations, resulting in human rights claims.	Ensure that camp security personnel meet at least the following requirements: • Have not been implicated in past abuses • Are trained in appropriate conduct towards workers and community members including: o Exercising constraint and caution and understand how force may be used o Respecting human rights o Behaving consistently o Knowing and abiding by applicable laws	Assessment	Quarterly	ESO; SSO

			o Fostering good community relations through their interaction and behaviour towards the workforce and communities			
Community relations.	Communities are negatively impacted by camp activities: noise, waste, traffic, lighting and so forth. This may result in negative actions towards camp operations such as road closures and the prevention of workers or suppliers from entering the worksite.	Workers are stopped from going to work, which affects productivity.	Implement control measures to avoid and minimise the impacts of camp and living conditions on communities. Limit foreign worker interaction with communities and provide cultural sensitivity awareness training to facilitate appropriate interaction with communities.	Assessment	Quarterly	ESO; SSO

Annex 10: List of Persons Met During Study

NAME	SEX	PHONE NUMBER	LGA	COMMUNITY
Aisha Usman	Female	Nil	Gujba	Wagir
Aisha Abdullahi	Female	07088442725	Gujba	Wagir
Aisha Muhammadu	Female	09072783371	Gujba	Wagir
Sakina Idriss	Female	09114745951	Gujba	Wagir
Gabai Mohammed	Male	Nil	Gujba	Wagir
Mohammed Mahmud	Male	08026462507	Gujba	Wagir
Baba Hassan Goni Mele	Male	08087401039	Gujba	Gujba Town
Amina Mohammed	Female	08022273051	Gujba	Gujba Town
Babulama Zariye	Male	08081843464	Gujba	Gujba Town
Idrissa Mohammed	Male	08088814659	Gujba	Gujba Town
Dallatu Modu Carpenter	Male	08080129023	Gujba	Gujba Town
Fatima Ali Kwayam	Female	08088144350	Gujba	Gujba Town
Ibrahim Gana	Male	07085479122	Gujba	Gujba Town
Zara Ibrahim	Female	07016596346	Gujba	Gujba Town
Balkisu Hassan	Female	09071033620	Gujba	Gujba Town
Fatima Ibrahim Goni	Female	08022639440	Gujba	Gujba Town
Ali Lamido	Male	08082563211	Gujba	Gujba Town
Abdu Haruna	Male		Gujba	Tashan Deffo
Wada Alhassan	Male	07083846522	Gujba	Wagir
Usman Maifumi	Male		Gujba	Wagir
Ibrahim Abdu	Male		Gujba	Wagir
Umaru Abubakar	Male		Gujba	Wagir
Mala A. Bakura	Male	07012844392	Gujba	Bukkiyel
Jalige Buba	Male	08123786994	Gujba	Bukkiyel
Yahaya Maina Ilu	Male	08030432150	Gujba	Bukkiyel
Usman Hassan	Male	08024190179	Gujba	Bukkiyel
Jauro Fema	Male	08082645544	Gujba	Bukkiyel
Musa A. Dadi	Male	08129613773	Gujba	Bukkiyel
Biba Gado Ibrahim	Female	08125103951	Gujba	Bukkiyel
Dajji Adamu	Male	08121865774	Gujba	Bukkiyel
Aisha Umar	Female	07087628170	Gujba	Bukkiyel
Halima Babayo	Female	08126543473	Gujba	Bukkiyel
Mohammed S. Modu	Male	08081046673	Gujba	Mutai

Bukar Wanzam	Male	07088364977	Gujba	Mutai
Ya Hadiza Bako	Female	09014790168	Gujba	Mutai
Hajja Mamman	Female	09071280676	Gujba	Mutai
Hajja Mangu	Female	07016507300	Gujba	Mutai
Yagana Maluri	Female	08027852218	Gujba	Mutai
Chiroma Mala	Male	09017499556	Gujba	Mutai
Barde Jalo	Male	08o68990051	Gujba	Mutai
Muhammed Fannami	Male	08086862982	Gujba	Mutai
Mai Kadiri Fannami	Male	08088738038	Gujba	Mutai

Annex 11: Camp Management Plan

Contractor Company (name of the Company) has developed this Camp Management Plan as part of its Environmental and Social Management Plan (ESMP) outlining a range of mitigation measures designed to avoid or reduce undesired camp management impacts during construction. This document establishes a basis and template for use by the Contractor(s) to develop their own plans outlining not only mitigation measures but to also incorporate the roles and responsibilities described in the ESMP.

The objectives of the Camp Management Plan are:

Avoid or reduce negative impacts on the community and maintain constructive relationships between local communities and workers' camps; and

Establish standards on worker welfare and living conditions at the camps that provide a healthy, safe and comfortable environment.

This Plan should be read in conjunction with other environmental and social management plans (ESMPs), if available including:

- Traffic Management Plan
- Security Plan
- Stakeholder Engagement Plan

Legal Requirements and Grievances

The Contractor is required to operate within the parameters of the Nigeria Labour Law and the International Labour Organization guidelines. The World Bank Performance Standards are applicable to MCRP and its sub projects. Furthermore, the Grievance Redress Mechanism for the MCRP is required to be adhered to by the Contractor.

Contractor personnel shall conduct regular safety walks and an HSE committee will track performance against requirements stipulated in this plan. The Contractor will also have its grievance mechanism developed for the project.

Additionally, Contractor would be required to sign and acknowledge the Code of Conduct and agree to abide by its provisions.

Management and Monitoring

Figure below presents a flow chart summarizing key management steps associated with implementation and review of this Plan, including steps to allow for continued improvement. Table 1 presents a summary of the potential impacts related to camp activities, together with mitigation and management measures to avoid or reduce these impacts, and the monitoring required to assess the performance of these measures.

The Contractor shall develop a Contractor Plan which shall, as a minimum, incorporate the camp management measures described in Table 1. The Contractor shall not be limited to these measures.

Monitoring to be undertaken as part of this Plan is described in Table 1.The Contractor is responsible for developing area or site-specific procedures for the

monitoring program (where necessary) based upon the final design details of the infrastructure

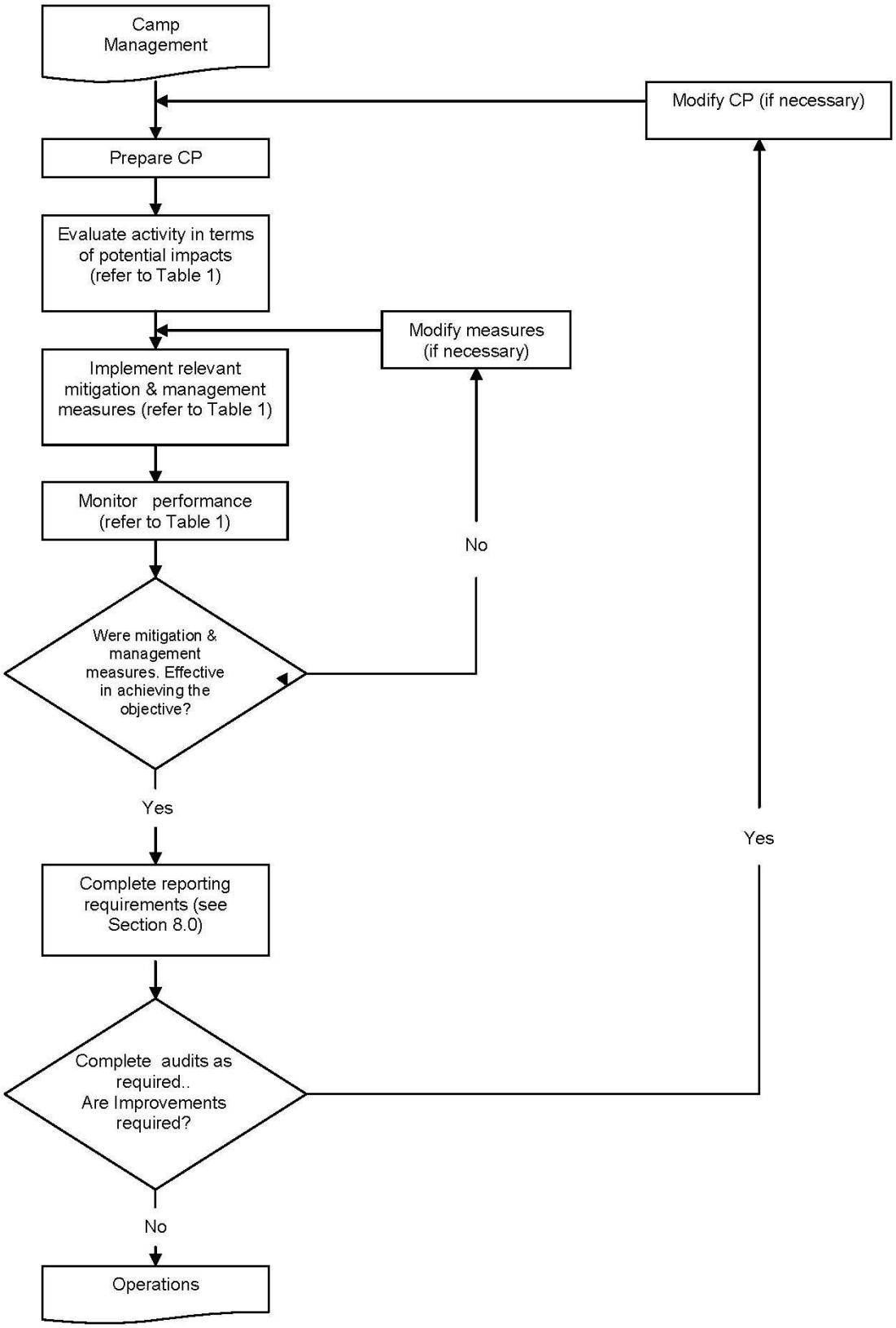

Figure 1: Camp Management Process

Table 1: Management and Monitoring

Aspect	Potential impact	Mitigation & Management	Monitoring	Frequency	Responsibility
Community Relations	Unauthorised movements of construction workers (during and after working hours) could result in trespassing, damage to local land and property and create amongst local residents a sense of their privacy being invaded. Residents may feel vulnerable and there may be increasing incidents of crime and or violence (GBV etc) and threats to the safety of community members. Disparity of pay, increase in disposable income and potential availability of illegal substances, illicit or culturally inappropriate lifestyle choices, leading to increased tension between local communities and the workers at camps.	1. Contractor shall enforce a 'closed' camp policy unless otherwise agreed and approved by Company. Workers will comply with the agreed camp closure hours. 2. Contractor shall implement suitable measures to maintain the closed camp policy which may include perimeter security fences, security controls and guard houses, monitoring transfer of goods into and out of camps for contraband and stolen goods. Contractor should refer to the Project Security Management Plan. 3. Contractor, as appropriate, shall provide adequate recreation facilities for workers to reduce incentive for leaving camps during leisure time. 4. Contractor shall limit workers interaction with the community when outside the camp e.g., by organizing transport directly to and from the worksite. 5. If community members or local businesses express grievances in relation to camp related activities/operations, the Project shall respond to the grievance in accordance with the Grievance Redress Mechanism contained in the ESMF. 6. FPMU/SPCU may request that camp related activities/operations be amended to address community grievances. Contractor shall comply with these requests. 7. Workers shall abide by camp rules which include a disciplinary process to be developed by the contractor once appointed. 8. The Project shall, be cognisant of the environment in which it works and shall, where practicable, respect local cultural events such as religious events, funerals and the like. 9. The Project shall provide training to all workers on camp management including: a. A briefing on camp rules, including closed camp policy, behaviour between	1. Monitoring 2. Verification 3. Verification 4. Verification 5. Notification 6. Verification 7. Verification 8. Verification 9. Verification	1. On-going 2. Every 3 months 3. Every 6 months 4. On-going 5. On-going 6. On-going 7. Every 3 months 8. On-going 9. Every 3 months	1. Contractor 2. Contractor 3. Contractor 4. Contractor 5. Contractor and FPMU/SPCU 6. Contractor and FPMU/SPCU 7. Contractor and FPMU/SPCU 8. Contractor and FPMU/SPCU 9. Contractor and FPMU/SPCU

		fellow workers and the community; b. Procedures for dealing with camp related complaints, worker issues and community issues and c. Community relations orientation. The objective of this orientation will be to increase awareness about the local area and cultural sensitivities.			
Health	Potential interaction between workers, persons engaged in illicit activities and the community increases the risk of spreading communicable diseases, particularly in more remote communities. Camp operations have the potential to develop favourable conditions for pests and disease, which could impact the health of workers and the community, as well as affect community livelihoods (e.g. rodent infestation affecting crops).	1. Contractor shall comply with the Minimum Health Requirements for Project Execution and the Community Health and Safety Management Plan which set out requirements and management measures on controlling communicable diseases within camps and to outside communities 2. Contractor shall enforce the closed camp policy to limit interaction with community 3. The Contractor shall develop a Pathogen and Pest Management Plan to prevent pathogens and pests from entering the camps and spreading outside the camps. 4. Posters and informational sessions will be conducted to raise awareness among the workforce and communities locally around the worker camps.	Verification	1. Every three months 2. On-going 3. Every three months	Contractor
Waste management, pollution and environmental impacts	Camp has the potential to have off site pollution impacts from waste disposal, emissions and spills. Camp operations may also cause environmental issues including deteriorating water quality, erosion, sedimentation, noise and air quality issues. These factors have the potential to affect the community if not adequately managed.	a) Contractor shall exercise all reasonable due diligence to conduct its operations in a manner that will minimize pollution. b) Contractor shall comply with the Waste Management Plan and Hazardous Materials Management Plan which define requirements to contain, transport, handle and dispose of camp wastes and hazardous materials to avoid impacts to human health and the environment. c) Contractor shall also apply appropriate mitigation measures as contained in this ESMF.	1. Verification 2. Verification 3. Notification	On-going	Contractor
Community resources	• Any infrastructure, services or resources used by camps (e.g. water abstraction) that result in reductions/ shortage/interruptions for the	1. Contractor shall utilise water sources for camp use in a manner that minimises impacts on local supply and use. Where necessary, water supply should be sought outside of the community source(s).	1. Verification 2. On-going 3. Verification	1. Prior to establishing the camps 2. Every 3	1. Contractor 2. Contractor 3. Contractor & SPCU

	local community will have a negative impact. • There is potential for social envy and increased resentment from the community towards the Project and project team if camp facilities are perceived to be superior to those in the community. Services of note include camp health facilities, power supply, clean running water. Restricted ability to access these services may increase frustration at the level of the services available to them.	2. The Project shall routinely monitor quality and supply of water source used by camp through quarterly sampling exercises. 3. Contractors shall be encouraged to extend Corporate Social Responsibility projects to host communities.		months 3. Annual	
Procurement and supply of goods	Increased demand for food and other provisions may deplete natural resources e.g. agriculture, fisheries, etc. potentially causing shortages of supply in the local community, and/or increasing the price of goods, affecting affordability for local communities.	The Project shall not purchase products in the local community unless through formal contracts with approved suppliers.	Verification	On-going	Contractor
Camp location	• Siting of camps may result in displacement of residents, loss of productive lands and the resources upon these lands. Camps may also restrict or impede access to areas for the local community. • Construction camps may result in a noticeable increase in traffic, noise, air emissions and light intrusion which could negatively affect the amenity and lifestyle of nearby communities and pose a potential safety issue.	1. Potential camp locations will be selected in consultation with FPMU/SPCU and affected communities will be subsequently consulted. Necessary permits will be obtained from the relevant Local Authorities for the approved camp location. 2. The Project shall refer to those Environmental & Social Management Plan's (ESMP) that include mitigation/avoidance measures that relate to the local community, including: • Noise and Vibration Management Plan; • Air Emissions Management Plan; and • Waste Management Plan.		1. Prior to establishing the camp 2. On-going	Contractor and/or Company
Labour Influx	There is a likelihood of influx of non local labour into areas around	• Contractor shall enforce a 'closed' camp policy. This is intended to deter individuals setting up	Verification	On-going	Contractor and FPMU/SPCU

	the construction camps. However, people from outside of the local area may migrate into existing settlements or develop new settlements in proximity to camps and the Project area. Labour Influx can result in disputes and sometimes violence between the new settlers and the resident community. Migrants moving into existing settlements may increase demand and inflate prices for housing, goods and services. Increased population and development of new and uncontrolled settlements increase pressure on infrastructure, services and resources. Major labour influx related risks include workers' sexual relations with minors and resulting pregnancies, presence of sex workers in the community, the spread of HIV/AIDS, sexual harassment of female employees, child labour and abuse, increased drop out rates from school, poor labour practice and lack of road safety.	near camp. • Contractor shall develop a Labour Influx Management Plan. • Contractor is to coordinate with Local government to ensure that no illegal and unsafe settlements develop. • Contractor shall eview and ensure adherence to labour influx management plan.			
Worker welfare and living conditions	Construction workers living in camps may encounter stresses and discomforts that negatively impact their health and welfare. These stressors or discomforts may be caused by Poor living conditions (accommodation, ablution and sanitary, health, recreation catering and laundry).	Contractor shall comply with minimum standards for camp buildings, facilities and services in line with the Bank standard or as contained in the Project Invitation to Tender (ITT) requirements.	Verification	On-going	Contractor
	Cultural issues (nationality, religion, discrimination, GBV and harassment, etc.).	• Contractor shall ensure that applicable ESMF mitigation measures for specific issues are applied. • Contractor may provide prayer rooms and other facilities, as necessary and to the extent	Verification	On-going	Contractor

		practicable, to satisfy the religious needs and customs of its workforce. • Contractor's personnel shall not engage in any discrimination, GBV, SEA or harassing behaviour. Contractor shall establish an Equal Opportunity Policy to promote non-discrimination in accordance with Labour and Worker Conditions Management Plan. • Contractor shall implement a worker grievance procedure to address grievances between workers. .			
	Mental health issues (morale, isolation, family attachments, boredom).	• Camps will be treated as closed camps. Camp rules in relation to alcohol consumption and drug prohibition will be complied with. • Contractor shall provide recreational facilities where practicable. • Contractor will provide counselling for all workers, with no discrimination by race, sex or religion.	Verification	• On-going • Every 6 months	Contractor
	Personal security (crime, and emergencies).	• Camps will be controlled by security to avoid intrusions from outside community. • Work Site Security Plan to be developed by Contractor shall include security measures to be provided at the camps which may include fencing, locks, alarms, pass card systems, badge and pass system, access points, safe transport of personnel as appropriate. • Contractor shall develop an Emergency Response Plan that meets requirements set out in ITT package	Verification	Prior to establishing camp	Contractor
	Environmental stress (climate, noise etc.).	Contractor shall comply with Minimum Health requirements for Project Execution including the following: • Accommodation will be designed to suit climatic conditions; • Accommodation and surroundings shall be constructed so that noise does not interfere with sleep to the extent that is reasonably practicable; and • Health and hygiene inspections shall be carried out.	Verification	On-going	Contractor
Decommissioning	Decommissioning of camps has several potential impacts:	• Contractor is to follow retrenchment procedure contained in Labour and Worker Conditions	Verification	On-going	Contractor and FPMU/SPCU

	• Local employment and provision of local goods and services at camps will no longer be required; • Locals employed and previously accommodated in camps will no longer have access to services and benefits available at camps (e.g. health services, recreation facilities); and • Infrastructure which provides benefits to communities may no longer be maintained (e.g. roads, camp boreholes) and may be decommissioned and removed.	Management Plan (if available) • Where Community requests, some infrastructure and services may be retained as advised by the FPMU and the World Bank: ○ Disturbed areas will be reinstated; ○ Where practicable, Contractor will return camp areas to former landforms; ○ No facilities will be maintained in or near especially environmentally or socially sensitive areas; and ○ Where there are negative consequences of induced access, the facility will also be decommissioned and the area reinstated.			

Annex 12: Security Management Plan (Sample)

The contractor shall pay necessary attention to ensuring security of life & property during the execution of this contract according to the scope of works. In ensuring that this role is carried out, the following will be given priority:

1. Management Commitment and Responsibilities

Management is committed to ensuring that the following are in place:

- Providing up to date information regarding the security management mechanism, tools & updates in and around the work sites
- Ensure necessary early warning system is deployed to respond to security emergencies in the workplace by:
    - Development of a specific step-by-step approach to security response
    - Establish a security task force to respond to specific hazards, which is to be deployed in the case of security emergency

- Employing the appropriate personnel for the role of security personnel/advisor(s) and security staff
- Prioritize training of security personnel
- Enforcing disciplinary actions as needed to enforce security compliance
- Promoting interaction and assistance with regulatory and response agencies such as the Nigerian Police Force & Nigerian Military armed forces.

2. Threat Assessment and Analysis

A vital component of this Security Management Plan is the identification of internal and external threats. The mechanisms for identifying threats shall comprise but will not be limited to:

- Have in place and periodically update a threat matrix that will be submitted to management for review and approval.
- Undertake periodic drills that will include responses to:
    - A bomb threat
    - A violence in the workplace situation – potential or actual
    - Domestic violence occurring within our facilities
    - General evacuation requirements due to a technical, human or natural threat
    - Others as may be determined by the General Manager or Security Management Committee

Threats will be qualified utilizing a threat matrix, or other tool that compares operations to threats, and their likelihood and severity. Where possible, mitigating actions and recommendations will be initiated.

3. The Role of the Security Focal Person or Manager

In the minimum, the contractor will have a security manager or focal staff that will be responsible for all security related issues in the workplace. The role of this security focal person includes:

- Lead role in threat assessments
- Program maintenance and updates
- Incident response and coordination
- Chair of the Security Program Committee
- Training Responsibilities
- Coordination with other Departments
- Coordination with agencies and response units

4. Employee security education and training

The company-training security program will ensure:

- Employee duties and responsibilities
- Event-specific responsibilities
- Threat or event reporting
- Back-to-work/check-in requirements
- Potential disciplinary actions
- Dealing with the media, regulatory agencies, or other entities outside the company

5. Management and Supervisor Education and Training

For Managers and Supervisors, our program focuses upon:

- Individual or Department duties
- Knowledge and deployment of response protocols
- Assuring employee and other constituent welfare
- Threat or event reporting
- Back-to-work/check-in requirements
- Potential disciplinary actions
- Dealing with the media, regulatory agencies, or other entities outside the company

Program Exercises and Drills

The training and education activities that will be undertaken for the purposes of implementing this Security Management Plan shall be one of the following: case studies, table top exercises, or small

and/or large scale exercises involving response pattern to adopt in the face of clear and present threats e.g. insurgent attacks

Annex 13: Specific Environmental & Social Parameters Monitoring Plan

Impact Parameter	Time of Impact/Project Phase	Impact Indicator	FMEnv Limits	Sampling Location	Sampling Frequency	Sampling Method	Monitoring Duration	Monitoring Personnel
Ambient Air Quality & particulate and gaseous emission	Site preparation, Construction/rehabilitation & Operation of facility	TSP NO2 SO2 CO HC	600μg/m3 100 μg/m3 300 μg/m3 20 ppm	Receiving air - upwind & downwind of the site	Daily, during site preparation, construction; Once every three months during operation of facility	Air Sampler	Short-term Long-term	PCU-MCRP Contractor Yobe SMENv & FMEnv
Noise	Site preparation, Construction/rehabilitation & Operation of facility	Noise Level	80 dBA (8-hr)	Work Site and 200m away	Daily (During site preparation, construction	Decibel Noise Meter	Short-term	PCU-MCRP Contractor Yobe SMENv & FMEnv
Water Quality (Surface)	Site preparation, Construction/rehabilitation & Operation of facility	pH Temperature Oil & Grease Salinity COD BOD Turbidity TDS TSS	As specified in FMEnv Guidelines	Receiving water body/ drainage (upstream & Down-stream of discharge point).	Daily during Land preparation & construction & for 1- month at operation.	Water Sampler, Turbidi-meter and pH-meter	Short-term	PCU-MCRP Contractor Yobe SMENv & FMEnv

		Heavy Metals						
Soil	Site preparation, Construction/ Rehabilitation	Particle Size, Total Org C, Oil & Grease Heavy Metals, Nutrients,	As specified in FMEnv Guidelines	Within and around construction area.	Once, before and after construction	Visual Inspection and Soil Sampler	Short-term	PCU-MCRP Contractor Yobe SMENv & FMEnv
Socio-economics	Construction/ rehabilitation stage	Absence of Contractor/community conflict, increase/ decrease in economic activities	National/ World Bank guidelines & procedures	Host communities	Monthly during construction	Socio-economic survey, observations and interviews	Short term	PCU-MCRP Contractor Yobe SMENv & FMEnv
Health	Construction/ Rehabilitation & operation	Presence / absence of alien diseases	National health survey guidelines	Host communities	Monthly at construction and bi-annually at operation stages	Interview & medical examinations & records	Long term	PCU-MCRP, ESMoH, Yobe SMENv, & YOBE SWAMA
Land	Pre-	Complain	National/	Host	Weekly before	Complaint	Long	PCU-MCRP

acquisition Economic displacement	construction	ts of land take or economic displacement (Grievance Log)	World Bank guidelines & procedures	communities	construction	s received by PCU Grievance redress mechanism	term	
Risk of Increase in spread of Communicable diseases, STDs such as HIV/AIDS and other STIs	Construction & Operation	Increase in reported cases	National/ World Bank guidelines & procedures	Host communities	During and after construction works	Interview & medical examinations & records	Long term	PCU-MCRP Yobe State MoH
Risk of GBV/SEA and VAC as a result of Labour Influx	Construction & Operation	Presence / absence of reported cases	National/ World Bank guidelines & procedures	Host communities	During and after construction works	Interview & medical examinations & records	Long term	PCU-MCRP Yobe State MoH
Reconnection of utilities such as existing power cables	Operation & Decommissioning	Visual inspections and reported cases	National/ State, World Bank guidelines & procedures	Host communities	During operation & decommissioning	Interview & records of inspections	Long term	PCU-MCRP Yobe MoP

Annex 14: Certificate of Laboratory Reports

FEDERAL MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

DEPARTMENT OF AGRIC LAND RESOURCES,
GARKI, AREA 11 - ABUJA.

P.M.B No.:.....
Tel: 09 - 2344315
Sec. Fax: 09 - 2344314
E-Mail Fmin Agric @ Linkserve Com.ng

Ref. No. AR/LAB/1/95
Date: 12 - 02 20 20

CLIENT: SadaAfri-Tech International,
3B Evo Road GRA Port Harcourt,
River State, Nigeria.

SUBMISSION OF LABORATORY ANALYSIS RESULT

Ihereby submit the result of twelve **(12)** soil samples and twelve (12) water samples submitted to the laboratory on 28th January,2020 for analysis.
Attached, is a copy of the laboratory analysis results.
Thank you for your patronage.

Yours faithfully,

Daniel AutaDanjuma (MR)
Field Officer,
AL& CCMS,
Kaduna.

FEDERAL MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

FEDERAL DEPT. OF AGRICULTURAL LAND AND CLIMATE CHANGE MANAGEMENT SERVICES

NATIONAL SOIL AND WATER LABORATORY,

KM 2 KADUNA- ABUJA EXPRESSWAY, GONIN- GORA, KADUNA

CLIENT: SadaAfri-Tech International **DATE: 12/02/20**

Heavy Metals

S/N	PARAMETER	WGG02 Sub Soil	NGD05 Top Soil	NGA05 SubSoil	WGG02 Top Soil	TDG01 Top Soil	MUT03 Sub Soil	BUK04 SubSoil	BUK Top Soil	BUK04 Stream Sediment	MUT03 Top Soil	WGG02 Stream Sediment	TDG01 Sub Soil
1	**Cadmium (mg/kg)**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2	**Lead (mg/kg)**	53.5	ND	ND	6.20	ND	4.70	23.1	9.20	ND	ND	ND	50.70
3	Manganese (mg/kg)	231.5	274.3	73.3	153.0	68.40	247.4	348.9	131.8	21.1	25.7	24.3	156.0
4	Chromium (mg/kg)	4.0	7.2	15.9	ND	7.6	11.1	13.4	14.6	ND	ND	ND	14.0
5	Zinc (mg/kg)	100.7	161.6	43.0	1.3.6	45.7	1.3.6	117.0	155.8	38.2	46.2	36.4	99.4
6	Cobolt (mg/kg)	21.1	7.1	ND	7.0	12.8	9.0	3.3	ND	0.5	ND	0.7	11.9

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Auta Daniel Danjuma

Lab. Analyst.

FEDERAL MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

FEDERAL DEPT. OF AGRICULTURAL LAND AND CLIMATE CHANGE MANAGEMENT SERVICES

NATIONAL SOIL AND WATER LABORATORY,

KM 2 KADUNA- ABUJA EXPRESSWAY, GONIN- GORA, KADUNA

CLIENT:SadaAfri-Tech Internal **DATE: 12/02/20**

Water Samples

S/N	PARAMETER	WGG02 Ground water	BUK Down stream S.Water	BUK04 Ground Water	MUT 03 Ground Water	NGD 05 shallow Sediment	NGD 05 G.Water	WGG02 Up stream S. water	MUT 03 Pond sediment	TD GO1 G. Water	BUK 04 Up streamS. water	TDGO1 Shallow well sediment	WGG Down stream S. water
1	pH	7.20	7.15	7.10	7.60	7.05	7.35	7.35	7.10	7.00	7.10	7.25	7.10
2	TDS (ppm)	66	336	377	201	184	416	91	114	26	316	510	169
3	Nitrate (mg/l)	42	140	16	20	170	250	80	240	53	91	330	340
4	Chloride (mg/l)	28.36	121.95	65.23	34.03	45.38	124.78	34.03	51.05	31.20	52.47	134.71	39.70
5	Alkalinity(mg/l)	2.5	42.5	138	158	236	130	75	51	18	3159	5	55
6	Cadmium (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7	Lead (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	0.077	0.276	ND	ND
8	Chromium (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9	Manganese (mg/l)	0.148	0.195	3.152	0.202	0.940	0.423	0.411	0.480	0.324	2.078	1.664	0.220
10	Zinc (mg/l)	0.370	0.215	0.447	0.315	0.460	0.391	0.723	0.508	0.450	0.436	0.367	0.276
11	Cobolt (mg/l)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Auta Daniel Danjuma

Lab. Analyst.

FEDERAL MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

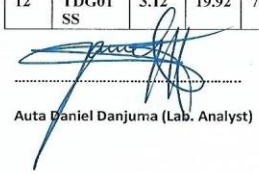
FEDERAL DEPT. OF AGRICULTURAL LAND AND CLIMATE CHANGE MANAGEMENT SERVICES

NATIONAL SOIL AND WATER LABORATORY,

KM 2 KADUNA- ABUJA EXPRESSWAY, GONIN- GORA, KADUNA

CLIENT; SadaAfri-Tech International **DATE: 10/2/2020**

S/N	Soil ID	Particle Size Distribution				pH Ratio 1:2		%		mg/kg	>Cmol/kg <						mg/kg				ds/m
		Clay %	Silt %	Sand %	TC	H_20	0.01m $CaCl_2$	O.C	TN	Av. P	Ca	Mg	K	Na	EA	ECEC	Zn	Fe	Mn	Cu	EC
1	WGG02 S.S.	16.76	13.24	70.00	SL	7.20	6.55	0.152	0.028	1.24	1.881	0.395	0.156	0.677	0.501	3.610	12.70	14.10	12.22	4.92	0.1609
2	NGD05 TS	12.76	7.24	80.00	SL	7.25	6.75	0.323	0.028	1.40	2.063	0.376	0.159	0.674	0.334	3.606	29.92	14.11	22.31	5.20	0.1906
3	NGA05 SS	3.12	28.92	67.96	SL	7.20	6.30	0.076	0.014	1.03	1.763	0.394	0.145	0.670	0.835	3.807	14.13	15.19	7.84	4.83	0.0609
4	WGG02 TS	4.12	25.92	69.96	SL	6.85	6.15	0.171	0.007	2.86	1.947	0.392	0.202	0.675	0.501	3.717	5.68	55.44	8.49	5.53	0.0218
5	TDG01 TS	3.12	27.92	68.96	SL	6.95	6.00	0.152	0.007	1.51	1.935	0.404	0.175	0.672	0.167	3.353	9.29	31.36	9.94	5.45	0.0484
6	MUT03 SS	5.12	25.92	68.96	SL	7.10	6.20	0.124	0.007	0.70	1.871	0.389	0.141	0.676	0.501	3.578	10.17	11.39	9.48	3.45	0.1078
7	BUK04 SS	6.12	24.92	68.96	SL	6.90	5.95	0.048	0.028	0.76	1.774	0.395	0.139	0.672	0.167	3.147	8.52	8.19	8.83	3.55	0.0594
8	BUK04 TS	5.12	25.92	68.96	SL	7.15	6.65	0.380	0.028	3.29	2.285	0.361	0.203	0.670	0.835	4.354	48.23	87.82	28.02	5.40	0.1000
9	BUK04 SD	4.12	17.92	77.96	LS	7.30	7.00	0.114	0.014	2.05	2.009	0.346	0.164	0.675	0.501	3.695	19.07	81.97	19.87	4.25	0.1172
10	MUT03 TS	5.12	21.92	72.96	SL	7.45	6.70	0.798	0.056	2.21	2.255	0.312	0.189	0.672	0.668	4.096	80.93	56.73	43.11	5.47	0.0219
11	WGG02 SD	0.00	0.00	100	S	7.15	6.80	0.019	0.014	0.97	0.121	0.120	0.051	0.673	0.167	1.232	5.36	9.23	4.09	2.94	0.0609
12	TDG01 SS	3.12	19.92	76.96	SL	6.60	6.50	0.019	0.014	0.54	1.680	0.395	0.143	0.672	0.501	3.391	8.02	7.00	6.21	3.80	0.2641



Auta Daniel Danjuma (Lab. Analyst)

Annex 15: Air quality standards along 40km Gujba-Ngalda road

Sample location	Sample point	SPM mg/ms	CO PPM	NO2 PPM	H23 PPM	302 PPM	VOC PPM
TDGOI	A1	0.19	0.01	0	0.01	0.02	0.01
11045'7''N	A2	0.26	0	0	0.01	0.01	0
11089'66"E	A3	0.17	0	0	0.03	0.01	0
	Mean	0.21	0	0	0.02	0.01	0.03
	FME LIMIT.	0.25	0.02 0	0.06	0.05	0.26	0.15
INAG02	A1	0.02	0	0.01	0	0.01	0.01
11035'74"N	A2	0.21	0	0	0	0.01	0.01
110 73'11"E	A3	0.19	0	0	0.01	0.01	0
	Mean	0.2	0	0	0	0.01	0.01
	FME limit	0.25 Mg/m3	0.02 ppm	0.06 ppm	0.05 ppm	0.26 ppm	0.15 ppm
BUK 03	A1	0.25	0	0.01	0	0	0
110 31'86"N	A2	0.23	0	0	0.01	0	0.01
110 73'11"E	A3	0.21	0.01	0	0	0	0
	Mean	0.23	0	0	0	0	0
	FME Limit .	0.25 MG/M3	0.02 ppm	0.06 ppm	0.05 ppm	0.26 ppm	0.15 Ppm
MUT 04	A1	0.02	0	0	0.01	0.01	0
110 26'50"N	A2	0.16	0.01	0.01	0	0.01	0.01
110 71'88"E	A3	0.15	0	0	0.01	0.01	0.01
	Mean	0.17	0	0	0.01	0.01	0.01
	FME Limit.	0.25 Mg/m3	0.02 Ppm	0.06 ppm	0.05 Ppm	0.26 ppm	0.15 Ppm
DNG 05	A1	0.2	0	0	0.01	0.01	0
	A2	0.16	0.01	0.01	0	0.01	0.01
	A3	0.15	0	0	0.01	0.01	0.01
	Mean	0.17	0	0	0.01	0.01	0.01
	Limit	0.25 Mg/m3	0.02 ppm	0.06	0.05 ppm	0.26 ppm	1.15 ppm

Source: Field Survey January, 2020.

Annex 16: Noise Levels along 40km Gujba-Ngalda road

Sample Location TDG 01	Position	Noise level DB (A)
110 45 '76"N, 110 89' 66"E	n1	38.4
	n2	42.3
	n3	35.1
	mean	38.6
110 35'74"N,11081'07"E	n1	48.7
WAG 02	n2	51.1
	n3	47.3
	mean	49
110 31'86"a 110 73'11"E	n1	36.8
BUK 03	n2	40.2
	n3	37.3
	mean	38.1
110 26'50"N, 110 71' 88"E	n1	35.3
MUT 04	n2	38.6
	n3	32.9
	mean	35.6
DNG 05.	n1	40.8
	n2	42.3
	n3	45.1
	mean	42.7

Source: Field Survey, January 2020

Annex 17: Physico-chemical properties of water along 40km Gujba-Ngalda road

PARAMETER	WGG02	WGG02US	BUK1	BUK2	MUT1	MUT2	NGD1	NGD2	TDG01	TDG02	BUK04US	WGG02DS
Temp. (oc)	28	28	28.1	27.5	29	27	28	29	28.2		28.2	28
PH	7.2	7.35	7.15	7.1	7.6	7.1	7.05	7.3	7	7.21	7.1	7.25
TDS (ppm)	66	91	336	377	201	114	184	416	26	510	316	169
CONDUCT (NS/cm)	122											
TURB. (NTU)	0.08	0.72	3.56	0.07	0.05		0.72	0.08	0.05		0.06	0.75
NITRATE (mg/cm)	42	80	140	16	20	240	170	250	53	330	91	340
NITRITE mg/cm	0.1	0.62	0.51	0.03	0.11		0,65	0.13	0.18		0.57	0.49
SULPHATE mg/L												
CHLORIDE mg/L	28.6	34	121.95	55.23	34.03	51	45.38	125	32	134.7	52.47	39.7
LEAD mg/L	ND	ND	ND	ND	ND	ND	ND	ND	0.07	ND	0.28	MD
CADMIUM mg/c	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ZINC (mg/c	0.37	0.73	0.215	0.447	0.32	0.5	0.46	0.4	0.45	0.3	0.436	0.22
CALCIUM (mg/c)	0.93	0.75	0.84	0.72	0.98		0.76	0.83	0.82		0.69	
MAGNESSIUM Mg/c	0.27	0.35	0.29	0.3	0.25		0.28	0.19	0.26		0.3	0.33
NICKEL (mg/c)	ND											
CHROMIUM (mg/c)	ND	ND	ND	ND	ND		ND	ND	ND		ND	ND
IRON mg/c	0.19	0.34	0.24	0.2	0.26		0.31	0.22	0.18		0.26	0.21
POTASSIUM mg/c	0.32	0.91	0.93	0.25	0.18		0.84	0.31	0.26		0,76	0.66
SODIUM mg/c	12	10.3	9.21	10.32	13.6		10.5	15.4	12,1		13.2	11.8
TPH mg/c	ND	ND	ND	ND	ND		ND	ND	ND		ND	ND
BOD5 mg/c	1	0.31	1.2	0.1	0.1		0.I	0.1			0.21	0.46
COD	2	6.1	4.6	1.8	1.6		5.3	1.3	2.1		5,0	4.3
DO												

MPN/100ml	120	615	722	200	180		501	310	212		605	613
E.COL1spp.	AB	AB	>1	AB	AB		AB	AB	AB		>I	AB
SAMONELLA spp.	AB	AB	AB	AB	AB		AB	AB	AN		PR	AB
SHIGELLA spp	AB	AB	PR	AB	AB		AB	AB	AB		PR	AN

Source: Field Survey, January 2020

Annex 18: Physico-chemical properties of water along 40km Gujba-Ngalda road

Description	WGG02SS	WGG02TS	NGD05TS	NGD05SS	TDG01TS	TDG01SS	MUT03SS	BUK04SS	BUK04TS	BUK04SD	WGG02S
clay	16.76	4.12	12.76	3.12	3.12	3.12	5.12	6.12	5.12	4.12	0
Silt	13.24	25.29	7.24	28.92	27.92	19.92	25.92	24.92	25.92	17.92	0
Sand TC	70 SL	69.96 SL	80 SL	67.96 SL	68.96 SL	76.96 SL	68.96 SL	68.96 SL	68.96 SL	77.96 LS	100 S
PH	7.2	6.85	7.25	7.2	6.95	6.6	7.1	6.9	7.15	7.3	7.15
% OC	0.152	0.171	0.323	0.076	0.152	0.019	0.124	0.048	0.38	0.114	0.019
%TN	0.028	0.007	0.028	0.014	0.01	0.014	0.01	0.028	0.03	0.014	0.014
P mg/kg Ca mol/kg	1.24 1.881	2.86 1.947	1.4 2.063	1.03 1.763	1.51 1.94	0.54 1.68	0.7 1.871	0.76 1.774	3.92 2.29	2.05 2.009	0.97 0.121
Mg ,,	0.395	0.392	0.376	0.394	0.41	0.395	0.389	0.395	0.36	0.346	0.12
K ,,	0.156	0.202	0.159	0.145	0.18	0.143	0.141	0.139	0.2I	0.164	0.051
Na ,,	0.677	0.675	0.674	0.67	0.67	0.672	0.676	0.672	0.67	0.675	0.673
EA,,	0.501	0.501	0.334	0.835	0.17	0.501	0.501	0.167	0.84	0.501	0.167
ECEC	3.61	3.717	3.606	3.807	3.35	3.391	3.578	3.147	4.35	3.695	1.232
Znmg/kg	12.7	5.68	29.92	14.13	9.29	8.02	10.17	8.52	48.23	19.07	5.36
Femg/kg	14.1	55.44	14.11	15.19	31.36	7	11.39	8.19	87.82	81.97	9.23
Mnmg/kg	12.22	8.49	22.31	7,84	9.94	6.21	9.48	8.83	28.02	19.87	4.09
Cumg/kg	9.22	5.53	5.2	4.83	5.45	3.8	3.45	3.55	5.4	4.25	2.94
EC	0.16	0.021	0.19	0.061	0.0485	0.2641	0.1078	0.0594	0.1	0.117	0.0609
Cdmg/g	ND	ND	ND								
Pbmg/g	53.5	ND	ND								
Cr	4	7.2									
Comg/g	21.1	7.1	45.7								
MCT %	2.58	2.61	2.6								
TPH	22.6	16.9	24.1								
HB	4X10	7X10	5X12								
HUB	5.5X10	7.3X10	4X10								

HF	1.3X10	2.1X10	1I5X10								
HUF	2X10	3X10	2X10								

Source: Field Survey, January 2020

Annex 19: Sample Copy of Grievance Procedure for Stakeholders

Community project & Name of Complainant	Type of Grievance				Grievance Resolution				
	Affected, but not informed about impacts and options	Compensation awarded is inadequate	Compensation not paid before assets acquisition	Resettlement benefits awarded are not provided	other	Date of complaint	Date received	Pending	Case referred to the Court
Community Project 1									
Complainant A									
Complainant B									
Complainant C									
Community Project 2									
Complainant D									
Complainant E									
TOTAL									

Annex 20: Chain of Custody for Sampling

The following procedures summarize the major aspects of chain of custody that guided the sampling for environmental media in this ESIA:

- The type of sample container used to store samples collected can affect the constituents of such samples. Therefore plastic containers with plastic screw caps were used for analysis of water; Glass containers are generally preferred with volatile organics (APHA, 1992).

- Sample labels: All samples were properly labeled to prevent wrong identification; labels were affixed or tags to samples containers before or at time of sampling. Each sample was number, name of collector; date and time of collection, and place of collection were all contained in the sample sheet attached here for your comment.

- Sample seals: labels were used to detect unauthorized tampering with samples up to time of analysis. Seal were attached in such a way that it would be necessary to break the seal to open the sample container.

- Field logbook: The sampling personnel have a log book where all information on the place of sample collection and the sample itself were recorded.
  The following basic elements are put down in the field logbook to aid in record keeping:

  - Date and time of sampling.
  - Name of sample.
  - Purpose of sampling
  - Location of sampling point (State, Town and Area)
  - Name and address of field contact
  - Type of sample
  - Number and volume of sample taken
  - Description of sampling point
  - Sampling method employed
  - Field observations and measurements
  - Signature and name of sampling personnel
  - Sample analysis request sheet
  - Sample delivery to Laboratory
  - Receipt and logging of sample
  - Assignment of sample for analysis