FEDERAL GOVERNMENT OF NIGERIA

AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT

PROJECT NUMBER P175237

DRAFT FINAL REPORT

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

September 2021

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FOR

AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT IN NIGERIA

PROJECT NUMBER P175237

Submitted To:

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September 2021

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LIST OF ABBREVIATIONS

ACHPR	African Charter on Human and Peoples' Rights
ACRESAL	Agro-Climatic Resilience in Semi-Arid Landscapes
ACREWC	African Charter on the Rights and Welfare of the Child
APs	Affected Persons
AQMP	Air Quality Management Plan
ARAP	Abbreviated Resettlement Action Plan
BAT	Best Available Technology
BMP	Best Management Practices
CAI	Community Administrative Institution
CBO	Community Based Organization
CRC	Convention on the Rights of the Child
CDAs	Community Development Associations
CDO	Community Development Organization
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CERC	Contingency Emergency Response Component
CIP	Community Involvement Program
CMP	Chemical Management Plan
COC	Chemicals of Concern
CPMC	Community Project Management Committee
CRC	Convention on the Rights of the Child
CRPD	Convention on the Rights of Persons with Disabilities
CSA	Center for Social Advocacy
CSO	Communities and Civil Society Organizations
DHS	Demographic Health Survey
EAD	Environmental Assessment Department
EIA	Environmental Impact Assessment
ERIP	Emergency Response and Incident Plan
ESHS	Environmental, Social, Health and Safety
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESM	Environmentally Sound Management
ESMMP	Environmental and Social Management and Monitoring Plan
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESS	Environmental and Social Standard
ESSC	Environmental and Social Screening Checklist
ESO	Environmental Safeguard Officer

FBO	Faith-Based Organization
FCT	Federal Capital Territory
FEPA	Federal Environmental Protection Agency
FGD	Focused Group Discussion
FGN	Federal Government of Nigeria
FMARD	Federal Ministry of Agriculture and Rural Development
FMENVnv	Federal Ministry of Environment
FMWR	Federal Ministry of Water Resources
FMW	Federal Ministry of Works
FPMU	Federal Project Management Unit
FONGO	Focal Non-Governmental Organization
GEF	Global Environmental Fund
GHG	Greenhouse Gases
GIS	Geographic Information System
GPS	Global Positioning System
GRASS	Gully Rapid Action and Slope Stabilization
GREENCODE	Green Concern for Development
GRM	Grievance Redress Mechanism
HAP	Health Action Plan
HIA	Health Impact Assessment
HODs	Head of Departments
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic, Social and Cultural Rights
IPMP	Integrated Pest Management Plan
ITD	Inter-Tropical Discontinuities
IUCN	International Union for Conservation of Nature and Natural Resources
IWRMC	Integrated Water Resources Management Commission
LGA	Local Government Area
LGDO	Local Government Desk Office
LGRC	Local Government Review Committee
LNA	Livelihood Needs Assessment
MDAs	Ministries, Departments and Agencies
M&E	Monitoring and Evaluation
NESREA	National Environmental Standards and Regulations Enforcement Agency
NEWMAP	Nigeria Erosion and Watershed Management Project
NGO	Non-governmental Organization
NIHSA	Nigeria Hydrological Services Agency

NIWA	Nigeria Inland Water Authority
NWRI	National Water Resources Institute
OHS	Occupational health and safety
OHSMSs	Occupational Health and Safety Systems
OTG	OTG Enviroengineering Nigeria Limited
PAH	Project-Affected Household
PAP	Project-Affected Person
PC	Project Coordinator
PCC	Project Complaints Committee
PDO	Project Development Objective
PG	President General
PMUS	Project Management Units
PPE	Personal Protection Equipment
PRS	Government's Poverty Reduction Strategy (PRS)
RAP	Resettlement Action Plan
RBDAs	River Basin Development Authorities
RPF	Resettlement Policy Framework
RWAYDI	Rural Women and Youth Development Initiative
SCCF	Special Climate Change Fund
SEPAS	State Environmental Protections Agencies/Authorities
SLO	Social & Livelihood Officer
SMARD	State Ministry of Agriculture & Rural Development
SMEnv	State Ministry of Environment
SMLS	State Ministry of Lands and Survey
SMOW	State Ministry of Works
SPMU	State Project Management Unit
ToR	Terms of Reference
TVMP	Traffic and Vehicle Management Plan
UN	United Nation
WB	World Bank
WHO	World Health Organization
WMP	Waste Management Plan

EXECUTIVE SUMMARY

Background

The Federal Government of Nigeria (FGN) has initiated the preparation of an agro-climatic resilience in semi-arid landscapes (ACRESAL) project with the World Bank. The project is to help Nigeria address critical challenges of regional desertification control and landscape management in northern Nigeria. In 2020, the FGN has expressed a plan of planting 30 million trees to control desertification. Effective implementation of issues related to the already planned rehabilitation of 20 oases in the current Medium Term Sector Strategy, establishing 550 hectares of rangelands in the Frontline States, stabilizing and restoration of 160 hectares of active sand dunes in eight of the 11 frontline States, and continued assessment of the extent and magnitude of drought and desertification in Nigeria.

Sustainable natural resources management is critical to addressing land degradation and building climate resiliency in the Semi-Arid Landscapes in Nigeria. The issues require urgent and focused action to scale-up cost-effective land restoration practices, to ensure more sustainable future food and water security in a changing climate. An integrated approach which collectively focuses on reducing exposure, managing sensitivity and increasing the coping capacity of all major factors of production are critical for building resiliency in dryland. Integrated catchment management is an appropriate framework to help address the natural resources management and human development challenges outlined above but these are not yet carried out at a large scale in the country, including northern regions.

Project Development Objective (PDO)

The project development objective (PDO) is to ***increase the adoption of climate resilient landscape management practices*** in targeted watersheds of northern Nigeria and to strengthen Nigeria's long-term framework for integrated landscape management. This ACRESAL project seeks to build on the lessons from the many international development partners including the World Bank Group and help develop a more integrated, spatial, multi-sectoral approach to build community resilience as well as improve the sustainable productivity of its natural resources. In particular, the project will support activities to develop multi-sectoral approaches for desertification control and landscape management, improve community livelihoods and resilience, and strengthen institutions.

Need for ACRESAL Intervention

Poverty alleviation is considered a high priority in the north. Almost half (87 million) of Nigeria's total population is living in extreme poverty. A significant disparity exists between the northern and southern regions in the country with economic development and poverty. Out of the six geopolitical zones in Nigeria, the three in northern regions have the worst indices of poverty.

The country has a total land area of 923, 770 km^2 out of which about 15% is believed to have been lost to desert encroachment according to studies (Fasona, M. et al, 2014). The annual loss of land to desertification has been estimated at 351,000 hectares. The spread of desert-like conditions southwards has been estimated at a rate of 0.6 km per year. It has been estimated that between 50 % to 75 % of Bauchi, Borno, Gombe, Jigawa, Kano, Katsina, Kebbi, Sokoto, Yobe, and Zamfara States in Nigeria are being affected by desertification.

These states, with a population of about 27 million people account for about 38 % of the country's total land area (NAP, 2000). Seven other buffer states (Federal Capital Territory, Plateau, Adamawa, Taraba, Niger, Kwara and Kaduna states) are under severe ecological pressure from migrating human and livestock populations from the frontline states. It is reported that these buffer states have about 10-15 % of their land area threatened by desertification. Desertification is therefore considered one of the most serious environmental problems in the country.

Drought and desertification impact directly or indirectly on all aspects of human life and the environment including the ecological, health, geo-chemical, hydrological and socio-economic facets (Olagunju, 2015). Among the anthropogenic factors are poor land management, inadequate farming techniques and over-cultivation, overgrazing and the removal of natural vegetation; misuse of water resources; and poor environmental and ecosystem management. The droughts-affected areas in Nigeria are characterized by low rainfall and high rainfall variability, high evaporation and potential evapotranspiration rate, Generally persistent negative rainfall anomalies, occasional torrential rains resulting in floods, rapidly high erosive runoff especially on steep terrains sparse vegetation cover and too little moisture for rainfed cultivation throughout the year. Similarly, desertification-affected areas are characterized by a reduction in the fraction of the soil covered by the vegetation.

In particular, under desertification, the fraction of bare soil increases, and vegetation may be reduced to isolated patches or clumps. Other aspects of the characteristics of desertification affected areas of the country include rise in the reflective capacity (albedo) of the surface for solar radiation, a considerable and permanent loss of perennial plants, especially woody shrubs and trees, considerable soil erosion and impoverishment by wind, gully and sheet erosion of soils by occasional heavy rainfalls, and overgrazing and inadequate forage in relation to vegetative resources. All these prevailing climatic and anthropogenic conditions, continually put excessive pressures on the livelihood and living conditions of people residing within described geographic area of Nigeria. The proposed ACRESAL intervention is targeted at arresting desertification and improving the sustainable productivity of land in the targeted areas of degraded and desert landscapes. The project also aims to support communities with improved capacity and investments to improve sustainable livelihoods.

Objectives/ Scope of the ESMF

The objectives of the ESMF include the following:

- Assess the potential environmental and social impacts of the Project;
- Establish clear procedures and methodologies at the subproject level, for screening , identification of environment and social impacts and for mitigation, monitoring and institutional measures
- Develop an Environmental and Social Management Framework Guidelines for the mitigation of the potential negative impacts and for monitoring compliance with the relevant Environment and Social Standards (ESSs) of the ESF
- Assess the capacity and training of the implementing agencies at the national and local levels, to implement the developed environmental and social management framework; and
- Establish the necessary funding requirements for the implementation of

the ESMF.

At this time of ACRESAL project's financing preparation, the specific sites at which the project would be implemented are not known with sufficient details in the states. Therefore, there is a need for an environment and social management framework to outline the principles and procedures that would be followed to ensure that implementation of ACRESAL meets with the existing EIA law in Nigeria and World Bank Environmental and Social Standards (ESSs). To this end, the ESMF scope of work included a number of tasks as highlighted below for the 19 states.

- Task 1 - Environmental Screening and scoping
- Task 2 - Environmental Policy and Regulatory Framework
- Task 3 – Potential Environmental and Social Impacts
- Task 4 - Analysis of Environmental Impact Issues
- Task 5 - Development of Management Plan to Mitigate Negative Impacts
- Task 6 - Institutional Framework
- Task 7 - Training Needs
- Task 8 - Public Consultation

Policy and Regulatory Framework

In Nigeria, the power to enforce all activities that might impact the environment is vested in the Federal Ministry of Environment (FMEnv). The FMEnv is also responsible for social safeguards related to developments in Nigeria. In addition to the provisions of the EIA Act, the National Social Protection Policy (NSPP) (2016) provides the commitment of the Government of Nigeria to the effective mobilization and efficient utilization of national resources to improve the quality of life of its citizens. The policy draws from the 1999 Constitution of the Federal Republic of Nigeria (as amended), Chapter 2 (Sections 16 & 17) which provides the basis for the provision of social protection in the country. The policy also emphasizes the direct application of international agreements ratified by Nigeria. These include the Universal Declaration of Human Rights (1948), relevant UN and ILO conventions, and the African Charter on Human and Peoples' Rights (1981), and Nigerian

The FMEnv has a mandate to coordinate environmental and social protection and conservation of natural resources for sustainable development in Nigeria. There are several national and international environmental guidelines in Nigeria that are applicable to the operation of the ACRESAL. These include:

- The National Policy on the Environment (NPE) of 1989
- Environmental Impact Assessment (EIA) Act No. 86, 1992
- National Guidelines and Standards for Environmental Pollution (March, 2001):
- NESREA Establishment Act, 2007.
- The National Effluents Limitations Regulation
- The NEP (Pollution Abatement In Industries And Facilities Generating Waste) Regulations
- The Management of Solid and Hazardous Wastes Regulations
- National Guidelines on Environmental Management Systems (1999)
- National Guidelines for Environmental Audit
- National Erosion and Flood Control Policy 2005:
- National Air Quality Standard Decree No. 59 of 1991
- The National Oil Spill Detection and Response Agency Act 2005 (NOSDRA ACT)

- Land Use Act of 1978
- Approved National Forestry Policy 2006
- Inland Waterways Authority (NIWA), 1997
- State Environmental Protection Act

Nigeria subscribes to a number of international regulations and conventions relating to Environmental Protection. These international protocols signed by Nigeria, that are relevant to the ACRESAL project include:

- The World Bank Environmental and Social Standards (ESSs)
- International Union for Conservation of Nature and Natural Resources (IUCN) Guidelines
- Convention of Biological Diversity
- Convention Concerning the Protection of the World Cultural and National Heritage Sites (World Heritage Convention)
- United Nations Framework Convention on Climate Change (1992)
- UN Convention to Combat Desertification
- Forced Labour Convention, 1930
- Freedom of Association and Protection of Right to Organize Convention, 1948
- Right to Organize and Collective Bargaining Convention, 1957
- Equal Remuneration Convention, 1951.
- Abolition of Forced Labour Convention, 1957
- Discrimination (Employment` and Occupation) Convention, 1958

Project Description

As currently designed, the ACRESAL Project is structured around four components:

Component A: **Dryland Watershed Management.** This component will implement integrated watershed management planning and addresses challenges of large-scale watershed degradation in northern Nigeria.

A1. Strategic Watershed Management: This subcomponent will support large scale integrated watershed planning and implementation. The Plans will be prepared for up to 20 watersheds, covering all of northern Nigeria. The multisectoral planning process will prioritize project investments, expected to include those related to information, institutions, and those required for desertification control, sustainable land and water management in drylands, and improved natural resource-based livelihoods. Extensive stakeholders consultation and participation will be fundamental in these processe. The strategic watershed plans will also provide a framework and guidance to the micro-watershed-level planning in Component B and will be a foundation for the longer-term dryland management framework of Nigeria supported under subcomponent C1.

A2. Watershed Infrastructure: This subcomponent will support large landscape-level investments, as prioritized in the strategic watershed plans. These may include those related to water resources (e.g., surface and groundwater storage, managed aquifer recharge, riverbank restoration, gully rehabilitation, irrigation, improved water systems), to environmental management (stabilization of sand dunes, forest management, afforestation), and to agriculture investments at large scale. Some investments will be supported that have been already identified and prepared under NEWMAP, provided they are consistent with ACReSAL objectives and requirements.

A3. *Special Ecosystems*: Investments under this subcomponent will improve the management of special ecosystems, including wetlands (especially the Hajejia-Nguru Wetlands), desert oases, and protected areas. Investments could include those related to wetland improvements, monitoring systems, water management, biodiversity conservation, stabilization of oasis buffer areas and improved water provision, and improving management systems for targeted protected areas.

Component B: Community Climate Resilience: Most of the challenges of dryland management are to be found at the local level, where they constitute the day-to-day reality of communities and farmers. Communities need support to be more resilient and communites and households need targeted investments to put new approaches into effect. The criteria for selecting communities are laid out in the PIM. In targeted micro-watersheds, this component will support the following sub-components:

B1. Community Strengthening: This subcomponent aims to strengthen the capacity of communities for sustainable natural resource use and management. Support will be provided to "local project implementation committees", or their local equivalent. Building on the outcomes of the higher-level strategic watershed planning under strategic watershed management intervention. Particular attention will be paid to addressing needs of vulnerable and marginalized groups (groups (including the poor, women, youth, the elderly, persons with disabilities, internally displaced people, pastoralists, and ethnic or religious minorities). Particular attention may be needed for internally displaced persons (IDPs) to address eniquality and to promote peace building initiative to promote ownership.

B2. Community Investments: This subcomponent aims to finance physical investments as prioritized through the micro-watershed planning process., Although the menu of potential investments will vary from community to community, four groups can be described:

- Investments in community-level infrastructure consistent with the goals of improved dryland management: soil conservation, surface and ground water management, streambank restoration, community-managed rainwater harvesting, expanding agroforestry enterprises, agroprocessing and storage, and shared community infrastructure.
- Landscape restoration in community-selected degraded areas, using an approach pioneered by FAO in both northern Nigeria and other dryland areas in western Africa, using the Delfino plow which mimics the traditional half-moon water harvesting technique. It is composed of hybrid agroforestry models on communal lands which include plant species chosen by the communities, which produce non-timber forestry products, such as: acacia (gum Arabic), balanites, fodder, beekeeping, nuts, mushrooms, and mixed planting with grains such as millet and sorghum. Improved pasture and rangeland management and restoration could also be included.
- Support to farmers at the household level to optimized climate-smart rainfed agriculture and farmer-led irrigation. Investments could include water and soil conservation, optimizing farm management (improved crop varieties, Integrated Pest Management; soil and water testing technologies), value chains, and small-scale solar-powered irrigation.

Component C: Institutional Strengthening and Project Management

This Component aims to improve the enabling institutional and policy foundation for multi-sectoral integrated landscape management as well as support project management. This will include the following sub-components:

C1. Institutional and Policy Strengthening: This subcomponent aims to improve the enabling institutional and policy foundation for integrated landscape management in Nigeria – with an initial focus on ACRESAL activities but setting the foundation for longer-term national frameworks. This will include work on improving the institutional infrastructure (IT, connectivity, and office improvements) in key agencies at federal and state levels, setting up the data, analytics and decision support framework (and also facilitate technical assistance and collaboration to improve the policy environment for longer-term integrated landscape management. This sub-component will also have a strong capacity-building and outreach focus for both in-person and virtual training, learning events, internships and competitions to improve youth participation and links with academia, and facilitating interactions with private sector (including tech startups). The platforms for data, analytics, knowledge, and learning will leverage national-level platforms for use at national, northern Nigeria, State, and local levels.

C2. Project Management: This subcomponent intends to support overall project monitoring and management. It will provide support for key overall consultancies (e.g. to support project monitoring and management, watershed implementation support, and capacity-building), as well as incremental operating costs (for specialized expertise, project-related travel, meetings, documentation, etc.) as well systems for improving remote preparation and supervision of investments (e.g. through use of satellite imagery, drones, 360o cameras, videoconferencing, etc.). It will also support the development of monitoring systems and dashboards and improving workflow processes to facilitate coordination across agencies at the central and state levels and public versions to improve transparency and outreach. The monitoring systems and documentation of lessons learned on an ongoing basis will be used to support adaptive project management, especially to identify activities that can be scaled-up depending on implementation performance and community feedback.

Component D: Contingency Emergency Response Component (CERC)

This is a component that could be used as necessary to provide immediate support to an eligible crisis or emergency. A CERC is a financing mechanism available to Borrowers in IPF operations to access funds rapidly to respond to an eligible crisis or emergency (includes disasters and health emergencies). This component will enable quick deployment of uncommitted funds to address these natural or man-made crises and emergencies during project implementation. This component will remain dormant until it is activated in an emergency situation. The component would then allow redistribution of uncommitted and undisbursed funds to finance emergency and recovery needs. A CERC is a financing mechanism available to Borrowers in IPF operations to access funds rapidly to respond to an eligible crisis or emergency (includes disasters and health emergencies). This component will enable quick deployment of uncommitted funds to address these natural or man-made crises and emergencies during project implementation. The CERC will be prepared under the provisions of Paragraph 12 of IPF Policy for projects in situations of urgent need for assistance which enables suspension of E & S and Fiduciary provisions to enable rapid allocation of the funds for emergencies.

This component will remain dormant until it is activated in an emergency situation. The component would then allow redistribution of uncommitted and undisbursed funds to finance emergency and recovery needs. In such instances, a CERC Operational Manual will be developed, which would require approval from the World Bank and adoption by the Government. The manual would describe the procedures and criteria for activation, eligible expenditures, and specific implementation arrangements.

Biophysical Environment and Socioeconomic Information

The proposed ACRESAL project will target the 19 States (Adamawa, Bauchi, Kwara, Niger, Kaduna, Gombe, Sokoto, Nasarawa, Borno, Kebbi, Katsina, Plateau, Benue, Kogi, Kano, Jigawa, Taraba, Yobe, and Zamfara States) in the arid and semi-arid areas of Nigeria. The overall population in the priority States is estimated to be 117,471,232 (2020) with 49.1% female and 50.9% male. The major livelihood activities in the priority states are mainly Agriculture (millet, sorghuim, cow pea, etc), Mining (gold, tin, iron, columbite, etc), and Commerce. It is estimated that among those living below the poverty line in Nigeria, 76.36% of the populations in the priority states are living below poverity line.

The priority States are located in the Sahel, Sudan Guinea Savanna and Southern Guinea ecosystem, characterized by dry semi-arid conditions, low precipitation, and sparse vegetative cover. The general topography of the project area is that of hills/dissected terrain, undulating plains and low lands on the southern zone, mountainous on the north eastern half crossed by large river valleys of Benue, Gongola and Yedsarem. The zone contains some modest to large variations in elevation, with a maximum elevation change ranging from 463 – 3,858 feet and an average elevation above sea levels of 2,025 feet. In terms of topography, the zone is mainly mountainous, undulating and hilly to the south-east and flat open plain in the central, north-east, west and north-west. Its valley and troughs extend inland and it is made up of flood plains laying generally below 250 meters. The north-west part is dominated by plains, a lowland topography with an average height of about 300 meters above sea level. In a few places, the lowland is interrupted by isolated hills and escarpments such as those around Dange and Kalambaina.

The hydromorphic soil provides a generally level plain, except where it is broken by the folded features of Awe to the south east and those of Toto to the south west.
On the north eastern section of the zone has a greater concentration of hills with the Monkwa hills in the northeast and the Mada rolling hills stretching from Wamba through Akwanga down to Nasarawa Eggon areas. The vegetation is Guinea Savanna grassland with concentration of wood land in the south- east and south - west. The valleys of the Mount Cameroon, Mandara Mountains and Adamawa Plateau form part of the landscape. The zone is naturally divided into two ecological zones; the Guinea and Sudan savannah zones. In general, the distribution of vegetation reflects the combined control of rainfall, topography and to a lesser extent, that of soils.

Nigeria is already experiencing climate variability in the form of droughts, floods, heatwaves, shifts in the timing of the rainy season, and increasing rainfall intensity. Climate-related disasters are a major problem. The northern areas of Nigeria are highly susceptible to impacts from climate change and this is expected to worsen

over time. Given the high dependence on rainfed farming in the northern region and the associated variability due to climate change, enhancing the adaptive capacity of agricultural systems, access to water resources at the local levels and reducing land degradation are critically important. As the biggest challenge to dryland agriculture is posed by the uncertain availability of water - both in terms of quantity and timing - the urgency of assuring water resources availability at local levels cannot be overemphasized.

Climate change is especially damaging in the more arid northern savanna ecosystems and will become more serious as mean temperatures continue to rise, accompanied with more variable weather patterns such as higher intensity rainfalls or heatwaves. It is expected that climate change will reduce productivity, increase crop failures; increase food prices; distress sale of animals; de-capitalization, impoverishment, reduced food security etc. Households cope with cash and food shortages by cutting and selling more firewood, thereby exacerbating land degradation and accelerating the onset of desertification. Further, the productivity of more than half of the staple crops in Nigeria is threatened by climate change; in northern states, extreme temperature increases will cause a considerable loss in productivity for most crops.

In the northern part of Nigeria, where aridity and a changing climate are causing significant disruption, extreme land degradation generates desertification, where the lack of vegetative cover contributes to a vicious circle of reduced precipitations and increased temperatures. It is estimated that desertification advances at a pace of around 350,000 ha per year. Between 50% and 75% of Bauchi, Borno, Gombe, Adamawa, Jigawa, Kano, Katsina, Kebbi, Sokoto, Yobe, and Zamfara States are affected by desertification. These states, with a population of about 35 million people account for about 35% of the country's total land area.

Nigeria is highly vulnerable to the global economic disruption caused by COVID-19, particularly due to the pronounced decline in oil prices and spikes in risk aversion in global capital markets. Unemployment and underemployment are expected to increase, affecting poor households and increasing the share of the population vulnerable to falling into poverty. Only agriculture is expected to positively contribute to growth in 2020.

Public Consultations and Concerns

The stakeholders' and public consultations were held between January 25 and February 5, 2021 in five states consisting of Sokoto, Niger, Nasarawa, Kano and Gombe States. These States were selected as representation of the project area based on (a) the agro-climatic cluster narea of the area, (b) the geopolical significance and (c) the prevailing of security risks in the area. For each of the States, a broad base group of stakeholders made up of Principal Officers of the relevant State MDAs (including environment, agriculture, works, women affairs, lands and survey, among others), NGOs, CBOs, community leaders, etc were consulted in an interactive session. A separate focused group discussion was also held with the members of the existing NEWMAP SPMU to share and discuss their experiences with the implementation of NEWMAP subprojects in the respective States.

The major concerns and expectations expressed by the stakeholders are as shown in the Table below. The general approach and responses to the concerns and

expectations of the stakeholders were framed towards creating positive perception on the ACRESAL capacity to resolve the issues raised as well as highlighting the benefits of the anticipated subprojects to the state, local project communities and individuals including women and the youths.

Major Concerns Expressed by Stakeholders

CONCERNS OF STAKEHOLDERS	CONSULTANT RESPONSES TO STAKEHOLDERS' CONCERNS
• What happens to ongoing projects which designs and safeguards instruments are already cleared by the Bank?	• It is anticipated that any ongoing subprojects which designs and safeguards instruments are already cleared by the Bank shall be allowed to proceed to implementation
• ACRESAL environmental and social hazards (e.g. road obstruction, noise and dust, etc.)..how will they be mitigated?	• The environmental and social risks and impacts associated with any subproject under ACRESAL shall be identified in the site-specific safeguard instruments prepared for the subproject. The mitigation measures for the identified risks and impacts shall also be included in the safeguard instruments
• Experience shows prolonged delays in the commencement of works. How will this be overcome?	• Any subproject implementation delays may result from the need to ensure that stipulated due processes are meticulously followed in subproject implementation. This is to foster project sustainability and effectiveness. • Nevertheless, this concern shall be brought to the attention of the WB and the FPMU.
• Will there be compensations for all lands taken up by the project?	• YES. Appropriate compensations shall be paid for all identified lands to be taken up by the project
• Any damages to homes, farmlands and businesses, will they be compensated for and by who?	• Where damages to structures, farmlands, economic trees and crops and businesses are identified resulting from the project, such assets shall be valuated and appropriate compensations shall be paid by the State through the SPMU
• Timely payment of compensation for project affected assets	• It is anticipated that all compensation payments shall be paid in a timely manner following stipulated due process. Where there are deviations, such situations should be brought to the attention of the project managers
• Experience has shown some abandonement of projects in the past and leaving site in worse condition	• This is not envisaged in this ACRESAL project.

Major Expectations Expressed by Stakeholders

S/N	EXPECTATIONS OF STAKEHOLDERS	CONSULTANT RESPONSES TO STAKEHOLDERS' EXPECTATIONS
1.	• Improved road networks • Provision of pipe borne water	• It is envisaged that where construction and/or rehabilitation of community roads are part of the ACRESAL intervention subproject, improved road networks should be the outcome. • Similarly, where provision of pipeborne water is a part of the intervention, the community should expect pipeborne water at the end of the subproject. • Notwithstanding initial group positions, community expectations should generally and freely be expressed during the stakeholders'

		engagement sessions.
2.	• Educational facilities and training opportunities	• As indicated above, project communities are encouraged to generally and freely express their desires and expectations during all stakeholders' engagement sessions. • The outcome of such engagements usually form the thrust of the subproject interventions for the communities
3.	• Up-grading of healthcare facilities and services	• Please refer to the Consultant responses under S/N 2.
4.	• Job opportunities	• Please refer to the Consultant responses under S/N 2.
5.	• Enhanced economic activities – farming, trading, etc	• Please refer to the Consultant responses under S/N 2.
6.	• Alternate sources of energy to current use of only firewood	• Please refer to the Consultant responses under S/N 2.
7.	• Other sources of livestock feeds	• Please refer to the Consultant responses under S/N 2.

The issues and concerns raised were fully addressed during the stakeholders' meetings. Specific mitigation measures to address some of the project impacts were also explained during the meetings.

The ACRESAL project is a development that the people are enthusiastically awaiting with high expectations of the benefits that the project will bring to the people. The project is expected to reduce desertification in the project areas, significantly improve the livelihoods of members of communities in the states and create employments for the youths of the project communities. Compensations shall be paid for structures, economic trees, useful land, lives and property that may be acquired by the ACRESAL Project. This project therefore is expected to have both short and long-term benefits to the host communities in the states and the Nigerian nation at large.

Environmental and Social Impact Mitigation Measures

Most of the planned ACRESAL activities at the subproject level are envisaged to be of Moderate or Substantial Risk or EA Category II in nature and scope. However, when taken together, the implementation of ACRESAL is considered a High Risk due the spread and significance of the adverse environmental and social impacts. Some of these adverse environmental and social impacts include the following:

Adverse Environmental Impacts

- Air pollution is expected from fugitive dust and emissions from construction vehicles, plant and equipment. Dust is generated by excavation and earth moving operations and causes nuisance to residents and other sensitive receptors. Exhaust emissions occur from poor maintenance of plant and equipment or over revving of engines.
- Increased sedimentation and runoff may result from activities during the construction works.
- Earthworks release suspended particles into watercourses, which can have temporary detrimental effects on water organisms. Spillages of fuel and other petroleum products cause contamination of the soil and water resources.
- Excavation at the borrow pits may cause land degradation in the vicinity of the borrow pits; may cause soil erosion and siltation of nearby roads.

- Noise will emanate from moving vehicles, excavators, generators, power tools (e.g. for vegetation clearing), and compressors during construction. Vibrations may come from soil compaction equipment and other vibro equipment to be used at the gully heads.
- Occupational accident during construction.
- Construction operations pose hazards to people living or working near construction areas or employed to work on site. Excavations, construction traffic and stockpiled materials pose particular threats to children and livestock. Children may be inadvertently recruited to work on construction sites.
- Construction workers camp give rise to health risks associated with unprotected sexual practice. and prostitution.
- Construction operations will result in topographic alterations.
- Construction operations may result in landslides, rock cave-ins, and mudflow/flooding.
- Construction operations can pose earth movement hazards to people working near the construction areas due to unstable soil profiles from site excavations.
- Impedance to traffic flow and movements.
- Possible vehicular collisions and accidents.
- Temporary diversions of traffic.
- Increased Traffic
- Air and Noise Emissions
- Proposed project will generate waste during construction including off specification materials such as wood, plastic, paper and domestic waste from construction areas and worker camps. This could result in increased pressure on local waste dump facilities as well as potential for unauthorized disposal and littering if not properly managed.
- Use of the acquired land associated with erosion gully setback will be altered and restricted to limited community uses. Structures may never be erected on this portion of land but economic trees could be planted.
- COVID-19 awareness and strict observance of NCDC protocols will be extended to each subproject community members and local residents;
- Mandatory use of face masks, frequent hand washing or use of sanitizers, maintaining social distancing where appropriate;
- Gender Based Violence/Sexual Exploitation & Abuse Management
- Solid Wastes Generation and Handling
- Effluents
- Use of Natural Resources
- Earth movements such as Landslides, Earth flow, Mud flow, etc
- Occupational and Public Health issues
- Biodiversity Loss, Endangered and Exotic Species
- Flooding

Adverse Social Impacts

- Croplands and economic trees along the gully setback may be destroyed during gully wall stabilization.
- Construction activities may affect persons with critical health conditions, including old persons, children and other vulnerable persons within project area may be temporarily relocated for construction phase.

- Possible disagreement over siting of staging areas and temporary facilities between community and contractor
- Population Influx
- Loss of Cultural Resources
- Occupation of private lands during works;
- Land acquisitions/use resulting in involuntary resettlement and/or loss of livelihoods or access to economic resources.
- Social exclusion and poor ethnic/regional coverage
- Increased corruption and rent seeking

The ACRESAL project will also result in some significant positive impacts that include environmental, economic and social benefits and clearly out-way the potential adverse impacts.

Positive Environmental Impacts

- Reduction in the phenomenon of desertification
- Reduction in the phenomenon of land degradation in the project area
- Reduction in the phenomenon of flooding in the project area
- Rehabilitation of degraded lands and their conversion into productive land
- Increase in the land area covered by vegetation
- Building resilience to climate change
- Biodiversity Conservation
- Increasing efficiency and speed in the ESIA process
- Reducing disaster risks in the project area
- Improved environmental performance and governance

Positive Social Impacts

- Employment generation
- Improved economic growth
- Community development programmes
- Increased opportunities for easy inter-state movement and business development.
- Initiation/ kick-off of rapid production systems and agricultural practices.
- Increase in social interactions
- Improved livelihood enhancing activities
- Increased urbanization
- Reduced level of land disputes and ethnic violence
- Increase in business/commerce during and after the construction works.
- Job creation opportunities.

Mitigation Measures

Mitigation measures are actions taken to enhance project positive impacts and minimize the identified adverse impacts to the extent possible. Such mitigation measures should be simple, measurable, achievable and can be accomplished in a timely manner. They should be based on the Mitigation Hierarchy [(i) risk and impact avoidance; (ii) where not possible, minimize or reduce risk and impact to acceptable level; (iii) appropriately mitigate minimized or reduced risk and impact; and (iv) where residual risk and impact is significant, compensate for or offset them] as described in the World Bank Environmental and Social Framework (ESF) and be assigned responsibilities for mitigation implementation and monitoring.

Impact mitigation measures proffered in this report are general guidelines for dealing with the envisaged program and sub-project impacts. The recommended mitigation measures are those that have been considered appropriate and practical and the following principles have been taken into consideration.

- Design changes
- Avoidance
- Preservation
- Minimization
- Rehabilitation
- Restoration
- Replacement
- Resource compensation
- Improvement
- Development
- Diversification

It is noted that the application of each mitigation measure will be affected by differences in subproject types, and environmental and social nuances. Moreover, some measures may be too costly or completely impractical to implement under certain conditions. In pursuing any of the proffered mitigation measures, therefore, it is important that for each sub-project component the following should also be assessed:

- Feasibility;
- Ease of implementation;
- Local suitability;
- Institutional requirements;
- Training requirements;
- Monitoring requirements;
- Cost (capital and operating); and,
- Cost-effectiveness.

ACRESAL Institutional Arrangements

Project implementation would follow the NEWMAP model and be implemented through existing NEWMAP Project Management Units (PMUs) already in place at the Federal Ministry of Environment and State Departments of Environments. However, given the multi-sectorial nature of this operation, the institutional arrangement of ACRESAL will be led by National Steering Committee that will be chaired by the Honorable Minister of Finance while the Honorable Minister of Environment shall serve as co-chair. Other members shall include Honorable Minister of Water Resources, Honorable Minister of Agriculture and Rural Development (FMARD) and Heads of relevant Agencies and Departments.

The National Steering Committee shall ensure inter-ministerial coordination and policy direction and engagement of the prodder agro-climatic resilience engagements and related climate change actions. Since activity implementation will be State led, there would be a small and fit-for-purpose Federal Project Management Unit (FPMU) to provide supervision and technical support to States as needed. Each participating State shall establish its own State Steering Committee similar to that at the Federal level as well as have the State Project Management Unit (SPMU). The

SPMUs will be staffed with a broad range of expertise, supplemented by secondments from the relevant MDAs. Details of the institutional arrangements of ACRESAL will be fleshed out in coordination with FGN during project preparation.

Capacity of PMUs to Prepare Safeguard Instruments and Implement Mitigation Measures

The oversight of the E&S safeguards preparation and implementation of mitigation measures rests with the FPMU at the federal level and the SPMUs at the priority state levels. It is therefore necessary that the safeguards officers at both federal and state levels be thoroughly knowledgeable in the Bank's ESSs as well as the national E&S safeguards regulations and requirements. The FPMU and SPMU personnel in the E&S safeguards preparation and implementation for NEWMAP were involved with the WB safeguards policies and are therefore not significantly familiar with the use of the Bank's ESSs requirements in the preparation of E&S safeguards. Institutional knowledge and experience relating to the Bank's ESSs have also not been gained by the FPMU and the SPMUs. It is therefore absolutely necessary that E&S safeguards trainings be conducted for the FPMU and SPMUs to build and/or strengthen the existing E&S safeguards capacities for the responsible officers.

Project Screening, Scoping and Categorization

All potential ACRESAL project intervention sites will be screened and scoped for Environmental and Social (E&S) impacts prior to approval by the PMU. A designated officer and/or consultant of the PMUs can carry out the screening. The screening and scoping process will include robust assessment of the project to determine:

- The appropriate project categorization EA;
- Applicable World Bank environmental and social standards;
- Potential for environmental and social liability; and,
- Cultural or other sensitivities.

In addition, the relevant stakeholders groups to be engaged in each subproject will be identified as well as the nature and extent of engagement for each stakeholder category. The report of the screening and scoping exercise conducted during the subproject preparation will be sent to the World Bank for review and approval. As previously indicated, most of the ACRESAL activities at the subproject level are envisaged to be of Moderate or Substantial Risk or EA Category II in nature and scope. This will necessitate that the appropriate environmental safeguards instruments will be limited to the Environmental and Social Management Plans (ESMPs), Codes of Practices, Standard Procedures and Good Practices.

Following the review and approval of the screening and scoping report, the applicable E&S safeguard instruments (ESIA/ESMPs) for each subproject shall be prepared in accordance with approved terms of reference (TOR). The resulting ESIA/ESMP report shall be reviewed and approved by the Bank prior to disclosure in Nigeria and at World Bank website. Implementation of the ESIA/ESMPs shall commence only after approval of the instruments has been given by the Bank.

Labor Influx and Child Labor

The project may face an influx of non-local labor and working conditions issues as skilled laborers might not be available in some of the project sites. The project will take concrete measures to mitigate potential labor influx-related risks such as workers' sexual relations with minors and resulting pregnancies, presence of sex

workers in the community, the spread of HIV/AIDS, forced marriage, human trafficking, sexual harassment of female employees and community members, sexual abuse and explotation, child labor and abuse, increased dropout rates from school, inadequate resettlement practices, and fear of retaliation, failure to ensure community participation, poor labor practice, and lack of road safety.

These risks require careful consideration to improve social and environmental sustainability, resilience and social cohesion. Necessary guidelines to properly assess and manage the risks of impacts on the project communities that may result from temporary ACRESAL induced labor influx have been included in this ESMF.

Grievance Redress Mechanism (GRM)
For each subproject, the SPMU will establish a grievance redress mechanism (GRM) that will allow the general public in the subproject area, affected subproject communities or individuals, and PAPs to file complaints and to receive responses in a timely manner. A separate GBV GRM shall also be established to address issues relating to GBV/SEA/SH and any victims. The GRM system will record and consolidate complaints and their follow-up.

While the GBV GRM is designed to exclusively and confidentially handle matters of GBV/SEA/SH nature, the project GRM system will be designed to handle complaints perceived to be generated by the subprojects or the personnel. It may also include disagreements about compensation and other related matters. The SPMU will assign a specific staff member to ensure that this is functioning properly. The consultants should review any existing GRM systems (government/traditional) that are operative in the area and propose ways that the GRM may fit within these systems. Ideally the subproject GRM should have second and third levels of appeal (including the court system, if appropriate, for legitimate claims that cannot be resolved at lower levels). The functioning of the GRM system, how to register complaints (written, by phone, or in person), where to go and hours of service, all should be clearly explained in local language during initial public consultations on the subproject. Local language brochures should be provided reiterating the functioning of the GRM.

Occupational Health and Safety/Community Health and Safety
The Contractor selected for a subproject shall be required to fully comply with Environmental, Social, Health and Safety (ESHS) obligations and bear the cost of implementation. Community Health, Safety and Security assessment will identify potential negative risks related to the different phases of the project. Selected Contractor shall develop and implement an occupational and community health and safety plans that contributes to a healthy workforce and local community for the subproject. The health and safety plan shall be submitted to the SPMU and FPMU for necessary approvals prior to implementation. In developing the Plans, the Contractors shall evaluate possible hazards that may be associated with the project activities such as: (a) imported backfill material; (b) Hazards to the aquatic environment arising from toxic effects of imported material (pH, COD, salinity, dispersed material); (c) Flood hazards due to heavy downpour during the construction period; (d) Physical/mechanical hazards due to the movement of solid material in the event of an accident; (e) Hazards resulting from soil contamination. The ACRESAL Project shall be conducted in strict adherence to the NCDC COVID-19 protocols.

Environmental and Social Impact Assessment (ESIA)/Environmental and Social Management Plan (ESMP)

An Environmental and Social Management Plan (ESMP) shall be prepared for each subproject during the subproject preparation stage. At that preparatory stage, each paritcipating State PMU will, as part of its proposal, submit a Bank approved ESMP for each subproject. The ESMPs are required to provide how environmental and social issues of the subprojects will be addressed during project pre-construction, construction and implementation phases on a continuous basis. The ESMPs will specify standards and codes of practice as well as all the operational plans proposed for each subproject to ensure environmental sustainability and social acceptability. These standards and plans are listed and described in more details under Section 10.8. A template of the terms of reference (TOR) for the preparation of the ESIA/ESMP has been provided.

The standards and plans proposed to address social issues including involuntary resettlement and legacy issues (people who would have lost their houses, lands, livelihood and other assets prior to the commencement of ACRESAL will be particularly important) are contained in a stand-alone Resettlement Policy Framework (RPF) prepared for ACRESAL. Site-specific Resettlement Action Plan(s) shall be prepared to identify and propose mitigation measures for the social impacts associated with each subproject at each site. The RPF will guide the preparation of the RAP(s).

Capacity Building and Training

In order to achieve the goal of the ESMF, there is need for capacity building and strengthening of relevant competencies on environmental and social management at Federal, States, LGAs and community levels including contractors. To this end, capacity building should be viewed as more than training. It is human resource development and includes the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively. It also involves organizational development, the elaboration of management structures, processes and procedures, not only within organizations but also the management of relationships between the different organizations and sectors (public, private and community).

Given the nature of the environmental and social management requirements and provisions outlined in this ESMF, competencies and capacity building will be required in the following areas:

- Environmental Impact Assessment Process - Screening, scoping, impact analysis, mitigation measures and monitoring, reviewing ESMP Reports;
- Environmental Due Diligence - Types of due diligence, screening projects for liabilities, scoping due diligence investigations and reviewing due diligence reports;
- Monitoring due diligence - Understanding the importance of monitoring and reporting in the ACRESAL ESMF implementation, monitoring requirements for environmental and social sustainability of subprojects (ESMP implementation).

Budget to Implement ESMF

An indicative budget of US$ 5,740,000 has been prepared for the implementation of the ESMF bearing in mind the elements that make up the implementation process.

Assumptions to provide clarity on the basis of the budget have also been given. The budget covers:

- Routine E & S duties of the PMU;
- Capacity Building for the PMU and other stakeholders;
- Engagement of Environmental and Social Specialists/Consultants
- Environmental and Social Due Diligence investigations and/or Audits;
- Environmental and Social Management Plans (ESMPs) developments commissioned directly by the PMU of the participating States and by the PMU at the Federal level
- Monitoring and evaluation activities of the PMU.

The FPMU/SPMU may initiate the preparation of detailed safeguards assessments and plans for specific sites. The project ESMF and RPF will guide the preparation of environmental and social safeguards instruments - environmental and social management plans (ESMPs), resettlement action plans (RAPs), and/or other safeguards instruments that will be prepared for ACRESAL, some of which will may be financed by the Bank.

S/N	ESMF activity	Cost $ (USD)
1	Trainings	2,300,000.00
2	ESMPs (including production of safeguards manual)	2,460,000.00
3	Monitoring	980,000.00
4	**Total**	**5,740,000.00**

Translations into the Major Language of the Project Area

In order to ensure that communities in the project area, especially “potential project affected persons (PAPs)” understand the involved issues, the executive summary of the report should be translated into the major language in the sub-projects areas (Hausa).

Disclosure

This ESMF has been prepared in consultation with the NEWMAP Federal level PMU, State MDAs, CBOs/NGOs and some community groups. The ESMF is expected to be disclosed publicly as a separate and stand-alone document for review and comment through the Federal/State Ministries of Environment at designated locations at Federal and in the participating States, and in World Bank website. Individual ESMPs will be prepared for each subproject based on the guidelines and procedures highlighted in this ESMF and would be disclosed in the area affected by the subproject.

CHAPTER ONE:
INTRODUCTION AND BACKGROUND TO ACRESAL

1.1 Introduction to ACRESAL

The Federal Government of Nigeria (FGN) has initiated the preparation of an agro-climatic resilience in semi-arid landscapes (ACRESAL) project with the World Bank. The project is to help Nigeria address critical challenges of regional desertification control and landscape management and proposed to be supported with an initial financing from the World Bank to the tune of $700 million. At the Federal level, the lead agency is the Federal Ministry of Environment.

The Project Development Objective (PDO) is to increase the adoption of climate resilient landscape management practices and enhance livelihoods in targeted arid/semi-arid watersheds in Northern Nigeria. This ACRESAL project seeks to build on the lessons from the many international development partners including the World Bank Group and help develop a more integrated, spatial, multi-sectoral approach to build community resilience as well as improve the sustainable productivity of its natural resources. In particular, the project will support activities to develop multi-sectoral approaches for desertification control and landscape management, improve community livelihoods and resilience, and strengthen institutions.

The project will collaborate with many Federal and State Ministries, Departments and Agencies (MDAs), Local Governments, Communities and Civil Society Organizations (CSO). Specifically, the MDAs include those responsible for Planning, Economy, Agriculture, Environment, Water Resources, Finance, Works, Transport, Power, Emergency Response as well as those focused on Climate and Hydrological Information or Watershed/Basin regulations.

1.2 Project Description

The project development objective (PDO) is to *increase the adoption of climate resilient landscape management practices* in targeted watersheds of northern Nigeria and to strengthen Nigeria's long-term framework for integrated landscape management.

As currently designed, the ACRESAL Project is structured around four components:

Component A: Dryland Watershed Management. This component will implement integrated watershed management planning and addresses challenges of large-scale watershed degradation in northern Nigeria

A1. Strategic Watershed Management: This subcomponent will support large scale integrated watershed planning and implementation. The Plans will be prepared for up to 20 watersheds, covering all of northern Nigeria. The multisectoral planning process will prioritize project investments, expected to include those related to information, institutions, and those required for desertification control, sustainable land and water management in drylands, and improved natural resource-based livelihoods. Extensive stakeholders consultation and participation will be fundamental in these processe. The strategic watershed plans will also provide a framework and guidance to the micro-watershed-level planning in Component B and will be a

foundation for the longer-term dryland management framework of Nigeria supported under subcomponent C1.

A2. Watershed Infrastructure: This subcomponent will support large landscape-level investments, as prioritized in the strategic watershed plans. These may include those related to water resources (e.g., surface and groundwater storage, managed aquifer recharge, riverbank restoration, gully rehabilitation, irrigation, improved water systems), to environmental management (stabilization of sand dunes, forest management, afforestation), and to agriculture investments at large scale. Some investments will be supported that have been already identified and prepared under NEWMAP, provided they are consistent with ACReSAL objectives and requirements.

A3. *Special Ecosystems*: Investments under this subcomponent will improve the management of special ecosystems, including wetlands (especially the Hajejia-Nguru Wetlands), desert oases, and protected areas. Investments could include those related to wetland improvements, monitoring systems, water management, biodiversity conservation, stabilization of oasis buffer areas and improved water provision, and improving management systems for targeted protected areas .

Component B: Community Climate Resilience: Most of the challenges of dryland management are to be found at the local level, where they constitute the day-to-day reality of communities and farmers. Communities need support to be more resilient and communites and households need targeted investments to put new approaches into effect. The criteria for selecting communities are laid out in the PIM. In targeted micro-watersheds, this component will support the following sub-components:

B1. Community Strengthening: This subcomponent aims to strengthen the capacity of communities for sustainable natural resource use and management. Support will be provided to “local project implementation committees”, or their local equivalent. Building on the outcomes of the higher-level strategic watershed planning under strategic watershed management intervention. Particular attention will be paid to addressing needs of vulnerable and marginalized groups (groups (including the poor, women, youth, the elderly, persons with disabilities, internally displaced people, pastoralists, and ethnic or religious minorities). Particular attention may be needed for internally displaced persons (IDPs) to address eniquality and to promote peace building initiative to promote ownership.

B2. Community Investments: This subcomponent aims to finance physical investments as prioritized through the micro-watershed planning process., Although the menu of potential investments will vary from community to community, four groups can be described:

- Investments in community-level infrastructure consistent with the goals of improved dryland management: soil conservation, surface and ground water management, streambank restoration, community-managed rainwater harvesting, expanding agroforestry enterprises, agroprocessing and storage, and shared community infrastructure.
- Landscape restoration in community-selected degraded areas, using an approach pioneered by FAO in both northern Nigeria and other dryland areas in western Africa, using the Delfino plow which mimics the traditional half-moon water harvesting technique. It is composed of hybrid agroforestry models on communal lands which include plant species chosen by the

communities, which produce non-timber forestry products, such as: acacia (gum Arabic), balanites, fodder, beekeeping, nuts, mushrooms, and mixed planting with grains such as millet and sorghum. Improved pasture and rangeland management and restoration could also be included.

- Support to farmers at the household level to optimized climate-smart rainfed agriculture and farmer-led irrigation. Investments could include water and soil conservation, optimizing farm management (improved crop varieties, Integrated Pest Management; soil and water testing technologies), value chains, and small-scale solar-powered irrigation.

Component C: Institutional Strengthening and Project Management

This Component aims to improve the enabling institutional and policy foundation for multi-sectoral integrated landscape management as well as support project management. This will include the following sub-components:

C1. Institutional and Policy Strengthening: This subcomponent aims to improve the enabling institutional and policy foundation for integrated landscape management in Nigeria – with an initial focus on ACRESAL activities but setting the foundation for longer-term national frameworks. This will include work on improving the institutional infrastructure (IT, connectivity, and office improvements) in key agencies at federal and state levels, setting up the data, analytics and decision support framework (and also facilitate technical assistance and collaboration to improve the policy environment for longer-term integrated landscape management. This sub-component will also have a strong capacity-building and outreach focus for both in-person and virtual training, learning events, internships and competitions to improve youth participation and links with academia, and facilitating interactions with private sector (including tech startups). The platforms for data, analytics, knowledge, and learning will leverage national-level platforms for use at national, northern Nigeria, State, and local levels.

C2. Project Management: This subcomponent intends to support overall project monitoring and management. It will provide support for key overall consultancies (e.g. to support project monitoring and management, watershed implementation support, and capacity-building), as well as incremental operating costs (for specialized expertise, project-related travel, meetings, documentation, etc.) as well systems for improving remote preparation and supervision of investments (e.g. through use of satellite imagery, drones, 360^{o} cameras, videoconferencing, etc.). It will also support the development of monitoring systems and dashboards and improving workflow processes to facilitate coordination across agencies at the central and state levels and public versions to improve transparency and outreach. The monitoring systems and documentation of lessons learned on an ongoing basis will be used to support adaptive project management, especially to identify activities that can be scaled-up depending on implementation performance and community feedback.

Component D: Contingency Emergency Response Component (CERC)

This is a component that could be used as necessary to provide immediate support to an eligible crisis or emergency. A CERC is a financing mechanism available to Borrowers in IPF operations to access funds rapidly to respond to an eligible crisis or emergency (includes disasters and health emergencies). This component will enable quick deployment of uncommitted funds to address these natural or man-made crises and emergencies during project implementation. This component will remain

dormant until it is activated in an emergency situation. The component would then allow redistribution of uncommitted and undisbursed funds to finance emergency and recovery needs. A CERC is a financing mechanism available to Borrowers in IPF operations to access funds rapidly to respond to an eligible crisis or emergency (includes disasters and health emergencies). This component will enable quick deployment of uncommitted funds to address these natural or man-made crises and emergencies during project implementation. The CERC will be prepared under the provisions of Paragraph 12 of IPF Policy for projects in situations of urgent need for assistance which enables suspension of E & S and Fiduciary provisions to enable rapid allocation of the funds for emergencies.

This component will remain dormant until it is activated in an emergency situation. The component would then allow redistribution of uncommitted and undisbursed funds to finance emergency and recovery needs. In such instances, a CERC Operational Manual will be developed, which would require approval from the World Bank and adoption by the Government. The manual would describe the procedures and criteria for activation, eligible expenditures, and specific implementation arrangements.

1.3 Description of the Project Area

The proposed ACRESAL project will target the 19 States in the arid and semi-arid areas of Nigeria. These States are located in the Sahel, Sudan Guinea Savanna and Southern Guinea ecosystem, characterized by dry semi-arid conditions, low precipitation, and sparse vegetative cover. An integrated and participatory catchment management approach will be the operating framework for project implementation at the field level. The ACRESAL Project shall be conducted in strict adherence to the NCDC COVID-19 protocols.

The map of Nigeria showing the northern States of Nigeira is illustrated in Figure 1 below.

Figure 1.1: Map of Nigeria Showing the 19 Northern States

1.4 Objectives of the ESMF

The Environmental and Social Management Framework (ESMF) is required when a proposed project consists of multiple subprojects where the entire scope of operations and activities are not fully known at the onset. With such a project, the range of environmental and social safeguard issues involved may not fully known. The ESMF serves as a statement of the policy, principles, institutional arrangements and procedures that the project management will follow in each project in addressing environmental and social issues.

This ESMF for Agro-Climatic Resilience in Semi-Arid Landscapes (ACRESAL) provides a clear, comprehensive and practical guidance to the Client on integrating an environmental and social due diligence process into the ACRESAL Project implementation. In particular, the ESMF will provide technical guidance for environmental and social assessment and management during preparation of the State selected priority agro-climatic resilience subprojects. Environmental and social assessment and management systems will be developed which will comply with good international practice and would result in a range of safeguards instruments. This ESMF will serve as the framework within which environmental and social management plans will be developed and implemented when the subproject specific location and exact impacts are known.

This ESMF identifies environmental and social safeguard policy frameworks, institutional arrangements and capacity available to identify and mitigate potential environmental and social safeguards issues and impacts of each subproject. It does not attempt to deal with site-specific impacts. The Bank will disclose the ESMF document publicly, in Nigeria and at the World Bank Info-shop before project appraisal.

The major objective of the ESMF is to enable support for effective decision-making in the implementation processes during the execution of subproject activities and ensure that such activities as pre-construction, construction, civil and rehabilitation works are environmentally and socially sound and sustainable, encourage community consultations and participations, enhance social wellbeing and are sustainable. Specifically, this ESMF seeks to provide a clear process including action plans to integrate environmental and social considerations into the ACRESAL Project.

The ESMF usually identifies the typical risks likely to arise in the subprojects but may cover all relevant risks. The ESMP for an individual subproject might discover and propose mitigation for a risk that was not named in the ESMF. This ESMF has generally:

(i) Identified potential environmental risks and social concerns that may arise as a result of proposed Project and the subprojects that it will support;
(ii) Specified appropriate roles and responsibilities of involved actors and parties;
(iii) Developed a screening and assessment methodology for potential projects, that will allow an environmental/social risk classification and the identification of appropriate safeguards instruments;
(iv) Developed environmental and social criteria for screening and prioritization within a portfolio of potential projects and activities;

(v) Outlined the required procedures for managing and monitoring environmental risks and social concerns related to the projects, and developed the TOR for appropriate safeguards instruments (such as ESMPs, RAPs, IPPs, and/or safeguard studies) as appropriate and required;
(vi) Determined the training, capacity building and technical assistance needed to successfully and effectively develop and implement the required safeguards instruments for investments planned during the TA Project;
(vii) Established the funding required to implement the ESMF requirements; and,
(viii) Provided practical information resources for implementing the ESMF.

The development of this ESMF followed a systematic process of gathering and documenting information and views on the required processes and, developing the necessary and appropriate elements of the ESMF to enable complete and effective assessment of environmental and social impacts associated with the ACRESAL project. The data and information gathered including outcomes from stakeholders' engagements and consultations are included in the ESMF.

The stakeholders across the various States in Northern Nigeria will be mobilized to contribute actively to scoping of the environmental and social issues associated with the subproject. Screening and scoping of the subprojects will take into account the typical project designs, vegetative land management measures and other activities aimed at reducing or managing runoff that could be carried out within target watersheds. The ESMF has also addressed measures needed to implement the identified actions, the adequacy of monitoring and institutional arrangements for the watersheds on a sustainable basis.

This ESMF will be used for the ACRESAL project together with a separate stand-alone document – Resettlement Policy Framework (RPF) for the project. The RPF provides a structure to address possible involuntary physical and economic displacement that may be associated with the project. ACRESAL subprojects are expected to comply with relevant state laws where the subproject will be executed as well as all national and international environmental and social requirements in order to meet legal obligations and to ensure project sustainability. The relevant requirements include the following:

- ESMP to meet Nigeria EIA laws
- ESMP to meet World Bank Environmental and Social Standards which include the following:
  i) Environmental and Social Standard 1: Assessment and Management of Environmental and Social Risks and Impacts;
  ii) Environmental and Social Standard 2: Labor and Working Conditions;
  iii) Environmental and Social Standard 3: Resource Efficiency and Pollution Prevention and Management;
  iv) Environmental and Social Standard 4: Community Health and Safety;
  v) Environmental and Social Standard 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;
  vi) Environmental and Social Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
  vii) Environmental and Social Standard 8: Cultural Heritage; and,

viii) Environmental and Social Standard 10: Stakeholder Engagement and Information Disclosure.

A more detailed description of the environmental and social standards of the World Bank are provided in Annex III. The ACRESAL FPMU will disclose the ESMF as required by the Nigeria EIA public notice as well as the World Bank Disclosure Policy.

1.5 Rationale for the ESMF

Prior to project appraisal, there is need to provide technical guidance for environmental and social assessment and management. Given that the detailed operational activities and civil works to be financed under ACRESAL are yet to be identified and the specific sites for the anticipated subprojects pertaining to ACRESAL are not known at this time, the key instrument for providing the required technical guidance is the Environmental and Social Management Framework (ESMF). The ESMF has been developed to address the environmental and social issues that may arise as a result of the anticipated infrastructure development and execution of other civil work activities in the participating States (Adamawa, Bauchi, Kwara, Niger, Kaduna, Gombe, Sokoto, Nasarawa, Borno, Kebbi, Katsina, Plateau, Benue, Kogi, Kano, Jigawa, Taraba, Yobe, and Zamfara States).

This document has not attempted to address impacts related to the anticipated individual sites in all the ACRESAL states. However, the process of integrating and management of environmental and social aspects of the subproject components at all stages of the project planning, design, execution and operation of the entire ACRESAL project have been established.

This document will be shared with the various relevant stakeholders in the ACRESAL subproject sectors and will constitute the principles and procedures that will govern the mitigation of adverse environmental and social impacts envisaged in the proposed ACRESAL project activities.

1.6 Application of the ESMF

Application of ESMF to the subprojects will enable preparation of standardized environmental and social assessment documents for appraisal and implementation. Subprojects with potential significant environmental and social impacts will necessarily require the conduct of environmental and social assessments, as mandated by the environmental laws of Nigeria (federal and state) and also conform to the Environmental and Social Standards of the World Bank. This framework defines the process for conformance to these procedures and establishes the criteria necessary to identify such subprojects.

The ACRESAL activities will involve civil works such as construction of infrastructure and/or stabilization or rehabilitation of degraded landscapes and flood plains. Activities will also include bio-vegetative works that control the encroachment of desert into these areas and reverse the desertification process wherever possible in strategically selected landscapes. The effort will be built on successful past and ongoing programs and support efforts to manage water and wind erosion, protect surface and ground water sources, and facilitating alternative livelihoods away from water-intensive crops alternative/sustainable energy systems, and unsustainable land and water management practices.

Consistent with the safeguards policies of Nigeria and the World Bank, these activities require the preparation of necessary environmental and social safeguards instruments to provide guidance during the project preparation and implementation process and associated construction works. These safeguards instruments, on the project level, include the ESMF and Resettlement Policy Framework (RPF) and, on the subproject level, the Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), Resettlement Action Plan (RAP) and Livelihood Needs Assessment (LNA).

The ACRESAL project will involve multi-sector operations and the institutional arrangements need to pragmatically involve other Federal and State ministries, and MDAs concerned with water resources and soil degradation such as the Federal Ministry of Agriculture, Federal Ministry of Water Resources (FMWR), River Basin Development Authorities (RBDAs), Integrated Water Resources Management Commission (IWRMC), and the National Hydrological Services Agency (NHSA) to mention a few. The local governments and local communities will also, form a strong forum of stakeholders to be considered as the project commences and continues.

1.7 Technical Approach and Methodology

This ESMF has been prepared in accordance with standard procedures for environmental and social assessment including the applicable World Bank ESS and Nigerian environmental assessment guidelines.

1.7.1 ESMF Preparation Strategy

The ACRESAL project will be implemented in the semi-arid and arid states of Nigeria, namely: Adamawa, Kogi, Sokoto, Plateau, Gombe, Kano, Borno, Katsina, Nassarawa, Niger, Kebbi Kwara, Kaduna, Bauchi, Benue,Yobe, Jigawa, Zamfara and Taraba States. Some of the States are already participating in the existing NEWMAP program and are advancing their investment preparations with investment support made available under the NEWMAP. Each state is expected to establish its respective project implementation teams, which will be involved in project preparation and implementation phases of ACRESAL project at the state level.

The indicative work plan, desktop study, scoping activities to understand the projects field of influence, State visits to the representative five (5) states, mapping and in addition, the review of the existing laws and policies currently in place at each level of government; as well as relevant World Bank policies and processes constituted activities undertaken in this ESMF. Representative states within the project region were selected based on the agro-cluster representation, similarity of project area and relative security of the state. Five states, including Sokoto, Niger, Nasarawa, Kano and Gombe, were selected to represent the ACRESAL project areas. The technical approach was targeted towards obtaining information based on oral interviews and focused group discussions (FGDs) with the representative states. Below is a brief description of activities performed in the conduct of the ESMF.

1.7.1.1 Literature Review

The methodology adopted for the ESMF studies involved an intensive application of desk reviews and collection of all relevant information in order to achieve successful outputs. Information was garnered from the Federal Ministry of Environment, Federal Ministry of Water Resources, Geological Surveys, River Basin Development Authorities (RBDAs) and National Water Resources Institute (NWRI), Department of

Erosion, Flood and Coastal Zone Management, World Bank, International documents for similar executed projects, etc).

1.7.1.2 State Visits and Consultations

The activities undertaken as part of the ESMF study included:

- Visits to five sample States (Sokoto, Niger, Nasarawa, Kano and Gombe)
- Project area characterization and potential Impacts Identification
- Potential Impacts Assessment and Definitions
- Oral interviews, use of questionnaires and focused group discussions. (The consultant obtained addresses of representatives for State Ministries of Environment (or implementing agencies) and other stakeholders at the respective states).

1.7.1.3 Interactive Discussions

This step involved the sampling of state experiences on previous international agency funded projects, observed constraints, suggestions, opinions and comments based on the previous projects including NEWMAP. The targeted groups in the state for consultations included the MDAs, SPMU, CBOs, LGA leaderships, NGOs, etc. The general stakeholders lists consulted for each state visited are included in Annex VI.

The main issues discussed with focus groups included:

- Land degradation & soil erosion
- Water pollution
- Afforestation and Deforestation
- Over-exploitation of wetlands
- Anthropogenic activities
- Labour issues and Socioeconomics
- Public Health Issues (Especially HIV/AIDs; Water-borne diseases & Choleras; STIs; Malaria; etc)

1.7.1.4 Identification of Potential Impacts and Mitigation Measures

Although specific projects to be implemented under the ACRESAL programme are not known at this stage especially in the 19 states, potential impacts were identified through initial generic screening of the anticipated projects in the light of the socio-environmental conditions: field visits and consultations with focused groups.

1.8 Screening and Scoping of the Project

To ensure all subprojects are appropriately screened for environmental and social issues at their conception stage, a checklist tool [See Annex III] has been developed to screen each subproject in terms of:

i) Appropriate EIA category;
ii) Applicable local, state, national and international regulations and standards (e.g., labour, pollution, occupational health and other standards);
iii) Relevant World Bank ESSs ;
iv) Level of stakeholder engagement (both sectoral and project level);
v) Existing environmental and other (e.g., pension or compensation) liabilities; and,
vi) Location sensitivities (e.g., sensitive environments and culture)

The screening tool provides necessary information to appropriately scope EA studies for the subprojects. The studies will include: environmental, social and other due diligence investigations. Mitigation measures for identified adverse impacts are often proffered to either eliminate or minimize adverse environmental and social impacts of specific actions, projects or programs, with a purpose to also enhance positive effects. The approach to mitigation has been primarily preventive principles of anticipated impacts based on well-known negative outcomes of project-environment interactions.

It is envisaged that the infrastructural interventions and access road rehabilitation components of the subprojects under ACRESAL will be environmentally and socially sensitive, particularly for the project states. The overall ACRESAL project is classified High Risk. However, in all probability, most of the subprojects will be of Moderate or Substantial Risk and Nigeria EIA Category II. As such, a site-specific ESMP will usually be sufficient for WB and national requirements.

CHAPTER TWO:
POLICY, LEGAL AND REGULATORY FRAMEWORK

2.1 Introduction

A number of national and international environmental guidelines are applicable to the operation of the ACRESAL. In Nigeria, the power to enforce all activities that might impact the environment is vested in the Federal Ministry of Environment (FMENVnv). Internationally, agencies such as the World Bank, IFC and other financial organizations usually set environmental criteria for projects, which must be met by project proponents before the agencies invest in them.

2.2 Relevant Regulatory Policies of Nigeria

Pursuant to Section 20 of the Nigerian 1999 Constitution, the state is empowered to protect and improve the environment and safeguard the water, air, and land, forest, and wildlife of Nigeria. The power to regulate all environmental matters in Nigeria is vested in the Federal Ministry of Environment (FMEnv) – a mandate that previously rested with the now defunct Federal Environmental Protection Agency (FEPA) set up by Federal Act 88, of 1988.

2.2.1 The National Policy on the Environment (NPE) of 1989

The National Policy on Environment, 1989 (revised 1999), provides for "a viable national mechanism for cooperation, coordination and regular consultation, as well as harmonious management of the policy formulation and implementation process which requires the establishment of effective institutions and linkages within and among the various tiers of government – federal, state and local government".

The objective of the policy is to achieve sustainable development in Nigeria and in particular to:

- Secure a quality environment adequate for good health and well being
- Conserve the environment and natural resources for the benefit of present and future generations.
- Raise public awareness and promote understanding of the essential linkages between the environment resources and development and encourages individual and community participation in environmental improvement efforts
- Maintain and enhance the ecosystems and ecological processes essential for the functioning of the biosphere to preserve biological diversity;
- Co-operate with other countries, international organizations and agencies to achieve optimal use and effective prevention or abatement of trans-boundary environmental degradation.

2.2.2 Environmental Impact Assessment Act No. 86, 1992

National EIA Act 1992, Clause 2 provides that public or private sector of the economy shall not undertake or embark on or authorize projects or activities without prior consideration of the effects on the environment. The act makes an EIA mandatory for any development project, and prescribes the procedures for conducting and reporting EIA studies. As part of the effective utilization of the EIA tool, the Federal Ministry of Environment (FMEnv) has produced sectoral guidelines.

2.2.3 National Guidelines and Standards for Environmental Pollution (March, 2001):

The National Guidelines and Standards for environmental pollution control in Nigeria (March, 2001) is the basic instrument for monitoring and controlling industrial and urban pollution.

2.2.4 NESREA Establishment Act, 2007.

The National Environmental Standards and Regulations Enforcement Agency (NESREA) has responsibility for the enforcement of the environment regulations and biodiversity conservation, including coordination and liaison with relevant stakeholders within and outside Nigeria on matters of enforcement of environmental standards, regulations, rules, laws, policies and guidelines.

The following NESREA National Environmental Regulations are considered relevant in this study:

- National Environmental (Construction Sector) Regulations. 2011;
- National Environmental (Soil Erosion and Flood Control) Regulations. 2011;
- National Environmental (Desertification Control and Drought Mitigation) Regulations. 2011;
- National Environmental (Surface and Ground Water Control) Regulations. 2011;
- National Environmental (Watershed, Mountainous, Hilly and Catchment Areas) Regulations, 2009.

2.2.5 The National Effluents Limitations Regulation

This instrument makes it mandatory that industrial facilities install anti-pollution equipment, make provision for further effluent treatment, prescribe maximum limit of effluent parameters allowed for discharge, and spell out penalties for contravention. It also provides that all industries in Nigeria should be operated on the basis of Best Available Technology (BAT);

2.2.6 The NEP (Pollution Abatement In Industries And Facilities Generating Waste) Regulations

Restrictions are imposed hereunder on the release of toxic substances and requirement of Stipulated Monitoring of pollution to ensure permissible limits are not exceeded; Unusual and accidental discharges; Contingency plans; Generator's liabilities; Strategies of waste reduction and safety for workers.

2.2.7 The Management of Solid and Hazardous Wastes Regulations

These regulate the collection, treatment and disposal of solid and hazardous waste for municipal and industrial sources and give the comprehensive list of chemicals and chemical waste by toxicity categories.

2.2.8 National Guidelines on Environmental Management Systems (1999)

The guidelines establish the requirement for an Environmental Management System (EMS) in ‘all organisations /facilities in Nigeria’. They also state that this EMS should be audited annually or as deemed necessary.

2.2.9 National Guidelines for Environmental Audit

These are designed to serve as a reference for compliance with the Environmental Audit requirements of the FMEnv. It states that it is mandatory for a company to

carry out an audit every 3 years or at the discretion of the Hon. Minister of the FMEnv.

2.2.10 National Erosion and Flood Control Policy 2005:

The general soil erosion & flood control guidelines provide necessary instructions for soil and water resources users to develop, implement and monitor plans that are to assure erosion and flood hazard mitigation. The maintenance of levees and other protective structures are also to be developed at areas with potential impacts. In addition to this, all requests for project plan approvals must include soil type and drainage pattern/structures in and around project area and the likely impact of the project on these duly certified.

2.2.11 National Air Quality Standard Decree No. 59 of 1991

The FMEnv is the regulatory agency charged with enforcing ambient air quality standards in Nigeria. The World Health Organization (WHO) air quality standards were adopted in 1991 as the national standards by the FMEnv. These standards define the levels of air pollutants that should not be exceeded in order to protect public health.

2.2.12 The National Oil Spill Detection and Response Agency Act 2005 (NOSDRA ACT)

This statutory regulation makes adequate regulations on waste emanating from oil production and exploration and its potential consequences to the environment.

Other Acts and Legislations

2.2.13 Land Use Act of 1978

The basic legal framework for the acquisition of land in Nigeria is the Land Use Act 1978 as amended in 2004, Chapter L5 under the laws of the Federation of Nigeria. The Part 1 of the amended Act 2004 vests all land within the urban areas of any Nigerian State in the Executive Governor of that state. Land within the rural areas of the state is vested on the Local Government. The Part VI, Section 29 of the law provides for compensation to the holder of any land title when such land is to be acquired for public purposes. For developed land, the Governor (in the case of urban areas) or Local Government (in the case of rural areas) may, in lieu of compensation, offer resettlement in any other place as a reasonable alternative accommodation and in acceptance of resettlement, the holder's right to compensation shall be deemed to have been duly satisfied.

The land-use Act of 1978 states that "…It is also in the public interest that the rights of all Nigerians to use and enjoy land in Nigeria and the Natural fruits thereof in sufficient quality to enable them to provide for the sustenance of themselves and their families should be assured, protected and preserved'. This implies that acts that could result in the pollution of the land, air, and waters of Nigeria negates this decree, and is therefore unacceptable.

2.2.14 Approved National Forestry Policy 2006

The extant national forest policy which is included within the document "Agricultural Policy for Nigeria" published by the Federal Ministry of Agriculture in 1988 recognized forestry as the management and utilization of forests as renewable natural resources. The policy overall objective is to achieve sustainable forest

management that would ensure sustainable increases in the economic, social and environmental benefits from forests and trees for the present and future generation including the poor and the vulnerable groups.

The Forest Policy encourages and supports an aggressive establishment of plantations of economic trees of both exotic and indigenous species. It provides for the preservation of forest and the setting up of forest reserves, and also provides goals, targets and implementation strategies for the management, development and use of forests and their resources and products. Nigeria is at present a wood deficit nation. The policy on forest resources management and sustainable use is aimed at achieving self-sufficiency in all aspects of forest product through the use of sound forest management techniques as well as the mobilization of human and material resources. The overall objectives of forest policy are to prevent further deforestation and to recreate forest cover, either for productive or for protective purposes, on already deforested fragile land.

The national biodiversity conservation strategy continues to be based on a system of Protected Areas, including Forest Reserves, National Parks and Game Reserves. In recognition of the fact that the local communities must share from the benefits of these Protected Areas, there must be a meaningful participation of these communities in their management. Efforts to safeguard biodiversity in private forests and to improve agricultural biodiversity through farm forestry initiatives must be supported.

Government has signed a number of international agreement and conservators that are relevant to the forestry development. It is obligatory that Government should honour these agreements and instruments through domestic legislation; and action. Intergovernmental, bilateral and multilateral cooperation will be upheld to promote sustainable development of forest resources.

2.2.15 Criminal Code

The Nigerian Criminal Code makes it an offence punishable with up to 6 months imprisonment for any person who:

• Violates the atmosphere in any place so as to make it noxious to the health of persons in general dwelling or carry on business in the neighbourhood, or passing along a public way; or

• Does any act which is, and which he knows or has reason to believe to be likely to spread the infection of any disease dangerous to life, whether human or animal.

2.2.16 Inland Waterways Authority (NIWA), 1997

Nigeria Inland Water Authority (NIWA) Act 13 of 1997 established NIWA whose functions are among others are to:

• Provide regulations for inland navigation;

• Ensure the development of infrastructural facilities for a national inland waterways network connecting the creeks and the rivers with the economic centres using the river-ports as nodal points for inter model exchange;

• Ensure the development of indigenous technical and managerial skill to meet the challenges of modern inland waterways transportation; and

• Carry out environmental impact assessment of navigation and other dredging activities within the inland water and its right-of-ways.

2.3 State Legislations

2.3.1 State Ministry of Environment

Some of the functions of the State Ministries of Environment include:

- Liaising with the Federal Ministry of Environment, FMEnv to achieve a healthy or better management of the environment via development of National Policy on Environment
- Co-operating with FMEnv and other National Directorates/Agencies in the performance of environmental functions including environmental education/awareness to the citizenry
- Responsibility for monitoring waste management standards,
- Responsibility for general environmental matters in the State, and,
- Monitoring the implementation of ESIA studies and other environmental studies for all development projects in the State.

2.3.2 State Environmental Protection Act

This Act for the states, where the Act still exists provides for the effective development and maintenance of sanitation in all areas of the State. The law further provides for proper disposition of excavated silt or earth and other construction materials after any construction project or repair works. Open burning of wastes is prohibited with stipulated penalties.

2.4 International Laws and Regulations

2.4.1 The World Bank Environmental and Social Framework (ESF)

The World Bank ESF documents the Environmental and Social Standards (ESSs) designed to help ensure that infrastructure projects proposed for Bank financing are environmentally and socially sustainable, and thus improve decision-making. The Bank has ten Environmental and Social Standards (ESS1-10). The Bank requires that all environmental and social risks and impacts of the project be addressed as part of the environmental and social assessment conducted in accordance with ESS1. ESS2–10 set out the obligations of the Borrower in identifying and addressing environmental and social risks and impacts that may require particular attention. These Standards establish objectives and requirements to avoid, minimize, reduce and mitigate risks and impacts, and where significant residual impacts remain, to compensate for or offset such impacts.

Based on the scope of the ACRESAL Project and the envisaged subprojects construction and rehabilitation activities, Table 2.1 (Relevant Environmental and Social Standards for ACRESAL Project) summarizes the World Bank ESSs considered to be relevant to the Sub-projects. Eight of the 10 WB ESSs are considered relevant to ACRESAL.

Table 2.1: Relevant Environmental and Social Standards for ACRESAL Project

WB Environmental and Social Standard	Relevant to ACRESAL?		Relevant To ACRESAL Due To	How Project Addresses ESS Requirements
	YES	NO		
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	[x]	[ ]	Scope of anticipated civil works and activities with environmental and social risks and impacts. Need to assess, manage and monitor environmental and social risks and impacts associated with each stage of the project	This ESMF is prepared for ACRESAL & specific mitigation measures developed. SMP has also been prepared to meet the requirements of the ESS. Site-specific ESMP/ESIA with mitigation measures is

WB Environmental and Social Standard	Relevant to ACRESAL?		Relevant To ACRESAL Due To	How Project Addresses ESS Requirements
	YES	NO		
				required for any subprojects
ESS2: Labor and Working Conditions	[x]	[ ]	Proposed project will result in employment creation and involve worker-management relationships	This ESMF is prepared for ACRESAL & specific mitigation measures developed. LMP has also been prepared to meet the requirements of the ESS. Site-specific ESMP/ESIA with mitigation measures is required for any subprojects
ESS3: Resource Efficiency and Pollution Prevention and Management	[x]	[ ]	Proposed project activity may generate pollution to air, water, and land, and consume resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels	This ESMF is prepared for ACRESAL & specific mitigation measures developed. IPMP has also been prepared to meet the requirements of the ESS. Site-specific ESMP/ESIA with mitigation measures is required for any subprojects
ESS4: Community Health and Safety	[x]	[ ]	Project activities, equipment, and infrastructure may increase community exposure to health and safety risks and impacts. Also, communities may be subjected to climate change impacts' acceleration or intensification due to project activities	This ESMF is prepared for ACRESAL & specific mitigation measures developed. Site-specific ESMP/ESIA with mitigation measures is required for any subprojects
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	[x]	[ ]	Project-related land acquisition and restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both.	Stand-alone RPF prepared for ACRESAL will guide required land acquisition and resettlements issues. Site-specific ARAP/RAP shall be required for any subprojects
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	[x]	[ ]	Protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development.	This ESMF is prepared for ACRESAL & specific mitigation measures developed. Site-specific ESMP/ESIA with mitigation measures is required for any subprojects
ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	[ ]	[x]	Applies to a distinct social and cultural group identified in accordance with the provisions for indigenous people and does not apply to Nigeria. Standard is therefore not relevant to ACRESAL	Not Relevant
ESS8: Cultural Heritage	[x]	[ ]	Scope of civil works and activities may result in impacts to the traditions and cultural heritage of the people - an important economic and social asset for development	This ESMF is prepared for ACRESAL & specific mitigation measures developed. Site-specific ESMP/ESIA with mitigation measures is required for any subprojects
ESS9: Financial Intermediaries	[ ]	[x]	Project is not about financial sector development or enhancing the role of domestic capital and financial markets. Standard is therefore not relevant to ACRESAL	Not Relevant
ESS10: Stakeholder Engagement and Information Disclosure	[x]	[ ]	Development of strong, constructive and responsive relationships are important for successful management of a	This ESMF is prepared for ACRESAL & specific mitigation measures developed. SEP has also been prepared to meet

WB Environmental and Social Standard	Relevant to ACRESAL?		Relevant To ACRESAL Due To	How Project Addresses ESS Requirements
	YES	NO		
			project's environmental and social risks	the requirements of the ESS. Site-specific ESMP/ESIA with mitigation measures is required for any subprojects

NA* = Not Applicable

The eight ESSs that are considered relevant to ACRESAL are summarized below:

2.4.2 ESS1: Assessment and Management of Environmental and Social Risks and Impacts

ESS1 sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing, in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).

The ESSs are designed to help Borrowers to manage the risks and impacts of a project, and improve their environmental and social performance, through a risk and outcomes based approach. The desired outcomes for the project are described in the objectives of each ESS, followed by specific requirements to help Borrowers achieve these objectives through means that are appropriate to the nature and scale of the project and proportionate to the level of environmental and social risks and impacts.

Borrowers will conduct environmental and social assessment of projects proposed for Bank financing to help ensure that projects are environmentally and socially sound and sustainable. The environmental and social assessment will be proportionate to the risks and impacts of the project. It will inform the design of the project, and be used to identify mitigation measures and actions and to improve decision making. Borrowers will manage environmental and social risks and impacts of the project throughout the project life cycle in a systematic manner, proportionate to the nature and scale of the project and the potential risks and impacts.

2.4.3 ESS2: Labor and Working Conditions

ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

- To promote safety and health at work.
- To promote the fair treatment, nondiscrimination and equal opportunity of project workers.
- To protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate.
- To prevent the use of all forms of forced labor and child labor.1

- To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law.
- To provide project workers with accessible means to raise workplace concerns.

2.4.4 ESS3: Resource Efficiency and Pollution Prevention and Management

ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations. At the same time, more efficient and effective resource use, pollution prevention and GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable.

This ESS sets out the requirements to address resource efficiency and pollution1 prevention and management throughout the project life cycle consistent with GIIP.

- To promote the sustainable use of resources, including energy, water and raw materials.
- To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities.
- To avoid or minimize project-related emissions of short and long-lived climate pollutants.3
- To avoid or minimize generation of hazardous and non-hazardous waste.
- To minimize and manage the risks and impacts associated with pesticide use.

The Borrower will consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention measures in accordance with the mitigation hierarchy. The measures will be proportionate to the risks and impacts associated with the project and consistent with GIIP and, in the first instance the EHSGs. The Borrower will implement technically and financially feasible measures for improving efficient consumption of energy, water and raw materials, as well as other resources. Such measures will integrate the principles of cleaner production into product design and production processes to conserve raw materials, energy and water, as well as other resources. Where benchmarking data are available, the Borrower will make a comparison to establish the relative level of efficiency.

2.4.5 ESS4: Community Health and Safety

ESS4 recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities.

ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.

• To anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and nonroutine circumstances.
• To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams.
• To avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials.
• To have in place effective measures to address emergency events.
• To ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.

This ESS addresses potential risks and impacts on communities that may be affected by project activities. Occupational health and safety (OHS) requirements for project workers are set out in ESS2, and measures to avoid or minimize impacts on human health and the environment due to existing or potential pollution are set out in ESS3. The Borrower will evaluate the risks and impacts of the project on the health and safety of the affected communities during the project life cycle, including those who, because of their particular circumstances, may be vulnerable. The Borrower will identify risks and impacts and propose mitigation measures in accordance with the mitigation hierarchy.

When the Borrower retains direct or contracted workers to provide security to safeguard its personnel and property, it will assess risks posed by these security arrangements to those within and outside the project site. In making such arrangements, the Borrower will be guided by the principles of proportionality and GIIP, and by applicable law, in relation to hiring, rules of conduct, training, equipping, and monitoring of such security workers. The Borrower will not sanction any use of force by direct or contracted workers in providing security except when used for preventive and defensive purposes in proportion to the nature and extent of the threat.

The Borrower will seek to ensure that government security personnel deployed to provide security services act in a manner consistent with provisions for sexual exploitation (SEA) and abuse as well as sexual harassment (SH), and encourage the relevant authorities to disclose the security arrangements for the Borrower's facilities to the public, subject to overriding security concerns.

2.4.6 ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

Issues relating to Land Acquisition, Restrictions on Land Use and Involuntary Resettlement are captured in the Resettlement Policy Framework (RPF), which has been prepared as a standalone document.

ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and persons. Project-related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both. The term "involuntary resettlement" refers to these impacts. Resettlement is considered involuntary when affected persons or communities do

not have the right to refuse land acquisition or restrictions on land use that result in displacement.

1 *"Land acquisition"* refers to all methods of obtaining land for project purposes, which may include outright purchase, expropriation of property and acquisition of access rights, such as easements or rights of way. Land acquisition may also include:
(a) Acquisition of unoccupied or unutilized land whether or not the landholder relies upon such land for income or livelihood purposes; (b) repossession of public land that is used or occupied by individuals or households; and (c) project impacts that result in land being submerged or otherwise rendered unusable or inaccessible. "Land" includes anything growing on or permanently affixed to land, such as crops, buildings and other improvements, and appurtenant water bodies.
2 *"Restrictions on land use"* refers to limitations or prohibitions on the use of agricultural, residential, commercial or other land that are directly introduced and put into effect as part of the project. These may include restrictions on access to legally designated parks and protected areas, restrictions on access to other common property resources, and restrictions on land use within utility easements or safety zones.
3 *"Livelihood"* refers to the full range of means that individuals, families and communities utilize to make a living, such as wage-based income, agriculture, fishing, foraging, other natural resource-based livelihoods, petty trade and bartering.

Experience and research indicate that physical and economic displacement, if unmitigated, may give rise to severe economic, social and environmental risks: production systems may be dismantled; people face impoverishment if their productive resources or other income sources are lost; people may be relocated to environments where their productive skills are less applicable and the competition for resources greater; community institutions and social networks may be weakened; kin groups may be dispersed; and cultural identity, traditional authority, and the potential for mutual help may be diminished or lost. For these reasons, involuntary resettlement should be avoided. Where involuntary resettlement is unavoidable, it will be minimized and appropriate measures to mitigate adverse impacts on displaced persons (and on host communities receiving displaced persons) will be carefully planned and implemented.

- To avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives.
- To avoid forced eviction.
- To mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.
- To improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure.
- To conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable displaced

persons to benefit directly from the project, as the nature of the project may warrant.
- To ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected.

2.4.7 ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

ESS6 recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development. Biodiversity is defined as the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems. Biodiversity often underpins ecosystem services valued by humans. Impacts on biodiversity can therefore often adversely affect the delivery of ecosystem services. Requirements related to ecosystem services are set out in ESS1.

ESS6 recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support. Habitat is defined as a terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the nonliving environment. All habitats support complexities of living organisms and vary in terms of species diversity, abundance and importance. This ESS also addresses sustainable management of primary production and harvesting of living natural resources.

ESS6 recognizes the need to consider the livelihood of project-affected parties, including Indigenous Peoples, whose access to, or use of, biodiversity or living natural resources may be affected by a project. The potential, positive role of projectaffected parties, including Indigenous Peoples, in biodiversity conservation and sustainable management of living natural resources is also considered.

- To protect and conserve biodiversity and habitats.
- To apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity.
- To promote the sustainable management of living natural resources.
- To support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities.

Based on the environmental and social assessment, the requirements of this ESS are applied to all projects that potentially affect biodiversity or habitats, either positively or negatively, directly or indirectly, or that depend upon biodiversity for their success. This ESS also applies to projects that involve primary production and/or harvesting of living natural resources.

2.4.8 ESS8: Cultural Heritage

ESS8 recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. People identify with cultural heritage as a reflection and expression of their constantly evolving values, beliefs, knowledge

and traditions. Cultural heritage, in its many manifestations, is important as a source of valuable scientific and historical information, as an economic and social asset for development, and as an integral part of people's cultural identity and practice. ESS8 sets out measures designed to protect cultural heritage throughout the project life cycle.

This ESS sets out general provisions on risks and impacts to cultural heritage from project activities. ESS6 recognizes the social and cultural values of biodiversity. Provisions on Stakeholder Engagement and Information Disclosure are set out in ESS10.

- To protect cultural heritage from the adverse impacts of project activities and support its preservation.
- To address cultural heritage as an integral aspect of sustainable development.
- To promote meaningful consultation with stakeholders regarding cultural heritage.
- To promote the equitable sharing of benefits from the use of cultural heritage.

The term 'cultural heritage' encompasses tangible and intangible heritage, which may be recognized and valued at a local, regional, national or global level, as follows:

- Tangible cultural heritage, which includes movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Tangible cultural heritage may be located in urban or rural settings, and may be above or below land or under the water;
- Intangible cultural heritage, which includes practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artifacts and cultural spaces associated therewith—that communities and groups recognize as part of their cultural heritage, as transmitted from generation to generation and constantly recreated by them in response to their environment, their interaction with nature and their history.

2.4.9 ESS10: Stakeholder Engagement and Information Disclosure

This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.

Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management and monitoring of the project's environmental and social risks and impacts.

This ESS must be read in conjunction with ESS1. Requirements regarding engagement with workers are found in ESS2. Special provisions on emergency preparedness and response are covered in ESS2 and ESS4. In the case of projects involving involuntary resettlement, Indigenous Peoples or cultural heritage, the Borrower will also apply the special disclosure and consultation requirements set out in ESS5 and ESS8.

- To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties.
- To assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance.
- To promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle on issues that could potentially affect them.
- To ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format.
- To provide project-affected parties with accessible and inclusive means to raise issues and grievances, and allow Borrowers to respond to and manage such grievances.

2.4.10 World Bank Group EHS Guidelines

The Environmental, Health, and Safety (EHS) Guidelines of the World Bank Group (WBG) are technical reference documents with general and industry - specific examples of Good International Industry Practice (GIIP). The EHS Guidelines that are relevant and applicable to the ACRESAL project will include the following:

(i) General EHSG;
(ii) ESHG for Perennial Crop Production;
(iii) EHSG for Annual Crop Production.
(iv) EHSG for Mammalian Livestock Production; and,
(v) EHSG for Waste Management Facilities.

2.5 Other Relevant Acts and Legislations at Federal Level

Nigeria subscribes to a number of international regulations and conventions relating to Environmental Protection. These international protocols signed by Nigeria, that are relevant to the ACRESAL project include:

- International Union for Conservation of Nature and Natural Resources (IUCN) Guidelines
- Convention of Biological Diversity
- Convention Concerning the Protection of the World Cultural and National Heritage Sites (World Heritage Convention)
- United Nations Framework Convention on Climate Change (1992)
- UN Convention to Combat Desertification
- Forced Labour Convention, 1930
- Freedom of Association and Protection of Right to Organize Convention, 1948
- Right to Organize and Collective Bargaining Convention, 1957
- Equal Remuneration Convention, 1951.
- Abolition of Forced Labour Convention, 1957

- Discrimination (Employment` and Occupation) Convention, 1958
- Minimum Age Convention, 1973
- Worst Forms of Child Labour Convention, 1999
- Labour Inspection Convention, 1947
- Tripartite Consultation (International Labour Standards) Convention, 1976
- Right of Association (Agriculture) Convention, 1921;
- Protection against Accidents (Dockers) Convention.

Some of these guidelines/conventions/treaties to which Nigeria is a signatory are summarized below.

2.5.1 Convention on Biological Diversity

The objectives of the Convention include the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

2.5.2 Convention Concerning the Protection of the World Cultural and Natural Heritage Sites (or World Heritage Convention)

The convention sets aside areas of cultural and natural heritage for protection. The latter is defined as areas with outstanding universal value from the aesthetic, scientific and conservation points of view.

2.5.3 United Nations Framework Convention on Climate Change (1992)

In order to achieve sustainable social and economic development, energy consumption for developing countries needs to grow taking into account the possibilities for achieving greater energy efficiency and for controlling greenhouse gas emissions in general. This also includes the application of new technologies on terms, which make such an application economically and socially beneficial, determined to protect the climate system for present and future generations.

2.5.4 The Basel Convention on the Control of Transboundary Movement of Hazardous Waste and Disposal, 1989

This convention focuses attention on the hazards of the generation and disposal of hazardous wastes. The convention defines the wastes to be regulated and controls their trans-boundary movement to protect human and environmental health against their adverse effects.

The agreement aims to address the problems and challenges posed by hazardous waste and to protect human health and the environment by minimizing hazardous waste production whenever possible through an “integrated life-cycle approach”, which involves strong controls from the generation of a hazardous waste to its storage, transport, treatment, reuse, recycling, recovery and final disposal. The key objectives of the Basel Convention are:

- To minimize the generation of hazardous wastes in terms of quantity and hazardousness; and,
- To reduce the movement of hazardous wastes by disposing off as close as possible to the source.

2.5.5 UN Framework Convention on Climate Change – Kyoto Protocol (1992)

In order to achieve sustainable social and economic development, energy consumption for developing countries needs to grow taking into account the possibilities for achieving greater energy efficiency and for controlling greenhouse gas emissions in general. This also includes the application of new technologies on terms which make such an application economically and social beneficial, determined to protect the climate system for present and future generations.

2.5.6 Agenda 21 - UN Conference on Environment and Development

At the United Nations Conference on Environment (also the Earth Summit) – held in Rio de Janeiro (1992), with recommendations from the WHO Commission, more than 150 member states adopted Agenda 21 - an action plan to guide future strategies for health and environment activities on a national and international level. This fact provided the background for FEPA's EIA framework to ensure environmental sustainability of all types of activities in the oil and gas industry (FEPA, 1995).

2.5.7 Public Health Legislations and regulations

Several countries have legislation and regulations that stipulate the administrative and policy framework for conducting health impact assessment for a development project, whether as part of an EIA or a standalone study. In addition, a number of international agencies have endorsed this process, such as the World Banks, Asian Development Commission, and the World Health Organizations. In Nigeria, the Public Health Law (L.N47 of 1955, Cap 103) provides justification for the execution of developmental projects under guidelines that promote health by protecting the environment and safeguarding the health of humans.

2.5.8 WHO Health and Safety Component of EIA, 1987

WHO in its report on health and safety component of environment impact assessment (EIA) to protect human health indicates that:

i. One of the fundamental considerations in the approval of projects, policies and plans should be the health of communities affected by them; greater consideration should be given to the consequence of development policies/programs for human health;
ii. Environmental Impact Assessment should provide the best available factual information on the consequence for health of projects, policies and plan; and
iii. Information on health impact should be available to the public.

2.5.9 Convention on Conservation of Migratory Species of Wild Animals, Bonn, 1979

The Bonn convention concerns the promotion of measures for the conservation (including habitat conservation especial for endangered species and management of migratory species.)

2.5.10 United Nations Guiding Principle on the Human Environmental

The United Nation (UN) published the concept of guiding principles on the Human Environment in 1972. Ten of these Guiding Principles were defined as formal declarations that express the basis on which an environmental policy can be built and which provide a foundation for action.

2.5.11 The Rio Declaration on Environmental and Development

The UN Conference on Environment and development met at Rio de Janeiro in June 1992, at which time it reaffirmed the 1972 declaration on the Human Environment, and sought to build upon it. This was done with the goal of establishing a new and equitable global partnership through the creation of new levels of cooperation among states, key sectors of societies and people. It was also to aid work towards international agreements, which respect the interest of all, protect the integrity of the global environmental development system, and recognize the integral and interdependent nature of the earth.

Other relevant international conventions include:

- Africa Convention on the Conservation of Natural Resources of 1969
- Convention on the Law of the Seas of 1982
- The Ramsar Convention on Wetlands of 1971

2.6 Nigeria EIA Guidelines and World Bank EA Guidelines

The Environmental Impact Assessment Act No. 86 of 1992 requires that development projects be screened for their potential impact. Based on the screening, a full, partial, or no Environmental impact assessment may be required. Guidelines issued in 1995 direct the screening process.

According to these guidelines the Nigeria EIA Categories include:

- Category I projects will require a full Environmental Impact Assessment (EIA) for projects under this category EIA is mandatory according to Decree No. 86. Projects includes large-scale activities such as agriculture (500 hectares or more), airport (2500m or longer airstrip), land reclamation (50 hectares or more), fisheries (land based aquaculture of 50 hectares or more), forestry (50 hectares or more conversion, etc.
- Category II projects may require only a partial EIA, which will focus on mitigation and Environmental planning measures, unless the project is located near an environmentally sensitive area--in which case a full EIA is required.
- Category III projects are considered to have “essentially beneficial impacts” on the environment, for which the Federal Ministry of the Environment will prepare an Environmental Impact Statement.

With regard to environmental assessment, the Bank classifies projects based on the risks involved, namely: *High Risk*, *Substantial Risk*, *Moderate Risk* or *Low Risk.* The appropriate risk classification for a project is based on consideration of the relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the project sponsor (including any other entity responsible for the implementation of the project) to manage the environmental and social risks and impacts in a manner consistent with the ESSs. Other areas of risk relevant to the delivery of environmental and social mitigation measures and outcomes, include legal and institutional considerations; the nature of the mitigation and technology being proposed; governance structures and legislation; and considerations relating to stability, conflict or security.

The Bank requires that environmental and social assessment of subprojects irrespective of the designated classification, whether:

(a) *High Risk* subprojects; or,

(b) *Substantial Risk, Moderate Risk* and *Low Risk* subprojects, shall be carried out in accordance with the ESSs following the World Bank ESF. At the same time, the subprojects shall comply with the national laws and requirements.

The World Bank risk classification system corresponds in principle with the Nigeria EIA requirements of Category I, II and III, which in actual practice is done with regard to the level of impacts associated with a given project. However, in the event of divergence between the two, the more stringent requirement shall apply.

Thus for this ESMF, the Nigeria's *EIA* requirements and World Bank operational procedures were harmonized as much as possible, hence it is made responsive to the objectives of good practice. It is especially made responsive with regard to the followings:

- Early consideration of environmental and social issues (starting at the screening stage);
- Identification and early consultation with stakeholders;
- Prevention of adverse impacts through the consideration of feasible alternatives; and
- Incorporation of mitigation measures into planning and (engineering) design.

2.6.1 ACRESAL - Adequacy of Instruments for Environmental & Social Issues

Generally, with regard to environmental and social management issues, legislation is in a continuing process of development in Nigeria. In addition to the existing pieces of legislations highlighted above, there are a number of local (states), national and international environmental guidelines applicable to the subprojects under the proposed ACRESAL project.

In other words, the States have some additional legal framework to back up and manage the environmental and social safeguard issues that shall be triggered. The Ministries' officials are conversant with the applicable Environmental Assessment (EA) legislation, procedures and framework based on the Federal EIA Act 86 of 1992.

Although there are no separate laws in most of the States regarding land use, the federal Land Use Act guides the processes of land acquisition and compensation in the various States, which include: -

- Identification of Lands or Sites for various developments
- The Publication/Service of Acquisition Notices
- Enumeration/Inspections, assessment of compensation and the payment of it.
- Documentation of Acquisitions and Gazetting.

Thus, for the ACRESAL subprojects, there are sufficient guidelines to ensure that each subproject succeed socio-environmentally, speaking.

The main challenge would be enforcement of these legislation/guidelines, since most State Government-owned projects, for instance, rarely or are not accustomed to using EA tool for state-owned projects. In addition, there are problems of inadequate funding, low human capacity, computerization of system/information, etc. Consequently, in order to support the due diligence process, avoid causing harm or exacerbating social tensions and ensure consistent treatment of social and environmental issues across subproject intervention areas, institutional capacity strengthening and funding have been recommended in this ESMF.

2.7 Gaps between Nigerian Legislation and World Bank Environmental and Social standards

The gaps between the triggered Nigerian current legislation and WB policies as they relate to this project are summarized in Table 2.1 below. According to the ESRS, all of the ESSs except 7 and 9 are triggered for the ACRESAL project. These ESSs are considered in the Table.

Table 2.1: Gaps between Nigeria Legislation and WB Environmental and Social standards

Project Triggered Policies	Nigerian Legislation	World Bank ESS	Gaps Between the Policies
ESS1 Environmental Assessment	National EIA Act 1992, Clause 2 provides that public or private sector of the economy shall not undertake or embark on or authorize projects or activities without prior consideration of the effects on the environment. The act makes an EIA mandatory for any development project, and prescribes the procedures for conducting and reporting EIA studies. As part of the effective utilization of the EIA tool, the ministry has produced sectoral guidelines. Responsibility for monitoring of EIA activities lies with the NESREA and State ministries of environment but these agencies lack the logistic capability to carry out the tasks assigned to it by the law	An EA is conducted to ensure that Bank-financed projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and of their likely environmental impacts. Any World Bank project that is likely to have potential adverse environmental risks and impacts in its area of influence requires an EA indicating the potential risks, mitigation measures and environmental management framework or plan.	Nigeria currently has a comprehensive framework for assessing and managing the environmental impacts of development projects. However, in comparison with the World Bank ESS1, it would appear that the Nigeria framework lacks the provision of clear requirements or guidance in the assessment of the impact of an activity on public health. In this case the policy of the bank prevails.
ESS2 Labor and Working Conditions	The EIA Act in consonance with the NESREA Act recognize the need for compliance enforcement of the provisions of international agreements, conventions and treaties on the environment and labor matters. These provisions bring the Nigerian EIA Act to par with the World Bank ESS2.	ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.	Essentially, there is no difference between the main framework of both policies.
ESS3 Resource Efficiency and Pollution Prevention and Management	The policies, standards, legislation and guidelines under the EIA Act in consonance with the NESREA Act set out compliance requirements to address water quality, environmental health and sanitation, including pollution abatement. The legislations provide enforce compliance with guidelines and legislations on sustainable management of the ecosystem, biodiversity conservation and the development of Nigeria's natural resources; The regulations seek to use the most appropriate means to prevent and combat various atmospheric pollution; and to address standards applicable to emission from any new mobile or stationary source which causes or contributes to air pollution and may reasonably be anticipated to endanger public health or welfare using appropriate means to reduce emission to permissible levels.	ESS3 recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. The current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of current and future generations. At the same time, more efficient and effective resource use, pollution prevention and GHG emission avoidance, and mitigation technologies and practices have become more accessible and achievable. This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life cycle consistent with GIIP.	Essentially, there is no difference between the main framework of both policies.
ESS4 Community Health and Safety	In consonance with the NESREA Act, Section 20(1), the EIA Act provides the specifications and standards to protect and enhance the quality of Nigeria's air resources, so as to promote the public health, welfare and the natural development and productive capacity of the nations' human, animal, marine or plant life including, in particular, minimum	ESS4 recognizes that project activities, equipment, and infrastructure can increase community exposure to risks and impacts. In addition, communities that are already subjected to impacts from climate change may also experience an acceleration or intensification of impacts due to project activities.	Essentially, there is no difference between the main framework of both policies.

Project Triggered Policies	Nigerian Legislation	World Bank ESS	Gaps Between the Policies
	essential air quality standards for human, animal, marine or plant health; and the control of concentration of substances in the air which separately or in combination are likely to result in damage or deterioration of the environmental and human health ;	ESS4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.	
ESS5 Involuntary Resettlement	The basic legal framework for the acquisition of land in Nigeria is the Land Use Act 1978 as amended under the Amended Land Use Act of 2004, Chapter L5 under the laws of the Federation of Nigeria. The Part 1 of the amended Act 2004 vests all land within the urban areas of any Nigerian State in the Executive Governor of that state. Land within the rural areas of the state is vested on the Local Government. The Part VI, Section 29 of the law provides for compensation to the holder of any land title when such land is to be acquired for public purposes. For developed land, the Governor (in the case of urban areas) or Local Government (in the case of rural areas) may, in lieu of compensation, offer resettlement in any other place as a reasonable alternative accommodation and in acceptance of resettlement, the holder's right to compensation shall be deemed to have been duly satisfied. Although the Land Use Act is not strictly an Act for environmental protection, protection of the environment is one of the considerations which a holder of certificate of occupancy has to observe.	Key objectives of the World Bank's policy on involuntary land acquisition are to avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs; assist displaced persons in improving their former living standards, income earning capacity and production level, or at least in restoring them; encourage community participation in planning and implementing resettlement; and provide assistance to affected people regardless of the legality of land tenure. The policy covers not only physical relocation, but any loss of land or other assets resulting in relocation, or loss of shelter; loss of assets or access to assets; loss of income sources or means of livelihood whether or not the affected people must move to another location. When the policy is triggered, a Resettlement Action Plan (RAP), must be prepared. An abbreviated plan may be developed when less than 200 people are affected by the project. In situations, where all the precise impacts cannot be assessed during project preparation, provisions are made for preparing a Resettlement Policy Framework (RPF). The RAP/RPF must ensure that all Bank's policy provisions detailed in ESS5 are addressed particularly the payment of compensation for affected assets at their replacement cost	Essentially, there is no difference between the main framework of both policies. Lands that would be acquired for this project shall be fully compensated for in accordance with the World Bank policy and principles. The Nigerian regulations while also lacking clear responsibility for monitoring of activities associated with compensations further lack the logistic capability for any agency to carry out the tasks assigned to it by the law. In this case the policy of the bank prevails.
ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources	The provisions under the Nigerian EIA Act seek for the protection and development of the environment, biodiversity conservation and sustainable development of Nigeria's natural resources in general. To the extent of the compliance enforcement provisions, the Nigerian EIA Act and the World Bank ESS3 are similar.	ESS6 recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development. Biodiversity is defined as the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species, and of ecosystems. Biodiversity often underpins ecosystem services valued by humans. Impacts on biodiversity can therefore often adversely affect the delivery of ecosystem services. Requirements related to ecosystem services are set out in ESS1. ESS6 recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support. Habitat is defined as a terrestrial, freshwater, or marine geographical unit or airway that supports assemblages of living organisms and their interactions with the nonliving environment. All habitats support complexities of living organisms and vary in terms of species diversity, abundance and importance. This ESS also addresses sustainable management of primary production and harvesting of living natural	Essentially, there is no difference between the main framework of both policies.

Project Triggered Policies	Nigerian Legislation	World Bank ESS	Gaps Between the Policies
		resources.	
ESS8 Physical Cultural Resources	National Commission For Museums and Monuments Act of 1990, Chapter 242 seeks to protect and preserve any objects of archaeological interest wherever they may be found. Any person who discovers an object of archaeological interest in the course of operations permitted under section 19 of this Act shall notify the Commission.	The Bank seeks to assist countries to manage their physical cultural resources and avoid or mitigate adverse impact of development projects on these resources. This policy is triggered for any project that requires an EA.	No difference in framework. Responsibility for monitoring of activities and enforcement under this Nigerian Regulations is effectively lacking. In this case the policy of the bank prevails.
ESS10 Stakeholders Engagement and Information Disclosure	The EIA Act in consonance with the NESREA Act recognize the need to create public awareness and provide environmental education on sustainable environmental management, promote private sector compliance with environmental regulations	This ESS recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation. Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management and monitoring of the project's environmental and social risks and impacts.	Essentially, there is no difference between the main framework of both policies. Lands that would be acquired for this project shall be fully compensated for in accordance with the World Bank policy and principles. The Nigerian regulations while also lacking clear responsibility for monitoring of activities associated with compensations further lack the logistic capability for any agency to carry out the tasks assigned to it by the law. In this case the policy of the bank prevails.

The summary descriptions of the WB Safeguard Standards are included as Annexure III.

The Nigerian EIA Act and the World Bank ESS1 are similar. The Bank EA ESS1-10 significantly covers all aspects of the Nigerian EIA Act categories I, II and III. Notwithstanding however, in the event of divergence between Bank ESSs and the existing Environmental laws of Nigeria, the more stringent requirement will take precedence.

CHAPTER THREE:
PROJECT DESCRIPTION

3.1 Introduction

The proposed ACRESAL Project is a 5-year multi-sectoral and multi-scale program that is focused on addressing the northern Nigeria regional critical challenges of desertification control and landscape management. The project will develop regional agro-climatic resilience approaches to the challenges in the semi-arid and arid landscapes of the 19 northern States of Nigeria (Adamawa, Bauchi, Benue, Borno, Gombe, Jigawa, Kaduna, Kano, Katsina, Kebbi, Kogi, Kwara, Nasarawa, Niger, Plateau, Sokoto, Taraba, Yobe and Zamfara). It will also focus on improving community livelihoods and resilience through sustainable management of natural resources and small-scale development activities, and strengthen agro climatic institutions in the participating states.

The ACRESAL strategic approach to the intervention sites focuses on securing ecosystem services to cure the excessive flooding during raining season including erosion management measures in the watersheds. In the proposed ACRESAL Project area, erosion and drought threaten production lands and the immediate command areas of important multi-purpose reservoirs (reducing reservoir lifespan). The project is designed around three main components - Investments in targeted areas, Institutional development and Investment activities that prepare a given state to sufficient readiness to implement site interventions with high quality designs to international standards. The components of the ACRESAL Project are as detailed below.

3.2 Components of ACRESAL Project

As currently designed, the ACRESAL Project is structured around four components:

Component A: Dry Land Watershed Management (USD 370 million).

Dryland Watershed Management. This component will implement integrated watershed management planning and addresses challenges of large-scale watershed degradation in northern Nigeria

A1. ***Strategic Watershed Management****:* This subcomponent will support large scale integrated watershed planning and implementation. The Plans will be prepared for up to 20 watersheds, covering all of northern Nigeria. The multisectoral planning process will prioritize project investments, expected to include those related to information, institutions, and those required for desertification control, sustainable land and water management in drylands, and improved natural resource-based livelihoods. Extensive stakeholders consultation and participation will be fundamental in these processe. The strategic watershed plans will also provide a framework and guidance to the micro-watershed-level planning in Component B and will be a foundation for the longer-term dryland management framework of Nigeria supported under subcomponent C1.

A2. Watershed Infrastructure: This subcomponent will support large landscape-level investments, as prioritized in the strategic watershed plans. These may include those related to water resources (e.g., surface and groundwater storage, managed aquifer recharge, riverbank restoration, gully rehabilitation, irrigation, improved water systems), to environmental management (stabilization of sand dunes, forest

management, afforestation), and to agriculture investments at large scale. Some investments will be supported that have been already identified and prepared under NEWMAP, provided they are consistent with ACReSAL objectives and requirements

A3: Special Ecosystems: Investments under this subcomponent will improve the management of special ecosystems, including wetlands (especially the Hajejia-Nguru Wetlands), desert oases, and protected areas. Investments could include those related to wetland improvements, monitoring systems, water management, biodiversity conservation, stabilization of oasis buffer areas and improved water provision, and improving management systems for targeted protected areas.

Component B: Community Climate Resilience (USD 250 million)

Most of the challenges of dryland management are to be found at the local level, where they constitute the day-to-day reality of communities and farmers. Communities need support to be more resilient and communites and households need targeted investments to put new approaches into effect. The criteria for selecting communities are laid out in the PIM. In targeted micro-watersheds, this component will support the following sub-components:
B1. Community Strengthening: This subcomponent aims to strengthen the capacity of communities for sustainable natural resource use and management. Support will be provided to "local project implementation committees", or their local equivalent. Building on the outcomes of the higher-level strategic watershed planning under strategic watershed management intervention. Particular attention will be paid to addressing needs of vulnerable and marginalized groups (groups (including the poor, women, youth, the elderly, persons with disabilities, internally displaced people, pastoralists, and ethnic or religious minorities). Particular attention may be needed for internally displaced persons (IDPs) to address eniquality and to promote peace building initiative to promote ownership.

B2. Community Investments: This subcomponent aims to finance physical investments as prioritized through the micro-watershed planning process., Although the menu of potential investments will vary from community to community, four groups can be described:

- Investments in community-level infrastructure consistent with the goals of improved dryland management: soil conservation, surface and ground water management, streambank restoration, community-managed rainwater harvesting, expanding agroforestry enterprises, agroprocessing and storage, and shared community infrastructure.
- Landscape restoration in community-selected degraded areas, using an approach pioneered by FAO in both northern Nigeria and other dryland areas in western Africa, using the Delfino plow which mimics the traditional half-moon water harvesting technique. It is composed of hybrid agroforestry models on communal lands which include plant species chosen by the communities, which produce non-timber forestry products, such as: acacia (gum Arabic), balanites, fodder, beekeeping, nuts, mushrooms, and mixed planting with grains such as millet and sorghum. Improved pasture and rangeland management and restoration could also be included.
- Support to farmers at the household level to optimized climate-smart rainfed agriculture and farmer-led irrigation. Investments could include water and soil conservation, optimizing farm management (improved crop varieties,

Integrated Pest Management; soil and water testing technologies), value chains, and small-scale solar-powered irrigation.

Component C: Institutional Strengthening and Project Management (USD 80 million)

This Component aims to improve the enabling institutional and policy foundation for multi-sectoral integrated landscape management as well as support project management. This will include the following sub-components:
C1. Institutional and Policy Strengthening: This subcomponent aims to improve the enabling institutional and policy foundation for integrated landscape management in Nigeria – with an initial focus on ACRESAL activities but setting the foundation for longer-term national frameworks. This will include work on improving the institutional infrastructure (IT, connectivity, and office improvements) in key agencies at federal and state levels, setting up the data, analytics and decision support framework (and also facilitate technical assistance and collaboration to improve the policy environment for longer-term integrated landscape management. This sub-component will also have a strong capacity-building and outreach focus for both in-person and virtual training, learning events, internships and competitions to improve youth participation and links with academia, and facilitating interactions with private sector (including tech startups). The platforms for data, analytics, knowledge, and learning will leverage national-level platforms for use at national, northern Nigeria, State, and local levels.

C2. Project Management: This subcomponent intends to support overall project monitoring and management. It will provide support for key overall consultancies (e.g. to support project monitoring and management, watershed implementation support, and capacity-building), as well as incremental operating costs (for specialized expertise, project-related travel, meetings, documentation, etc.) as well systems for improving remote preparation and supervision of investments (e.g. through use of satellite imagery, drones, 360o cameras, videoconferencing, etc.). It will also support the development of monitoring systems and dashboards and improving workflow processes to facilitate coordination across agencies at the central and state levels and public versions to improve transparency and outreach. The monitoring systems and documentation of lessons learned on an ongoing basis will be used to support adaptive project management, especially to identify activities that can be scaled-up depending on implementation performance and community feedback.

Component D: Contingency Emergency Response Components (CERC)
This is a component that could be used as necessary to provide immediate support to an eligible crisis or emergency. A CERC is a financing mechanism available to Borrowers in IPF operations to access funds rapidly to respond to an eligible crisis or emergency (includes disasters and health emergencies). This component will enable quick deployment of uncommitted funds to address these natural or man-made crises and emergencies during project implementation. This component will remain dormant until it is activated in an emergency situation. The component would then allow redistribution of uncommitted and undisbursed funds to finance emergency and recovery needs. A CERC is a financing mechanism available to Borrowers in IPF operations to access funds rapidly to respond to an eligible crisis or emergency

(includes disasters and health emergencies). This component will enable quick deployment of uncommitted funds to address these natural or man-made crises and emergencies during project implementation. The CERC will be prepared under the provisions of Paragraph 12 of IPF Policy for projects in situations of urgent need for assistance which enables suspension of E & S and Fiduciary provisions to enable rapid allocation of the funds for emergencies.

This component will remain dormant until it is activated in an emergency situation. The component would then allow redistribution of uncommitted and undisbursed funds to finance emergency and recovery needs. In such instances, a CERC Operational Manual will be developed, which would require approval from the World Bank and adoption by the Government. The manual would describe the procedures and criteria for activation, eligible expenditures, and specific implementation arrangements

3.3 ESMF Implementation Arrangement

World Bank (WB)

The World Bank will function in the capacity of ***‘'Project Donor***". The Bank will therefore set out the benchmarks for all environmental and social safeguard standards and issues concerned with the development and implementation of ACRESAL activities. It will provide overall supervision, facilitation and coordination of the ACRESAL Project. All subprojects under ACRESAL shall be required to fully comply with the provisions of the Bank's Environmental and Social Standards (ESSs). The Bank shall monitor funds and funds allocations as well as the overall project performance indicators.

Federal Ministry of Environment (FMEnv)

The ministry will function in the capacity of the Federal Government of Nigeria ***(The Project Sponsor).*** It will be the responsible institution for implementing the ACRESAL in Nigeria. The ministry will also facilitate liaisons with all MDAs that are to be involved in the ACRESAL Project and ensure that every effort is made to enhance the positive impacts of the project and reduce/mitigate negative project impacts. The Environmental Assessment Department (EAD) of the Federal Ministry of Environment will ensure that all project ESIAs/ESMPs meet international "best practices" and the NESREA will regulate and enforce the implementation of all ESMPs developed for the ACRESAL Project.

It is essential that the FMEnv and the associated enforcement Agencies, particularly the EAD and NESREA are sufficiently knowledgeable and/or experienced in the workings of the Bank's ESSs. These Agencies are expected to provide necessary E&S safeguards preparation support and during the subproject implementation. Based on the limited extent of involvement of the Agency personnel in the E&S safeguards preparations using the Bank's ESS procedures, these Agencies may not at this time be sufficiently knowledgeable and/or experienced in the Bank's ESSs to provide the desired support. It is therefore strongly recommended that institutionalized trainings be organized for these Agencies to ensure effective involvement in the E&S safeguards preparations for the subprojects at the state level.

Department of Drought and Desertification Amelioration (DDA)

Apart from the above, other departments/agencies of the Federal Ministry of Environment (FMEnv) involved in the execution and management of ACRESAL

Project include Federal Department of Forestry (FDF), Environmental Assessment Department (EAD), Department of Climate Change (DCC), Department for Erosion Flood Control and Coastal Zone Management (EFC&CZM), Great Green Wall (GGW), Forest Reseach Institute of Nigeria (FIRN), National Park Services (NPS) and National Environmental Standards and Regulations Enforcement Agency (NESREA).

It is not clear at this time how versed these Agencies of Government are in knowledge and experience of the Bank's ESSs. However, given the generally low involvement of these Agencies during the NEWMAP implementation, it is unlikely that the Agencies are sufficiently knowledgeable and/or experienced in the workings of the Bank's ESSs to provide effective support to the ACRESAL project. It is therefore recommended that institutionalized trainings be organized for these Agencies to ensure effective involvement in the E&S safeguards preparations for the subprojects at the state level.

ACRESAL-PMU (Federal) - FPMU

The federal ACRESAL-PMU will coordinate all ACRESAL Project administrative and technical activities at the national level. It will be responsible for organizing and implementing capacity building programs, procurement of commodities, consultants and project management. The federal ACRESAL-PMU will establish a communication system between the federal and the state ACRESAL-PMUs, and be responsible for project success on behalf of the Federal Government.

The overall oversight, at the country level, of the E&S safeguards preparation and implementation rests with the FPMU. Based on the involvement of the FPMU specialist personnel in the preparation and implementation of the NEWMAP project under the WB safeguards policies, it is envisaged that significant institutional knowledge and experience relating to the Bank's ESSs would not have been gained by the FPMU. Since the use of the Bank's Environmental and Social Standards (ESSs) requirements in the preparation of E&S safeguards is relatively new for Nigeria, ESF trainings shall be necessary and desirable to strengthen the existing E&S capacities for the FPMU responsible officers.

ACRESAL-PMU (State) - SPMU

The states ACRESAL-PMU will coordinate implementation of ACRESAL Project activities at the state level. It will be responsible for all administrative, technical implementation and project management activities in the state. It will also facilitate liaise with MDAs, CBOs, NGOs and project affected communities.

The direct preparations and supervision of the E&S safeguards instruments for the subprojects at the state level are the responsibilities of the various SPMUs. It is therefore necessary that the safeguards officers at the state are thoroughly knowledgeable in the Bank's ESSs as well as the national E&S safeguards regulations and requirements. It is however noted that most of the SPMUs for the potential ACRESAL states were established during the later stages of the NEWMAP project. The institutional E&S safeguards knowledge and/or experience of these SPMUs and their safeguards officers may therefore be very limited. It is therefore absolutely necessary that E&S safeguards trainings be conducted for the SPMUs to build and/or strengthen the existing E&S safeguards capacities for the SPMU responsible officers.

Relevant Institutions

These are ministries, departments, agencies, civil societies etc that are directly or indirectly involved with the implementation of the ACRESAL Project. Implementation of the ACRESAL Project will involve multi-sectoral participation. These institutions will aid in broader activities under the project.

CHAPTER FOUR:
PROJECT COORDINATION AND IMPLEMENTATION ARRANGEMENTS

4.1 Introduction

The roles, responsibilities and institutional arrangements for the implementation of the ACRESAL are fundamental to the effective implementation of the environmental safeguard measures outlined in this ESMF. It is therefore necessary to highlight and define these attributes accordingly. Details of the institutional arrangements, the roles and responsibilities of the various institutions in the implementation of the ESMF are discussed below.

4.2 ACRESAL Institutional Arrangement

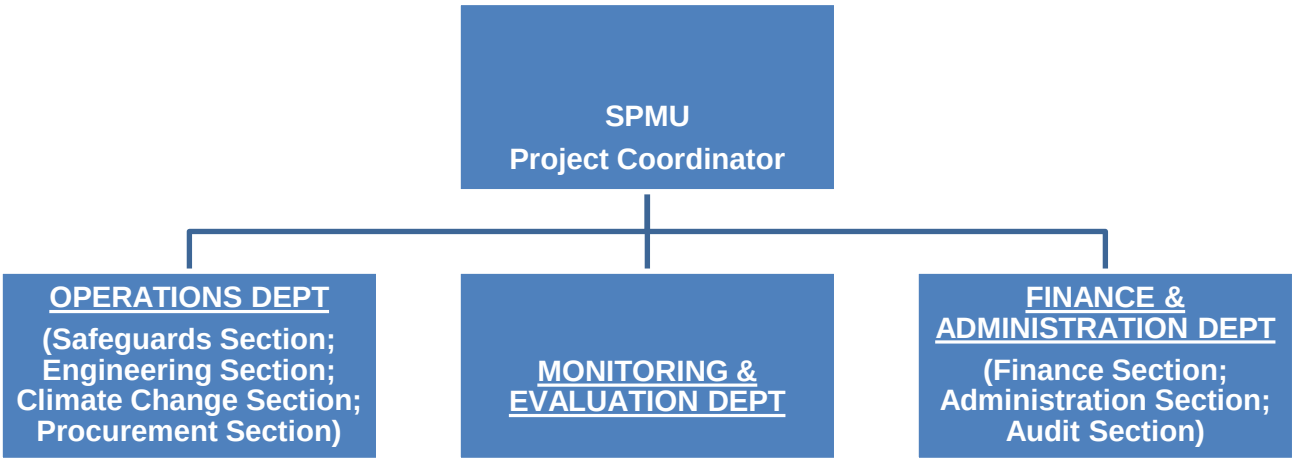
The ACRESAL project will be run at two levels, namely the Federal and States. At the Federal level, the Federal Project Management Unit (FPMU) supervised by the Federal Ministry of Environment will manage the Coordination and Program Support. The FPMU will establish coordination and support relationship with the State counterpart Agencies. At the State level, the State Project Management Unit (SPMU) shall be set up by State Law. The SPMU would work in collaboration with the FPMU, though operating independently.

Some of the potential ACRESAL states have been involved in the NEWMAP program and have already set up their SPMUs with workable structures for ACRESAL project. The SPMUs, supervised by the State Ministries of Environment, will manage and coordinate activities of ACRESAL at the state level and, will provide all necessary support and coordination with all key stakeholder MDAs in the state as well as the subproject community activities. The MDAs shall include Ministries of Agriculture, Water Resources, Lands, Women Affairs, etc. The Ministries of Finance, Budget and /Economic Planning, in the various States shall take the lead in the financial coordination of the ACRESAL preparatory programs.

The law or legal agreement used in establishing the agencies will insulate the agencies and specifically the management unit from undue political or administrative interference. In addition, to implement the ACRESAL program according to the agreed terms and conditions, a formal agreement is needed between the State Governments, the Implementing Agencies (SPMUs) and other MDAs outlining the tasks, responsibilities, schedules, procedures, deliverables etc., required for preparation and implementation of the approved subprojects. Furthermore, the State Project Management Unit (SPMU) will have an advisory board or a technical/steering committee. The board will include representatives from civil society and the government.

The SPMU shall be headed by a Project Coordinator who will supervise activities of staff within three (3) major departments of the Unit, namely: Operations, Finance and Administration, and Monitoring & Evaluation (all three departments will cater for the environmental and social components as well as other project implementation issues as they relate to ACRESAL. The SPMU shall establish a relationship with the Project Financial Management Unit (PFMU) set up by the Office of the Accountant General of the State for financial management of donor assisted projects at the state level. The PFMU will capture the inflow and use of credit proceeds in a transparent manner.

The above arrangement is depicted in the organizational chart shown below:



This relationship would entail the following:

- A copy of the annual budget and work plan will be made available to the PFMU by the PMU;
- PFMU internal auditors will be responsible for regular internal audit in the PMU and submit quarterly reports to the government (copied to IDA).
- A copy of monthly progress reports, quarterly reviews and Interim Financial Reports (IFRs) shall be sent regularly to the PFMU;
- The PFMU internal auditors shall participate in quarterly monitoring visits to communities as organized by the PMU.

4.3 Roles and Responsibilities

The successful implementation of the ESMF will depend on the commitment of the stakeholder sectors and related institutions, the capacity within the institutions to apply or use the ESMF effectively, appropriate and functional institutional arrangements, availability of budget and logistic support to carryout safeguards activities and execute plans, among others. Details of proposed institutional arrangements, the roles and responsibilities of the institutions that would be involved in the implementation of the ESMF are discussed in the following sections. The institutions identified for this ESMF will include:

Federal Level Institutions:

- Federal Ministry of Environment; Agriculture; Water Resources; Lands; Women Affairs; and other relevant Departments and Agencies (MDAs).
- Federal Project Management Unit (FPMU)

State Level Institutions:

- State Ministry of Environment; Agriculture; Water Resources; Lands; Women Affairs; and other relevant Departments and Agencies (MDAs).
- State Project Management Unit (SPMU)

Local Government Level Institutions:

- Local Government Review Committee (LGRC);
- Local Government Desk Office (LGDO)

Community Level and other Institutions

- Community Project Management Committee (CPMC);
- Community Development Associations (CDAs);

- Community Based Organizations (CBOs)
- Non-Governmental Organizations (NGOs)

Direct and Other Stakeholder/Groups:

- Consultants
- Contractors and Site Engineers

Other Development Groups

- World Bank and Other Development Partners

The roles and responsibilities of the above institutions and groups are highlighted below:

4.3.1 Federal Level Institutions

The institutions at the Federal level are responsible for the establishment of national policy goals and objectives and the appropriate provision of technical and financial assistance to State and local governments.

The Federal Ministry of Environment (FMENV) and her relevant Agencies and Departments like the Environmental Assessment Department, Drought and Desertification Amelioration Department, Department of Erosion Control, Flood and Costal Zone Management shall play the role of lead environmental regulator with respect to this ESMF, overseeing compliance requirements, granting consent and also monitoring or providing regulatory oversight for the ACRESAL project. FMENV shall also receive comments from stakeholders, public hearing of project proposals, and convening technical decision-making panel as well as provide approval and needed clearance for EA/EMP or other environmental clearance.

Federal Ministry of Environment (FMENV)

Federal Ministry of Environment (FMENV) is the statutory body with the mandate to ensure environmental protection and natural resources conservation for a sustainable development in the country. The Ministry promotes cooperation in environmental science and conservation technology with similar bodies in other countries and with international bodies connected with the protection of the environment and the conservation of natural resources. The Ministry also cooperates with Federal and State Ministries, Local Government, statutory bodies and research agencies on matters and facilities relating to the protection of the environment and the conservation of natural resources.

Environmental Assessment Department (EAD)

This Department is the lead regulatory agency at the federal level for this project. The department is ultimately responsible for monitoring, assessing, mapping, inventory and generation of baseline environment data for the prevention, mitigation and control of environmental degradation and other related environmental disasters in Nigeria. Ensuring that all developmental projects are carried out in compliance with relevant environmental laws and regulations. Reviews and discloses safeguards reports for public participation with a view of issuing EIA certifications.

Drought and Desertification Amelioration Department

This Department is responsible for combating desertification, land degradation in Nigeria and ensures rational utilization, conservation and sustainable management of the natural resources of the dry land as well as effective management of drought in the country.

Department of Erosion Control, Flood and Costal Zone Management

- Monitoring the impact of global change and associated impacts on flood, inland and coastal Erosion
- Land reclamation
- Development of Soil Conservation policy and master plan towards efficient land use practices in Nigeria
- Processing and management of satellite data for management of hydro-metrological related disasters in Nigeria-flood, erosion, water harvest & Coastal Erosion
- Inter-basin water transfer from regions of surpluses to region of deficits for water harvesting for flesh flood prevention
- Development and operation of flood, early warning systems.
- Studies and designs for control of Soil Erosion, Flood Coastal Zones Management water harvesting and management.
- Public enlightenment on prevention, mitigation and control of Flood Erosion and Coastal Zone Degradation.
- Operation and Maintenance of installed physical structures for control of flood and erosion, to ensure optimum efficiency and achievement of designed life spans of such structures.
- Protection and management of coastal shoreline against coastal erosion and coastal degradation.
- Establishing linkages with agencies with similar mandates.

Department of Climate Change

The Department of Climate Change (DCC) in the Federal Ministry of Environment, was created to implement the Climate Change Convention and the Kyoto Protocol activities. The vision of the National Policy on Climate Change (NPCC) is a climate change resilient Nigeria, and its mission is to strengthen national initiatives to adapt to and mitigate climate change in a participatory manner. There are several policies and strategic initiatives which, if properly implemented, can serve as adaptation and mitigation climate change measures, including the National Policy on Drought and Desertification.

The National Policy on Climate Change of Nigeria is a strategic policy response to climate change that aims to fosters low carbon, high growth economic development path and build a climate-resilient society through the attainment of set targets. The plan clearly identifies climate change as one of the major threats to economic development goals and food security. To meet these challenges, the plan includes concrete targets in the areas of climate change adaptation, afforestation, and energy supply. The vision of this policy document is aimed at a climate change-resilient Nigeria, ready for rapid and sustainable socio-economic development.

Its mission is to strengthen national initiatives to adapt to and mitigate climate change and involve all sectors of society, including the poor as well as other vulnerable groups (women, youth etc.) within the overall context of advancing sustainable socio-economic development.

Department of Forestry

The mandate for forestry in Nigeria resides with Department of Forestry in the Federal Ministry of Environment. Forestry is administered at three levels: the Federal

Department of Forestry in Abuja; 36 state forestry departments; and 774 local councils. The Federal Department of Forestry is mandated to propose policies, to oversee forestry administration nationwide, and to coordinate forestry development. It is not, however, an executing agency. Thus, state forestry departments deal with the management, development and protection and conservation of forest resources.

At the federal level, the Forestry Research Institute of Nigeria (FRIN) has the mandate for research in all aspects of forestry, wildlife and forest product utilization. The National Parks Service (NPS) is responsible for the management of national parks, which are not delegated to the states.

Great Green Wall
The Great Green Wall Programme is a Pan-African Initiative conceived to address land degradation and desertification, boost food security and support communities to adapt to climate change in the Sahel-Sahara region of Africa. The Initiative is specifically tailored towards strengthening the resilience of the regions people and natural system with sound ecosystem management, sustainable development of land resources, and the protection of rural heritage and improvement of the living conditions of the local populations.

Federal Ministry of Water Resources (FMWR)
The Federal Ministry of Water Resources is the umbrella government organ at the Federal level under which all water resource activities, including hydrological activities, operate. The Nigerian Hydrological Services Agency and Integrated Water Resources Commission and River Basin Development Authorities are under the Ministry.

Nigerian Hydrological Services Agency (NIHSA)
The Nigeria Hydrological Services Agency (NIHSA) operates and maintains hydrological stations nation-wide for gauging of surface water points. The agency also undertakes groundwater exploration and monitoring. The data collected is stored in robust database system, analyzed and processed for the purpose of mapping all the nation's water deposits and also to provide the vital hydrological and hydrogeological data required for sustainable water resources budgeting for various purposes such as domestic, irrigation/agricultural development (for food security and poverty alleviation), hydroelectricity generation, industrialization, tourism and recreation among others.

Integrated Water Resources Commission
The commission ensures the effective monitoring and evaluating of water sector program, and also receives and investigates complaints from consumers and other persons in the water resources sector.

Federal Ministry of Works (FMW)
The Federal Ministry of Works is engaged to ensure modern and reliable national road transport network in the country. They are also charged with Federal Highways and Bridges (Planning & Design, Construction & Rehabilitation, Monitoring and Maintenance of Federal Roads nationwide, Provision of Highway Engineering Infrastructure, Surveying and mapping the nation’s internal and international boundaries. Under the ministry they have several departments and agencies.

Federal Ministry of Agriculture and Rural Development (FMARD)

The Federal Ministry of Agriculture and Rural Development ensures that the citizenry are provided with credible and timely information on government activities, programs and initiatives; while creating an enabling technological environment for socio-economic development of the nation.

National Environmental Standards and Regulatory Enforcement Agency (NESREA)

The agency is chiefly responsible for the enforcement of environmental laws and regulations for the protection and development of the environmental, biodiversity conservation and sustainable development of Nigeria's natural resources in general and environmental technology including liaison with relevant stakeholders within and outside Nigeria on matter of enforcement of environmental standards, regulations, rules, laws, policies and guidelines.

The safeguard responsibilities for ACRESAL Project are highlighted in the table 5.0 below:

Table 4.1: Safeguard Responsibilities for ACRESAL Project

S/No	Category	Roles
1	Federal Government MDAs (Federal Ministry of Environment and her agencies (Such as NESREA, GGW, etc.)	Lead role -provision of advice on screening, scoping, review of draft RAP/EA report (in liaison with State Ministry of Environment), receiving comments from stakeholders, public hearing of the project proposals, and convening a technical decision-making panel, Project categorization for EA, Applicable standards, Environmental and social liability investigations, Monitoring and evaluation process and criteria
2	State Government MDAs (Ministry of Lands, Survey	Compliance overseer at State Level, on matters of Land Acquisition and compensation and other resettlement issues, Lead role - provision of advice on screening, scoping, review of draft RAP/EA report (in liaison with Federal Ministry of Environment), receiving comments from stakeholders, public hearing of the project and Urban Development, Ministry of Environment, etc. proposals, and convening a technical decision-making panel, Monitoring and evaluation process and criteria.
	Other MDAs	The MDAs applies when relevant areas or resources under their jurisdiction are likely to be affected by or implicated projects. They participate in the EA processes and in project decision making that helps prevent or minimize impacts and to mitigate them. These institutions may also be required, issue a consent or approval for an aspect of a project; allow an area to be included in a project; or allow impact to a certain extent or impose restrictions or conditions, monitoring

		responsibility or supervisory oversight.
3	World Bank	Assess implementation and Recommend additional measures for strengthening the management framework and implementation performance.
4	ACRESAL-FPMU Safeguards Unit	Liaise closely with Federal Ministry of Environment in preparing a coordinated response on the environmental and social aspects of project development. Ensure compliance with statutory requirements. Provides technical guidance on ESMP/RAP implementation. Liaise between SPMU and World Bank for effective coordination of ACRESAL project
5	ACRESAL-SPMU Safeguards Unit	Liaise closely with State Ministry of Environment in preparing a coordinated response on the environmental and social aspects of project development. Ensure compliance with statutory requirements. Provides technical guidance on ESMP/RAP implementation. Liaise between Communities and the FPMU for effective coordination of ACRESAL project
6	Local Government	Liaising with the SPMU to verify adequacy of resettlement location and provide approval for such sites, Providing additional resettlement area if the designated locations are not adequate, Provide necessary infrastructures in relocated areas, engage and encourage carrying out comprehensive and practical awareness campaign for the proposed projects, amongst the various relevant grass roots interest groups.
7	Community Development Associations (CDAs))	Ensure Community participation by mobilizing, sensitizing community members;
8	Consultants, Contractors, and Site Engineers	Will work with the PMUs at Federal and State levels, and other stakeholders. They are to ensure effective project delivery in a timely, safe and environmentally sound manner.
9	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 rehabilitation techniques, Organizing, coordinating and ensuring safe use of volunteers in a response action, and actually identifying where these volunteers can best render services effectively & Providing wide support assistance helpful in management planning, institutional/governance

		issues and other livelihood related matter, Project impacts and mitigation measure, Awareness campaigns
10	The General Public	Same as above

The other institutions come in as and when relevant areas or resources under their jurisdiction or management are likely to be affected by or implicated in the execution of the project. These institutions are grouped broadly into two – resource based ones and the utility service providers. They all have a significant role and are consulted as appropriate. They participate in the EIA processes and in project decision-making that helps prevent or minimize impacts and to mitigate them. These institutions may also be required:

- To issue a consent or approval for an aspect of a subproject;
- To allow impact to a certain extent or impose restrictions or issue permit conditions.

Furthermore, the institutions may have monitoring responsibility or supervisory oversight for an area of concern or interest to them during project implementation.

4.3.2 State Level Institutions

The State level institutions include the SPMU and other relevant Ministries, Departments and Agencies (MDAs). Some relevant agencies include:

State Environmental Protections Agencies/Authorities (SEPAs*)*

Most states have set up Environmental Protection agencies as the regulatory body to protect and manage the environmental issues in their domain. The functions of the SEPAs include:

- Enforcement of all environmental legislations in the states
- Minimization of impacts of physical development on the ecosystem
- Preservation, conservation and restoration to pre-impact status of all ecological process essential for the preservation of biological diversity.
- Protection of air, water, land, forest and wildlife within the state.
- Pollution control and environmental health in the state.

State Ministry of Agriculture & Rural Development (SMARD)

The states' ministries of Agriculture are mandated to promote accelerated agricultural development, increase production in all the sub sectors; and realization of the structural transformation in the socio-economic development of the rural areas.

State Ministry of Works (SMW)

The Ministry of Works at the State level ensures the construction and maintenance of rural and urban road networks. They are also responsible for the physical development of the States specifically the duties of Planning, Researching, Formulation, Implementation and evaluation and evaluation of policies on roads, electrical and Mechanical installations as well as the acquisition of earthmoving equipment and other machines needed in survey and Civil Engineering works.

State Ministry of Lands

The major function of the Ministry of Land is to ensure that there is optimal utilization of land resources in their states in order to achieve development. For the ACRESAL purpose, the State Ministry of land will provide proper guidelines in acquiring land from the members of the community for the purpose for the work.

State Ministry of Information and Communications
The State Ministry of Information and Communication will be responsible for dissemination of information that will enhance and facilitate project understanding and acceptance at the level of the state. It will have an idea on the language of the community members and the culture of its indigenous people. The ministry will utilize the use of radios, television media, public awareness campaigns and jingles; going into the communities and informing the people and other communication media to educate the community members on the importance of the ACRESAL in their community. This ministry will play a vital role in community involvement mechanism.

State Ministry of Human Capital Development
This ministry will work with the State ACRESAL to ensure that members of the local communities gain occupational benefits from project implementation.

State Ministry of Rural Development
The State Ministry of Rural Development is responsible for community-based matters such as community mobilization; self-help projects, rural industrialization, neighborhood watch, training and workshop for community development associations, listing of community development associations in the State etc. The Ministry will assist in educating the community members on the importance of the ACRESAL project and will provide indigenous communities with necessary assurances. For example: that the ACRESAL will not disrupt any farming practices but rather provide a better environment for production systems to thrive.

4.3.2.1 State Project Management Unit (SPMU)

As the implementing authority, the State PMU will have the mandate to:

- Coordinate all policies, programmes and actions of all related agencies in the State;
- Ensure the smooth and efficient implementation of the subprojects in the state;
- Cooperate with the Steering/Technical Committee that provides guidance to the technical aspects of all subproject activities;
- Maintain and manage all funds effectively and efficiently for the subprojects;
- Plan, coordinate, manage and develop ACRESAL subprojects to ensure success;
- Coordinate activities of the State Licensing Authority and all vehicle inspection units.
- Recommend on policy issues to the Governor including mechanisms for implementation.
- Prepare plans for the development and management of ACRESAL subprojects.
- Facilitate the discussion between project affected persons (PAPs) and communities regarding compensation for land acquired for the subprojects and micro-projects;

- Monitor the subproject work to ensure that the activities are carried out in a satisfactory manner;
- Organize necessary orientation and training for the SPMU officers so that they can carry out consultations with communities, support communities in carrying out RAPs and implement the payment of compensation and other measures (relocation and rehabilitation entitlement) to PAPs in a timely manner;
- Ensure that progress reports are submitted to the World Bank regularly

4.3.2.2 PMU Safeguard Units

To ensure sustainability in all the ACRESAL subprojects, an Environmental/Social Safeguards Unit that reports directly to the Project Coordinator shall exists within the SPMU. The paramount objective of the Environmental/Social Safeguards unit is to ensure the effective consideration and management of environmental/social concerns in all aspects of ACRESAL subprojects, from the design, planning, implementation, monitoring and evaluation of initiatives in the various States. A key function of the Unit is to engender a broad consensus, through participatory methods and extensive dialogue with affected and interested parties, on fair and adequate methods by which rights of way can be cleared of occupants as needed, taking account of international standards for involuntary displacement as incorporated into the World Bank's ESS5 on Involuntary Resettlement and environmental compliance with the EA. With this, particular attention is directed at minimizing environmental/social risks associated with the development of project initiatives, as well as the identification and maximization of social development opportunities arising from investments.

The Safeguard Unit will be expected to advise on the environmental and social costs/benefits of the different options and audit environmental and social safeguards compliance of subprojects. For all environmental and social issues, the Safeguard Unit shall work closely with other relevant MDAs in preparing a coordinated response on the environmental and social aspects of the ACRESAL subprojects.

Two members of the PMU will be designated as Environmental and Social Officers, respectively to oversee the implementation of Safeguard instruments for the ESMF and the RPF as well as any other environmental and social provisions as deemed fit for project implementation as per the regulations of the World Bank and Government of Nigeria and the respective State government. The roles and responsibilities of the Safeguard Specialists (Environmental and Social Officers to anchor environmental and social issues respectively) are described below:

Roles & Responsibilities of Safeguard Specialist

- Review all EA / SA Documents prepared by consultants and ensure adequacy under the World Bank Environmental and Social Safeguard Standards ESS1-10.
- Ensure that the project design and specifications adequately reflect the recommendations of the EIA / ESIA
- Coordinate application, follow up processing and obtain requisite clearances required for the subproject, if and when required
- Prepare compliance reports with statutory requirements.

- Develop, organize and deliver safeguards training program for the other SPMU officers, the contractors and others involved in the subproject implementation, in collaboration with the FPMU
- Review and approve the Contractor's Implementation Plan for the environmental measures, as per the ESIA and any other supplementary environmental studies that may need to be carried out by the SPMU
- Liaise with the Contractors, the SPMU and the Communities on the implementation of the ESMP / RAP
- Liaise with various Central and State Government agencies on environmental, resettlement and other regulatory matters
- Continuously interact with NGOs and Community groups that would be involved in the subprojects
- Establish dialogue with the affected communities and ensure that the environmental concerns and suggestions are incorporated and implemented in the subprojects
- Review the performance of the subprojects through an assessment of the periodic environmental monitoring reports; provide a summary of the same to the Project Manager, and initiate necessary follow-up actions
- Provide support and assistance to the Government Agencies and the World Bank to supervise the implementation

4.3.3 Local Government Level Institutions

The Local Government (LG) has become accepted as the government nearest to the people or the masses. For any meaningful development to take place, this level of government needs to be galvanized, to execute people oriented programs, which seek to lower poverty level as is designed in ACRESAL. The LG governs the affairs in the various communities. It is expected that it serves as an interface between the community members and the State ACRESAL. The LG can assist in the implementation of the proper community mechanism. Members of the local government are mostly people from the communities and can easily win the trust of the people. Their staff can work together with the other MDAs and CBOs.

The Local Government Councils in participating states have to be fully briefed and enlightened in the process and steps to be taken in the ESMF/EA/ESMP and the overall subproject execution. The Council should in turn engage and should be encouraged to carry out a comprehensive and practical awareness campaign for the proposed ACRESAL project, amongst the various relevant grass roots interest groups.

4.3.4 Community Level and other Institutions

This includes the traditional and administrative institutions for the communities and other concerned stakeholders/groups. The views/opinions as well as the concerns of these are vital in the choosing and execution of the various subprojects. The villages, communities and youth leaders shall ensure that social values are not interfered with.

4.3.5 Community Based Organizations (CBO)

These are organization based in the communities. Organizations in a community can serve as an interface and can speak for the people. They can communicate to the State ACRESAL, the intentions and needs of the people and vice versa during the proposed project.

4.3.6 World Bank

The World Bank will assess the implementation of the ESMF and recommend additional measures for strengthening the management framework and implementation performance, where need be. The reporting framework, screening procedures and preparation of management and mitigation plans shall be discussed and agreed to by the Bank team and PMU during the ACRESAL implementation.

4.3.7 Consultants, Contractors and Site Engineers

The Consultants and Contractors will work with the PMUs and other stakeholders to ensure the prompt and effective delivery of the ACRESAL subprojects.

4.3.8 Environmental and Social Safeguards Manuals

Environmental and Social Safeguards Manuals have been prepared by the EAD of the FMENV to provide guidance in the conduct of EIA for erosion control, and watershed management in Nigeria. These guidance documents shall be applicable in the development and preparation of the ACRESAL project. The ACRESAL-FPMU, ACRESAL-SPMU, Safeguards Units and implementers of subprojects are required to ensure that all project activities comply with environmental and social safeguards requirements as provided in these Manuals and the World Bank ESS1-10.

CHAPTER FIVE:
DESCRIPTION OF THE POTENTIAL PROJECT STATES

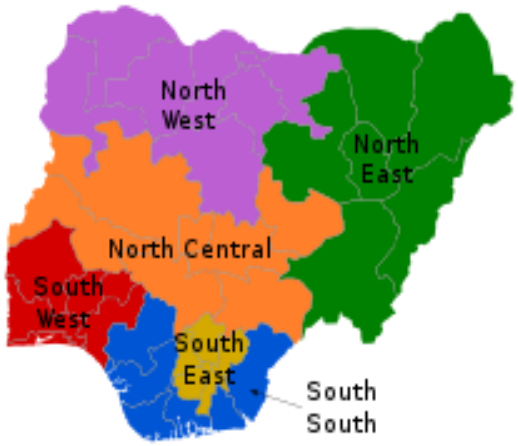
5.1 Introduction

The ACRESAL Project will potentially cover 19 States of Nigeria geopolitically located within the North East zone, North West zone and North Central zone. The States in each zone are as follows:

North Central Zone:
Niger, Kogi, Benue, Plateau, Nasarawa and Kwara.

North East Zone:
Bauchi, Borno, Taraba, Adamawa, Gombe and Yobe.

North West Zone:
Zamfara, Sokoto, Kaduna, Kebbi, Katsina, Kano and Jigawa.



The six geopolitical zones of Nigeria

There are six geopolitical zones that make up Nigeria. Three of these zones (North Central Zone, North East Zone and North West Zone constitute the proposed ACRESAL project areas. The six zones were carved out based on states with similar ethnic groups, and/or common political history.

5.2 Sources of Baseline Information

The environmental characteristics of the proposed ACRESAL Project area which cuts across northern Nigeria are summarized under Sections 5.3. The geologic and soil characteristics of the project area are summarized. The natural environmental factors include climate and vegetation, topography and landforms, hydrogeology and hydrologic patterns. Information sources for this evaluation include published literature, surface geologic map, and the physical observations made during site inspections in the course of the study.

Prevailing climatic conditions were sourced from the nearest meteorological center with existing literature complimenting field data to establish the project area rainfall, ambient temperature, wind direction and speed, atmospheric pressure and relative humidity. Information and data relating to the vegetation, topographic, geological, hydrogeological, hydrological and hydraulic nature of the area were used to fully characterize the watershed. Road transect or quadrats method was used to sample flora/fauna.

5.3 Summary of Baseline Data for the States

5.3.1 Locations and General Descriptions

TABLE 5.1: GENERAL DESCRIPTIONS OF PROJECT STATES AND GPS LOCATIONS

S/N	STATE	LOCATION COORDINATES	GEOPOLITICAL ZONE	BORDER STATES	POPULATION	NO. OF LGAs	LAND AREA
1	Adamawa	Latitude $9^{o}12^{o}$N and 12^{o} 30E	North East	Borno, Gombe, Taraba, Republic of Cameroon.	4,737,051	21	38,700 Km^2

2	Bauchi	Latitude 9° 3' and 12° 3'N and longitudes 8° 50' and 11° E	North East	Kano, Jigawa, Taraba, Plateau, Gombe, Yobe, Kaduna.	6, 537, 314	16	49,119km^2
3	Benue	Longitude 7° 47' and 10° 0' E. Latitude 6° 25' and 8° 8' N	North Central	Nasarawa, Taraba, Cross-River, Enugu, Kogi, Republic of Cameroon.	6, 469, 083	23	34, 095km^2
4	Borno	Latitude 10^{0}N to 13^{0}N and longitude 12^{0}E to 15^{o}E	North East	Adamawa, Gombe, Yobe, Republic of Chad, Niger Republic.	140,431,790	27	69,435km^2
5	Gombe		North East	Taraba, Bauchi, Borno, Yobe	2, 365, 040	11	20,265km^2
6	Jigawa	Latitude 11°N and 13°N and Longitudes 8°E and 10.15°E	North West	Kano, Katsina, Bauchi, Yobe, Republic of Niger	6,516,170	27	24,515.62km^2
7	Kaduna	Latitude 10^o 35'N and longitude 7^o 25'E	North West	Zamfara, Katsina, Kano, Bauchi, Plateau, Nasarawa, Niger, FCT.	9,335,595	23	46, 053km^2
8	Kano	Latitudes 12^o 00'N and 12^o 22'N.and longitudes 8^o 31'E to 9^o 05'E	North West	Bauchi, Jigawa Katsina, Kaduna.	14,932,151	44	21,276.87km^2
9	Katsina	Latitude 11° 08' N and 13° 22' N and longitude 6° 52' E and 9° 20' E		Kaduna, Zamfara, Kano, Jigawa.	8,823,248	34	24,971.22km^2
10	Kebbi	Latitudes 10°and 13°N and longitudes 3°30' and 6°E	North West	Niger Republic, Benin Republic, Sokoto, Zamfara, Niger State.	5,040,859.	21	37,727.97km^2
11	Kogi	Latitude 8°44.64' N and 6°32.02' N and longitude 5°20.97' E and 7°50.59' E	North Central	Niger, Ekiti, Benue, Anambra.	4,636,071	21	30,354.74km^2
12	Kwara	Latitudes 8˚-10˚N and longitude 3˚-6˚E	North Central	Niger, Oyo, Osun, Ekiti, Kogi	2, 365, 353	16	36, 825km^2
13	Nasarawa	Latitude 7^0 45^l and 9^0 25^{1,}'N of the Equator and between Longitude 7^{0}and 9^0 37'E	North Central	Kaduna, FCT, Kogi, Benue, Taraba, Plateau	189,835	13	27, 137.8 km^2
14	Niger	Latitude N13° 2' and longitude E5° 16'	North Central	Zamfara, Kaduna, FCT, Kogi, Kwara, Kebbi, Republic of Benin,	6,332,642	25	74,108.58km^2
15	Plateau	Latitude 10°11′N and 8°55′N and longitude 8°21′E and 9°30′E	North Central	Bauchi, Kaduna, Nasarawa, Taraba.	3, 206, 531	17	30, 913 km^2
16	Sokoto	Latitude of 13°4'0"N and a longitude of 5°13'60"E	North West	Republic of Niger, Zamfara, Kebbi, Republic of Benin	3,702, 676	23	25, 973km^2
17	Taraba	Latitude 6^o and 8^{o}30'N and longitude 9^o 00' and 12^o 00'	North East	Nasarawa, Benue, Plateau, Bauchi, Gombe, Adamawa,	2, 294, 800	16	54, 473km^2
18	Yobe	Latitudes 12^0 00' and 13^0 28' N and longitudes 9^0 45' and 12^0 30'E	North East	Republic on Niger, Jigawa, Bauchi, Borno.	2, 321, 339	17	54, 502km2
19	Zamfara	Latitudes 12º 30' and 13º 00' N and longitudes 6º 00' and 6º 30' E	North West	Republic of Niger, Kaduna, Katsina, Sokoto, Niger.	3,278,873	14	38,418km^2

5.3.2 Biophysical Environment for States in North Central Zone

The States within the North Central Zone of Nigeria include Benue, Kogi, Kwara, Nasarawa, Niger, and Plateau.

Benue State is within the Southern Guinea Savanna agro-ecological zone of Nigeria which is characterized by distinct wet and dry season. The mean annual rainfall is about 1137 mm, with a distribution between April to October. The landform is moderately undulating. The total average evapo-transpiration is estimated at about 2,602 mm with mean annual relative humidity of about 40.7 percent.

The general topography of Nasarawa State is that of hills/dissected terrain, undulating plains and low lands. Its valley and troughs extend inland for some 30 kilometers and it is made up of flood plains laying generally below 250 meters. The flood plains further protrude inland along the coast of river Benue. The area consists of very fertile alluvial soil deposited by the seasonal flood of river Benue.

The hydromorphic soil provides a generally level plain, expect where it is broken by the folded features of Awe to the south east and those of Toto to the south west.
On the eastern section of the zone, the northern part has a greater concentration with the Monkwa hills in the northeast and the Mada rolling hills stretching from Wamba through Akwanga down to Nasarawa Eggon local government areas.

The fertile soil and hydrology of the zone permits the cultivation of most of Nigeria's staple crops and still allows sufficient opportunities for grazing, fresh water fishing and forestry development. The majority of the populace in the State (85%) are farmers while others constituting (15%) are involved in vocations such as white-collar jobs, business, craft and arts. The major arable crops grown include maize, cassava, vegetables, rice, yam, millet, cocoyam, potato, cowpea, groundnut, guinea corn, fruits and sugarcane. Livestock reared include goat, sheep, cattle, chicken and donkey (Niger State Agricultural Development Project, 2002). These crops are usually grown in commercial quantity.

The geological location of zone endows it with a vast number of mineral resources. The zone boasts of commercial quantity of large mineral deposit like gold, talc, kaolin, tantalite, granite, marble, copper, lead, silica, iron, feldspar, columbite, mica, quartzite and limestone.
The highest rainfall is recorded during the wet season months of July and August.

Climate and Temperature:
The zone falls within the Guinea Savannah vegetation zone with distinct dry and wet season. The area experiences a tropical savanna climate which is strongly influenced by the tropical maritime air mass and the tropical continental air mass like in most part of West Africa. The tropical maritime air mass which originates from the southern high-pressure belt is humid in nature and is attended with on-shore South-western winds. The tropical continental air mass on the other hand is dry and accompanied by North-east trade winds.

Rainy season lasts from May to mid-October with a peak in August which has the highest number of rainstorms and sediment generation and an uncomfortably high humidity. The rainy season lasts for about 150 days in the northern parts to about 120 days in the southern parts of the State.

Temperature
in Niger State is generally high throughout the year with a yearly average of 34°C. The climate is very warm with April as the hottest month of the year while August is the coldest month. The average annual temperature in Minna is 27.5°C. The minimum monthly temperatures for Minna range from 21°C to 29°C and maximum monthly temperatures range from 27°C to 41°C.

Though situated in the tropical zone, a higher altitude means that Plateau State has a near temperate climate with an average temperature of between 13 and 22°C. Harmattan winds cause the coldest weather between December and February.

Typically, the area is affected by two wind patterns, the harmattan wind from the Sahara which is responsible for the cool dry months of November to February (about 24^0C) and the Southwest Monsoon Trade Winds blowing across the Atlantic Ocean which is responsible for the rains of June to October as shown in Figure 3-1. Average relative humidity is put at 42%. The average rainfall is from about 800mm to 1000mm. (Tukur, A 2014). Figure 3-1 shows the plot of average monthly temperature and rainfall distribution through the year.

The zone has a humid climate and falls within the geographic region with two distinct seasons namely; rainy season and dry season. The rainy season which lasts for eight months, starts from March and runs till October with annual rainfall in the range of 100-200mm. The dry season runs from November to late February with very scanty rainfall (Iloeje). These seasons are controlled by the position of the Inter-Tropical Discontinuities (ITD) whose movement is reflected in the corresponding shifts with the rain belt (Aziegbe, 2005). The wet season reaches its first maximum in July and the second is September. Both maxima are separated by a brief spell referred to as “August Break”.

There are however usually one or more out-of-season rains in January or February. This early rainstorm enables farmers to hoe their farms in preparation for the planting season which starts in March. The annual rainfall ranges from 1875mm to 2560mm.Temperatures are usually very high during the day, particularly in March and April. Along river valleys, these very high temperatures plus high relative humidity produces inclement weather conditions. The average daily temperature during dry season is approximated at 33ºC, while that of rainy season is 30ºC. Temperatures fluctuate between 21 – 37 degrees Celsius in the year. The south-eastern part of the state adjoining the Obudu-Cameroun mountain range, however, has a cooler climate similar to that of Plateau State.

Kogi State has two distinct seasons in a year; they are the wet and dry seasons. The wet season spans between middle of March and October. While between the months of October and March, the state experiences the dry season, during this season the air is dry with temperature missing up during the day.

Hydrology and Geology
Much of Benue State falls within the Benue Valley/trough which is believed to be structurally developed. During the Tertiary and possibly the Interglacial periods of the Quaternary glaciation, the Benue and Niger Valleys, otherwise known as the Niger/Benue trough, were transgressed by the waters of the Atlantic Ocean. As a result, marine sediments form the dominant surface geology of much of Benue State.

Kogi State has two main rock types, namely, the basement complex rocks of the Precambrian age in the western half extending slightly eastwards beyond the lower Niger Valley and the sedimentary rocks in the eastern half. The various sedimentary rock groups extend along the banks of River Niger and Benue and Southeast wards through Enugu and Anambra States, to join the Udi Plateau.

Kwara State falls within Tropical Savanna Climate which has an annual Temperature and rainfall of 26.3˚C and 1227mm respectively. Annual rainfall of Kwara state is between 1000mm to 1500mm with double rainfall peaks in June and September. The Least amount of Rainfall occurs in January with an average of 10mm while the most rainfall falls in September with an average of 234mm. the Temperature are highest on average in March at around 28.8˚C while August has the lowest average temperature of the year at 24.2˚C. Relative Humidity in the wet season is between 75 – 80% while in the dry season it is about 65%. The daylights are sunny and the sun shines brightly for about 6.5 to 7.7 hours daily from November to May (NBS, 2009). Kwara state has an area Landmass of 36,825km^2 (NPC, 2010).

Niger State lies within the North-central portion of the Nigerian Basement Complex. About one half of the state's landmass is underlain by the Basement Complex rocks while the remaining half is occupied by the Cretaceous Sedimentary rocks of the Bida Basin and part of the Sokoto Iullemeden Basin. The Basement complex rock is characterized by three lithofacies; the migmatite-gneiss complex, the low-grade schist belt and the older granites. The migmatite-gneiss complex is composed of heterogeneous assemblage of migmatites, ortho and para gneisses, and a series of metamorphosed basic and ultrabasic rocks. The schist belt formations are composed of low to medium grade metamorphosed sedimentary and volcanic rocks. The schists in the project area consist predominantly of phyllite, mica schist, talc schist and quartz schist inter-layered with amphibolite. The older granites are granitic rocks which show evidences of ancient tectonic activity in the form of major and minor faults, joints and fractures most especially around the rock exposure at the settlements.

Kwara state consists of Precambrian basement complex rock. The elevation on the Western side varies from 273m to 333m above sea level while on the Eastern Side it varies from 273m to364m. (Ajadi et al., 2011).

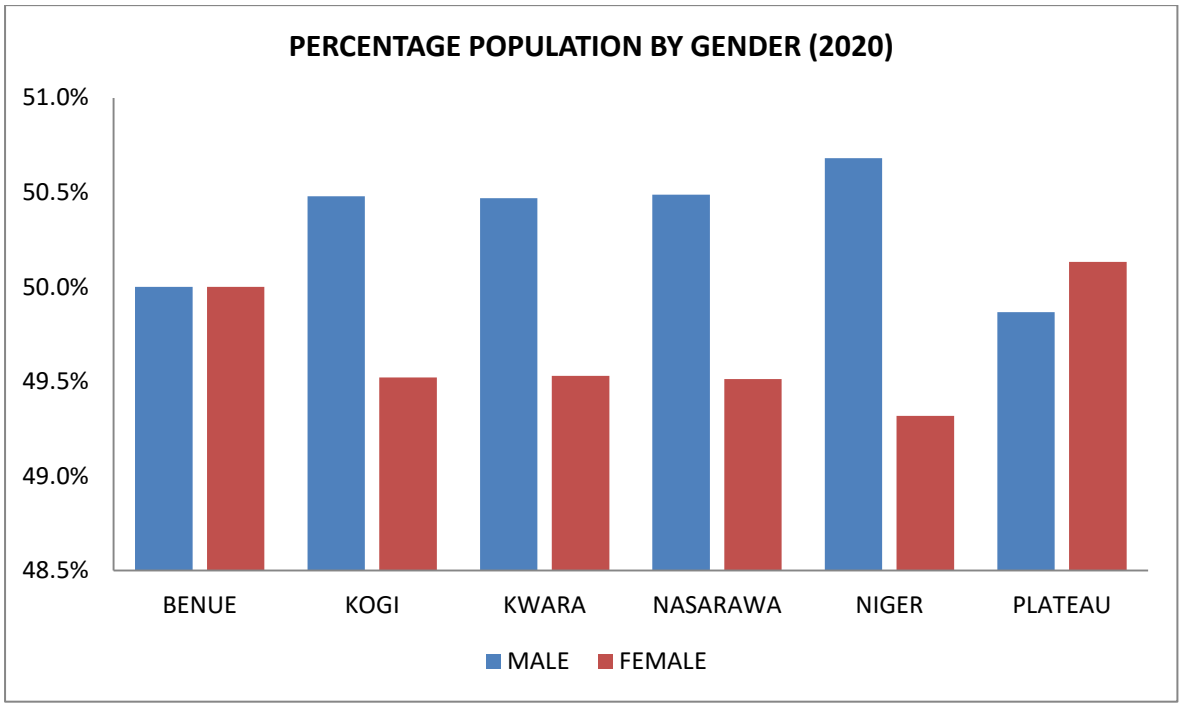
The vegetation is mainly Forest and Savannah and it constitutes about 47.78% and 35.04% respectively. the soil is mostly Ferruginous tropical soils and support crop production; However, low fertility is observed in Kwara due to leaching of minerals and nutrients because of the high seasonal rainfall coupled with high temperatures. The common tree species found in Kwara states includes Vitellaria paradoxa (Shea butter), Acacia spp, Parkia spp, Afzelia Africana, Terminalia spp

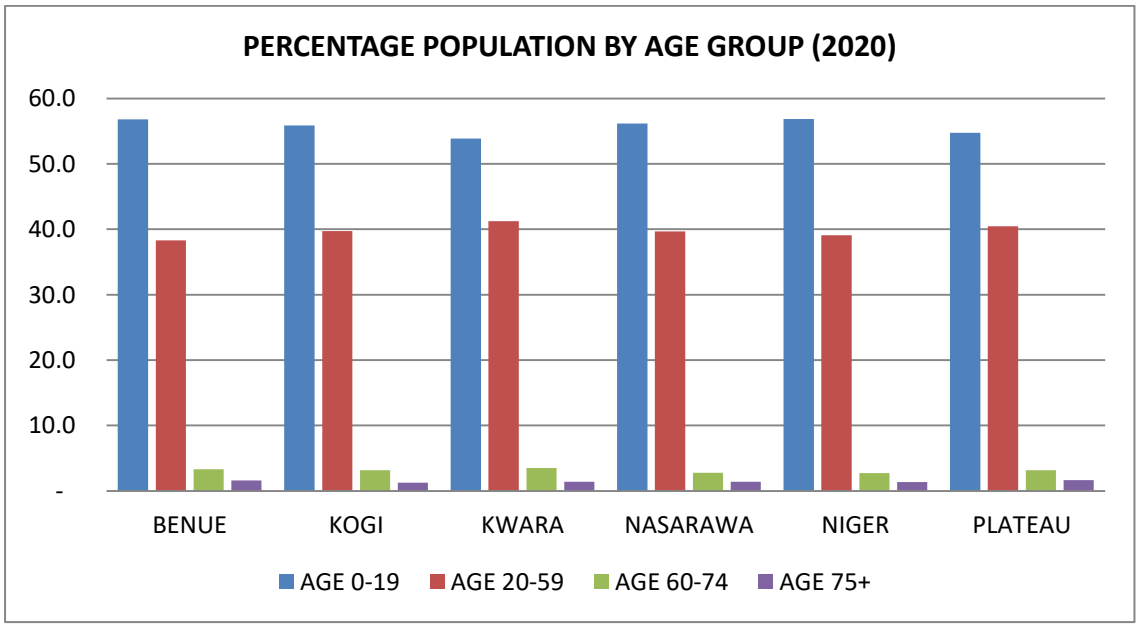
Natural Resources

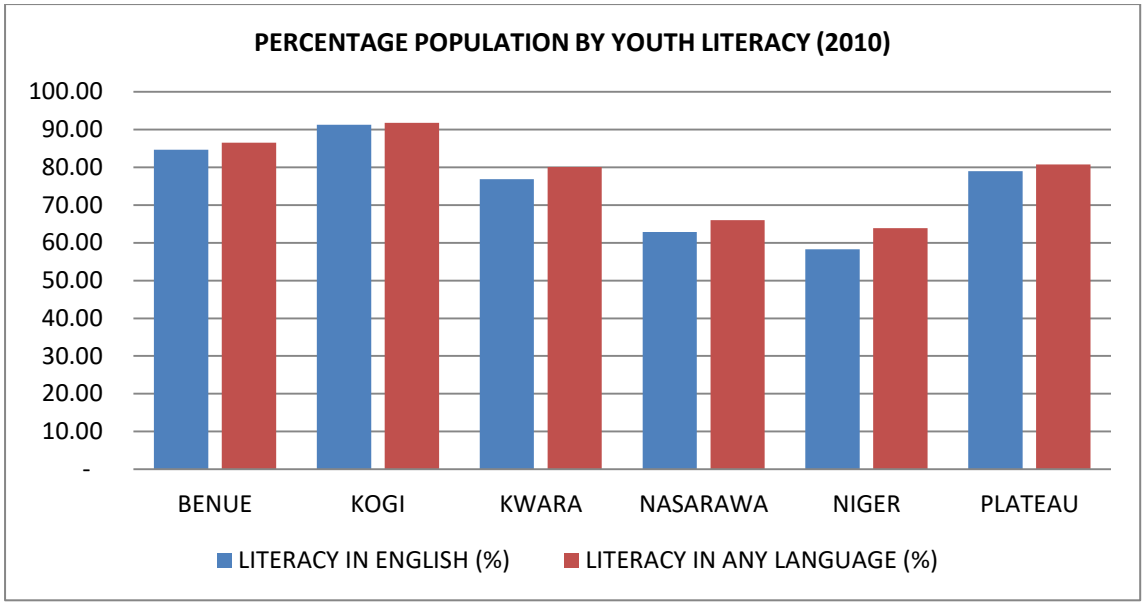
One of the major cases of mineral exploration and exploitation that boomed within the nation has been that of tin in Jos. Tin is said to be one of the oldest mineral resources known to man as its strategic importance was recognized as far back as some 300 years ago when its hardening effects on copper was discovered (Adegbulugbe, 2007). Since then, tin ore has been mined in several parts of Nigeria including Zaria, Kano, Bauchi, Ilesha and Plateau provinces, with over 80% of the production coming from the Jos Plateau (Ajaegbu et al, 1992). With tin mining

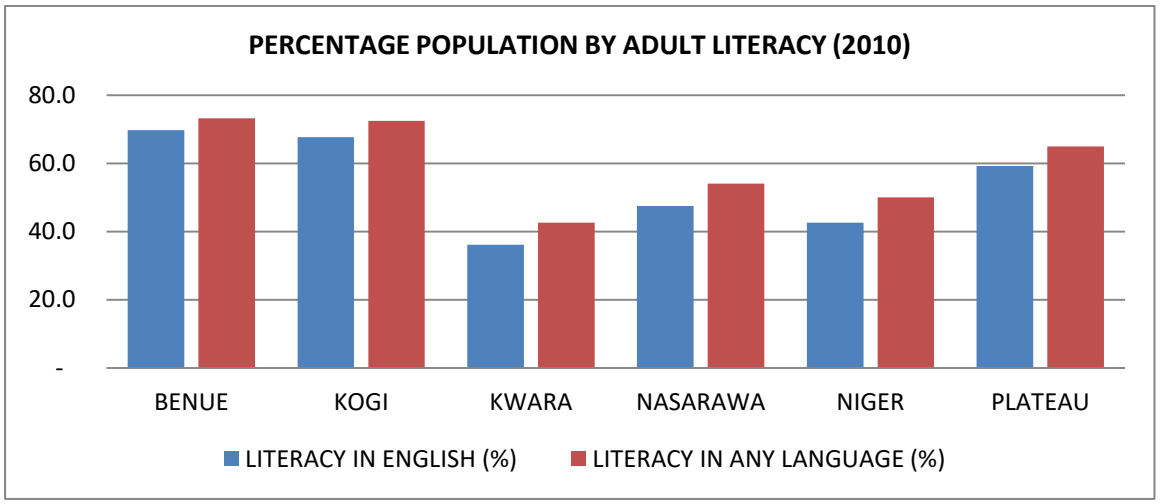
activities going on in various sites on the Jos Plateau at informal levels, the social and economic impacts within the natural and built environment of Jos Plateau comes readily to mind.

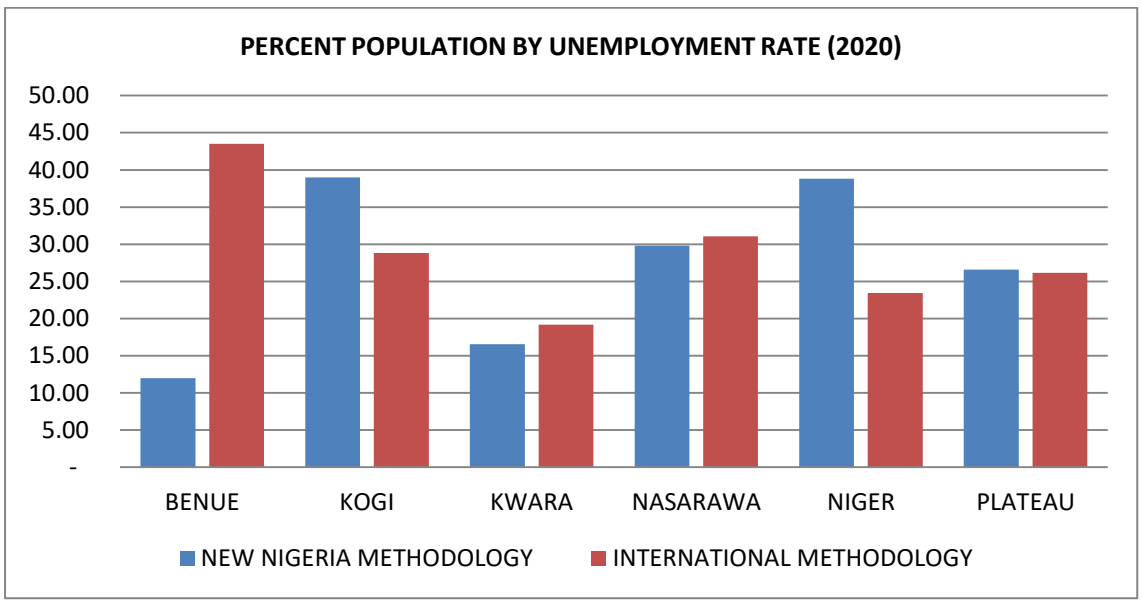
5.3.3 Socioeconomic Environment for States in North Central Zone






PERCENTAGE POPULATION BY YOUTH LITERACY (2010)
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
-
BENUE
KOGI
KWARA
NASARAWA
NIGER
PLATEAU
LITERACY IN ENGLISH (%)
LITERACY IN ANY LANGUAGE (%)


PERCENTAGE POPULATION BY ADULT LITERACY (2010)
80.0
60.0
40.0
20.0
-
BENUE
KOGI
KWARA
NASARAWA
NIGER
PLATEAU
LITERACY IN ENGLISH (%)
LITERACY IN ANY LANGUAGE (%)


PERCENT POPULATION BY UNEMPLOYMENT RATE (2020)
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
-
BENUE
KOGI
KWARA
NASARAWA
NIGER
PLATEAU
NEW NIGERIA METHODOLOGY
INTERNATIONAL METHODOLOGY

STATE	TOTAL POPULATION	TOTAL POPULATION BY GENDER (2020)		TOTAL POPULATION BY AGE GROUP (%)				YOUTH LITERACY RATE (NATIONAL SURVEY 2010)		ADULT LITERACY RATE (NATIONAL SURVEY 2010)		UNEMPLOYMENT RATE IN 2020 (%)	
		MALE	FEMALE	AGE 0-19	AGE 20-59	AGE 60-74	AGE 75+	LITERACY IN ENGLISH (%)	LITERACY IN ANY LANGUAGE (%)	LITERACY IN ENGLISH (%)	LITERACY IN ANY LANGUAGE (%)	NEW NIGERIA METHODOLOGY	INTERNATIONAL METHODOLOGY
BENUE	6,469,083	50.0%	50.0%	56.8	38.3	3.3	1.6	84.70	86.50	69.8	73.3	11.98	43.52
KOGI	5,033,267	50.5%	49.5%	55.9	39.7	3.2	1.3	91.30	91.80	67.7	72.5	38.97	28.81
KWARA	3,558,406	50.5%	49.5%	53.9	41.2	3.5	1.4	76.90	80.10	36.1	42.6	16.55	19.16
NASARAWA	2,846,878	50.5%	49.5%	56.2	39.7	2.8	1.4	62.90	66.00	47.5	54.1	29.83	31.06
NIGER	6,332,642	50.7%	49.3%	56.9	39.1	2.7	1.4	58.30	63.90	42.6	50.1	38.80	23.44
PLATEAU	4,810,761	49.9%	50.1%	54.7	40.5	3.2	1.6	79.00	80.80	59.3	65.0	26.59	26.15

New Nigeria methodology defines as unemployed labour force who did not work at all or worked for less than 20 hours a week.
The international definition includes people aged 15 years to 64 years old who were available for work, actively seeking work but were unable to find work.

Benue State is the nation's acclaimed food basket because of its rich agricultural produce which include Yam, Beans, Cassava, Sweet potatoes, Maize, Soyabean, Sorghum, Millet Sesame, Cocoyam etc. The state accounts for over 70% of Nigeria's Soyabean production. Agriculture is the mainstay of the economy, engaging over 75% of the state farming population. The State also boasts of one of the longest stretches of river systems in the country with great potential for a viable fishing industry, dry season farming through irrigation and for an inland water highway. The vegetation of the southern parts of the state is characterized by forests, which yield trees for timber and provide a suitable habitat for rare animal types and species. The state thus possesses potential for the development of viable forest and wildlife reserves.

Agriculture is the mainstay of the economy, with fishing in the riverine areas like Lokoja, Idah, Ibaji, Ogugu, etc. There are many Farm produce from the state notably coffe, cocoa, palm oil, cashews, groundnuts, maize, cassava, yam, rice, and melon. Mineral resources include; coal, limestone, iron, petroleum and tin. The state is home to the largest iron and steel industry in Nigeria known as Ajaokuta Steel Company Limited and one of the largest cement factories in Africa, the Obajana Cement Factory.

Nasarawa has a diverse range of ethnic groups indigenous to the state and according to the 2006 census, the state has a population of a little less than 2 million, very hospitable and culturally rich people. Nassarawa is composed of different ethnic groups each with its own distinct local dialect but Hausa is common among the people. They all have a common history and share similar social and cultural ideologies. Ethnic groups in Nasarawa state include Afo, Agatu, Akye, Alago, Baribari, Bassa, Egbira, Eggon, Fulani, Gade, Gbagyi, Gwandara, Hausa, Jukun, Kanuri, Mada, Ninzom, Arum, Rindei, Yeskwa and Tiv.

Nasarawa’s main economic activity is agriculture; and crops produced include cassava, yam, rice, maize, guinea corn, beans, soya beans, asha and millet. The state is blessed with precious mineral resources like columbite, coal and aquamarine. Production of minerals such as salt is also another major economic activity in the state; Nasarawa produces a large proportion of the salt consumed in the country.

Agriculture

Agriculture forms the backbone of the Benue State economy, engaging more than 70% of the working population. This has made Benue the major source of food production in the Nation. Important cash crops include soyabean, rice, peanuts, mango varieties, citrus etc.

Other cash crops include palm oil, melon, African pear, chili pepper, tomatoes, etc. Food crops include Yam, Cassava, sweet potatoes, Beans, Maize, Millet, Guinea corn, Vegetables etc. There is very little irrigation agriculture and techniques. Animal production includes, Cattle, Pork, Poultry, and Goat but no dairy and dairy products yet. The Zaki Ibiam International Yam Market is the biggest market for a single product in Nigeria.

Agriculture is the main source of the economy and the principal cash crops are: cotton, cocoa, coffee, Kolanut, tobacco, beniseed and palm produce. Mineral resources in the state are Petroleum , Gold, limestone, marble, feldspar, clay, kaolin, quartz and granite rocks. Kwara state has numerous mineral resources such as tourmaline, tantalite, and many mineral deposits in the northern part. Cocoa and Kolanut in the Southern parts Oke - Ero, Ekiti and Isin LGA.

Mineral Resources

Kogi state alone has deposits of a total of 29 mineral resources available in commercial quantities. These include coal, dolomite, feldspar, bauxite, iron ore, tar, limestone, gold, etc. Each of the 21 LGAs in the state has deposits of at least 2 minerals. One of the coalrich areas is the Okaba district of Ankpa LGA which alone holds reserves of 99 million tonnes of coal. As things stand, Kogi state alone has enough deposits of coal to supply all of Nigeria with electricity for 400 years. Kogi state alone holds enough limestone to keep 3 giant-sized cement factories (with over 15m tons annual capacity) operational for an unbroken stretch of 99 years (Federal Ministry of Mines and Steel report 2014).

Agro-Climatic and Watershed Issues

Because of the clearing away of the surface cover/vegetation in order to produce food and cash crops, the surfaces of the soils are usually left bare and the rate of surface runoff increases leading to wearing away of land surface which lead to reduced fertility of the soils. Since the top soils are the richest in soil nutrients and organic matter content. This could be noticed more in the resultant gullies at the southern parts of Benue State e.g. Otukpo and Ugbokolo. Siltation and accumulation of silt particles in streams and rivers in most part of Benue State are also common as a result of water erosion.

Organic matter depletion: Constant bush burning activities coupled with rapid mineralization of organic matter is a common feature of low-income agriculture especially in the tropics. This leads to rapid organic matter depletion. Organic matter is the storehouse of nutrients and a soil modification material. Its depletion causes impoverishment of soil nutrient status and consequently increases the vulnerability of the soil to crumbling and detachment and transport. It is evident that the most croplands in the state are unproductive today due to this phenomenon.

1. Desertification: Naturally most parts of Benue State belong to a derived Savanna region. The constant felling of trees has generated lush regeneration of grasses over time. However, the encroachment on marginal lands due to loss of fertile and productive lands because of the quest to increase productivity and also because of demand for fuel wood and timber, certain parts of Benue State are excessively deforested and are prone to desertification and its attendant effect.

2. Acidification / Salinization: Although no serious report of Salinization has been reported in Benue State, the downward and lateral transport of soil nutrients in solution due to high torrential rainfall intensity in this region causes soil acidification to crop fields across state resulting to poor crop yields. The high evapo-transpiration which sometime exceeds precipitation is also potentially a Salinization process.

Within this region, high inter-annual variability of onset and cessation of the rainy season leads to a lack of skillful predictability using traditional knowledge and

challenges in determining the optimal crop selection and planting date each yea. Generally, yields may suffer significantly with either a late onset or early cessation of the growing season and a high frequency of damaging dry spells within the growing season. The ability to accurately estimate the actual start of the season therefore is vital for farmers.

The major issues of the state have been Desertification and Drought which is as a result of degradation in dry lands in which biological productivity is lost due to natural processes or induced by human activities whereby fertile areas become increasingly arid. However, droughts take place whenever there is prolonged periods of rainfall deficiency for a season or more and usually when there is a lack of anticipated rainfall or precipitation. This is common place in Nasarawa state because the Sahara desert has eaten deep into the once fertile land. However, this can be controlled through irrigation, terrace ploughing and planting of trees and grasses.

Out of the 36 states of Nigeria and the Federal Capital Territory about 11 are seriously affected by various forms of land degradation. Each year they lose a large amount of land to desertification. Affecting each of these Northern states, desertification has emerged as Nigeria's leading environmental problem UNCCD, (1999).

5.3.4 Biophysical Environment for States in North East Zone

The States within the North East Zone of Nigeria include Bauchi, Borno, Taraba, Adamawa, Gombe and Yobe States.

Biophysical Environment

In terms of topography, the zone is mainly mountainous, undulating and hilly to the south-east and flat open plain in the central, north-east, west and north-west. The vegetation is Guinea Savanna grassland with concentration of wood land in the south- east and south -west LGAs. Topography within this zone is mountainous on the eastern half crossed by large river valleys of Benue, Gongola and Yedsarem. The zone contains some modest to large variations in elevation, with a maximum elevation change ranging from 463 – 3,858 feet and an average elevation above sea levels of 2,025 feet. The valleys of the Mount Cameroon, Mandara Mountains and Adamawa Plateau form part of the landscape. The zone is naturally divided into two ecological zones; the guinea and Sudan savannah zones. In general, the distribution of vegetation reflects the combined control of rainfall, topography and to a lesser extent, that of soils.

The zone is one of the warmest regions in Nigeria with an average daily high temperature of 35^0C. With a yearly average of 35^0C, the climate is very warm, but has only a very few tropical and humid months. It has a tropical wet and dry climate. Dry season lasts for a minimum of five months (November-March) while the wet season spans April to October. Mean annual rainfall in the state ranges from 700mm in the North-west, to 1600mm in the extreme southern part of the state (Adebayo, 1999).

Although, much of the area is underlain by the ancient crystalline basement complex; sedimentary formation during the late cretaceous period influenced the topography. The zone is characterized by prominent landforms consisting of Lijji and the Gombe hills, which falls within a stretch of the Benue Trough known as Zambuk ridge. The stratigraphy consists of the alluvium, the Kerri Kerri Formation, Gombe Formation,

Pindiga Formation, Yolde Formation, Bima Formation and the basement rocks as the oldest. Alluvium includes most soils and comprises those deposits formed in situ by the chemical and physical decomposition of the bedrocks.

Like most parts of Northern Nigeria, the zone has a wet and dry climate. The wet season lasts, on the average, from April to October. Mean annual rainfall varies between 1058mm in the north around Jalingo and Zing, to over 1300mm in the South around Serti and Takum. The Wettest months are August and September. The dry season lasts from November to March. The driest months are December and January with relative humidity dropping to about 15 percent. Mean annual temperature around Jalingo is about 28^0C with maximum temperature varying between 30^0C and 39.4^0C. The minimum temperatures range between 15^0C to 23^0C. The Mambilla Plateau has climatic characteristics typical of a temperate climate. Temperatures are low throughout the year and the rainy season lasts from February to November with a mean annual rainfall of over 1850mm escarpment which is about 900m high in some places. The Mambilla Plateau forms the watershed from which the major river systems in the zone take their source.

Rainy season in Borno state begins in June and end in September (4 months) while the dry season lasts for 8 months beginning from October – May. Dusty windstorms with very hot weather conditions are some of the characteristics of the beginning of rainy season. The state is characteristics with extreme weather conditions, very hot up to even 40^0C during the hot dry season and also as cool as 5^0C during the cool dry season. The rainfall ranges decrease as you move northward. The vegetation is made up of short thorny tree species and short annual grasses.

Adamawa is one of the warmest regions in Nigeria with an average daily high temperature of 35^0C. With a yearly average of 35^0C, the climate is very warm, but has only a very few tropical and humid months. It has a tropical wet and dry climate. Dry season lasts for a minimum of five months (November-March) while the wet season spans April to October. Mean annual rainfall in the state ranges from 700mm in the North-west, to 1600mm in the extreme southern part of the state (Adebayo, 1999).

Yobe is one of the warmest regions in Nigeria with an average daily high temperature of 37^0C. It is yearlong warm or hot. It has a tropical climate characterized by distinct wet and dry seasons. The dry season is associated with the prevalence of dry continental airmass of the North East Trade Wind (NETW), which originates from Sahara Desert. The wet season is associated with the moist maritime southerly airmass which originates from the Atlantic Ocean. The area experiences uniform weather with rainfall attaining its peak in August; though there seems to be a shift of this to July in recent times. The mean annual rainfall of the area is put at 450mm with an average onset and cessation dates in June and September respectively (Sawa and Adebayo 2015).

One of the distinguishing characteristics of the area is its low rainfall that lasts for only three to four months. The average daily temperature is about 25^0C with a monthly mean value of about 27^0C. However, mean maximum temperature for the hotter months goes as high as 40^0C especially in the months of April, May and June (Baka and Jajere 2011). The average relative humidity for the months of December

and January is about 30% (driest period) and goes as high as to an average of 70% in wettest months (August and September).

Geology/Hydrogeology

Hydrogeologic investigation of Adamawa indicate that two aquifer systems namely; an upper unconfined alluvial aquifer and the lower semi-confined to confined aquifer capable of yielding water in sufficient quantities for both rural and urban water supplies exist in the area. The area is characterized by high relief ranging from 2000m above sea level in the western part to 3900m above sea level in the southern part of the area. The northern hill ranges of Adamawa state were described as starting with the Bagale group of synclincal folds (about 600m above sea level) development in the series of cretaceous sandstones. The medium range and the series of inselbergs around Zumo through Maiha and Gella to the more popular Granitic ranges called Mandara hills.

Bauchi state is watered by a number of rivers. They include the Gongola and Jama'are rivers. The Gongola River crosses Bauchi state in Tafawa Balewa Local Government Area in the south and in Kirfi and Alkaleri Local Government Areas in the eastern part of the state, while the Jama'are River cuts across a number of Local Government Areas in the northern part of the state. Moreover, a substantial part of the Hadeja-Jama'are River basin lies in Bauchi state, which along with various Fadama (floodplain) areas in the state provides suitable land for agricultural activities. These are further supported by the number of dams meant for irrigation and other purposes. These include the Gubi and Tilde-Fulani dams. There also lakes such as the Maladumba Lake in Misau Local Government Area that further provide the necessary conditions to support Agriculture.

The state largely consists of quaternary deposits of the Chad Formation overlying the Sedimentary Formations, comprising consolidated sands, clay, Aeolian sands, beach sands and gravels, deltaic sands and clays, lagoonal clays, lacustrine sands and ancient alluvium which give rise to a complex landscape (Oruonye (2009)).

The unusual fayalitic quartz monzonite at Bauchi town was first described as a coarse-grained augite syenite by Falconer (1911). Basin (1926) also described as syenite from Bauchi, but the distinctive features of the rocks were first emphasized by Oyawoye (1958, 1961) who named it Bauchite (1965). There are four main occurrences of Bauchite in the Area, at Bauchi, margas and south of Kangere. In earth case biotite hornblende granite forms a large part of the complex and quartz diorities are common.

Greater part of the states lies on the Chad Formation. The Chad Formation is separated by Cretaceous Birma and Kerri sandstones. The volcanic areas of the Biu Plateau and the basement complex areas of the mandara mountains are found in the south and south eastern part of the state. Borno State could be divided into 2 broad relied regions; Hilly/mountainous area over 600m about sea level and the plains of less than 600m above sea level. Southern and south eastern Borno is predominately hilly, geologically underlain by the basement complex.

The rainfall in Bauchi state ranges between 1,300 millimeters per annum in the south and only 700 millimeters per annum in the extreme north. This pattern is because in the West Africa region, rains generally come from the south as they are carried by

the south westerlies. There is therefore a progressive dryness towards the north, culminating in the desert condition in the far north. So also, is the case in Bauchi state.

Vegetation:
The zone is one part of northern Nigeria that spans two distinctive vegetation zones, namely, the Sudan savannah and the Sahel savannah. The Sudan savannah type of vegetation covers the southern part of the state. Here, the vegetation gets richer and richer towards the south, especially along water sources or rivers, but generally the vegetation is less uniform and grasses are shorter than what grows even farther south, that is, in the forest zone of the middle belt.

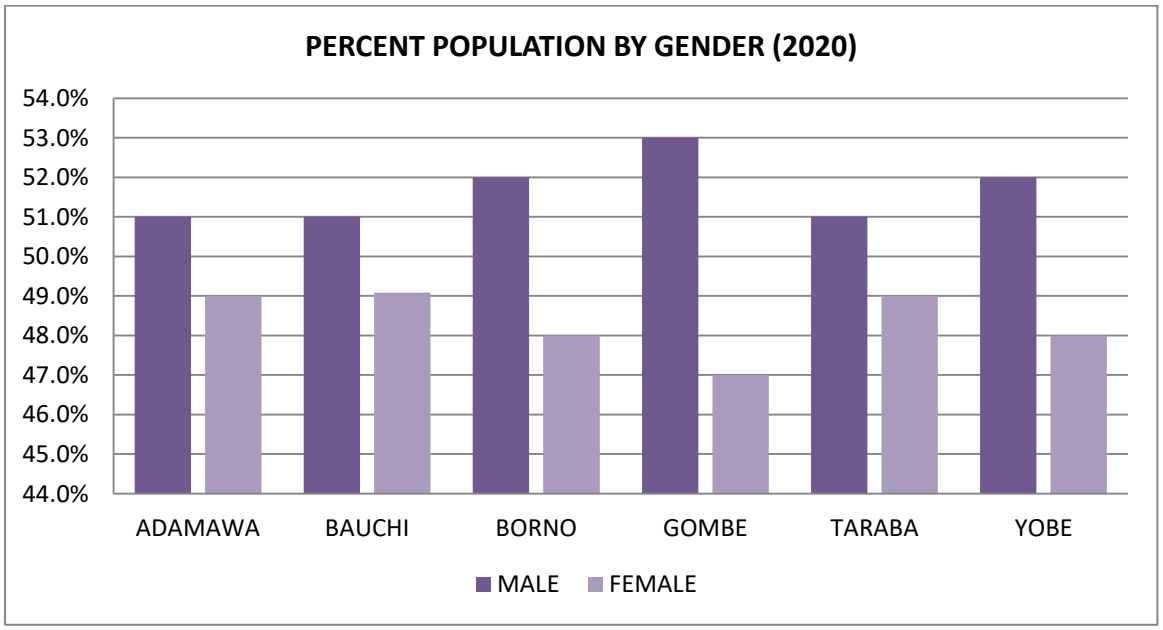
The Sahel type of savannah, also known as semi-desert vegetation, becomes manifest from the middle of the state as one moves from the state's south to its north. This type of vegetation comprises isolated stands of thorny shrubs. On the other hand, the southwestern part of the state is mountainous as a result of the continuation of the Jos Plateau, while the northern part is generally sandy.

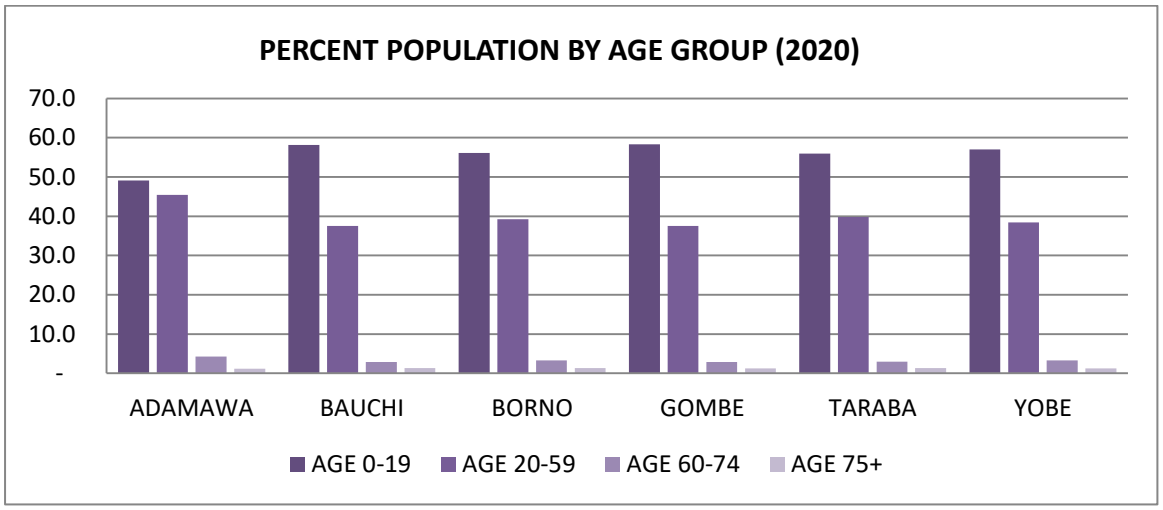
Natural Resources

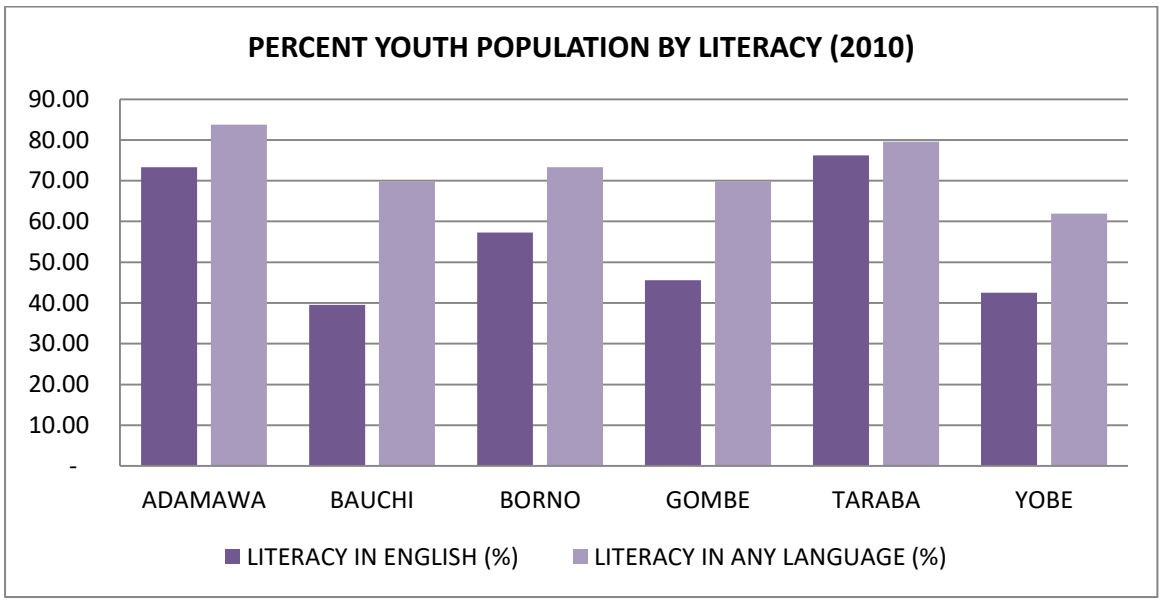
In addition to fertile land and water resources for farming, Adamawa state is known to have the following natural resources: Feldspar, Fluorspar, Gypsum, Magnesite, Tantalite, Laterites, Rock, Cystal, Topaz. The common mineral resources of Adamawa state include: Magnesite and kaolin, gypsum and bentonite.

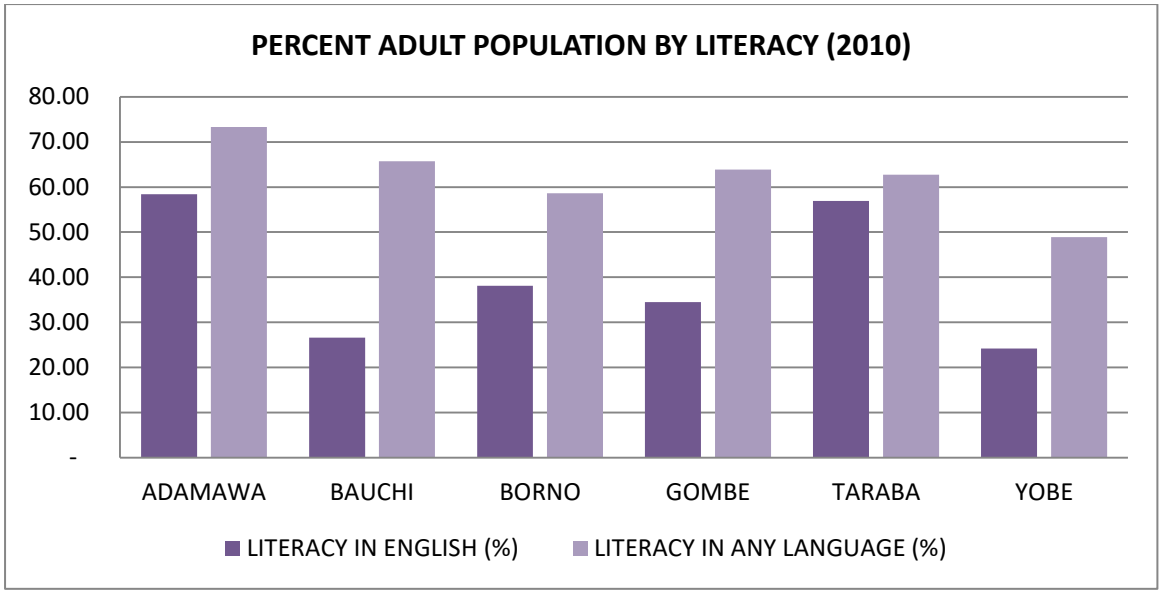
Taraba State is one of the states in the country that is well endowed with abundant natural resources. However, it is among the least developed parts of the country. Agriculture is the source of livelihood to an overwhelming majority of the population of the state. Farming is mainly subsistence with very few commercial base farms. Agriculture in the state is heavily dependent on natural rainfall, with irrigation agriculture accounting for less significant percentage of the total cultivated land. The types of cropping system practiced in the state are mixed farming, mixed cropping and mono cropping.

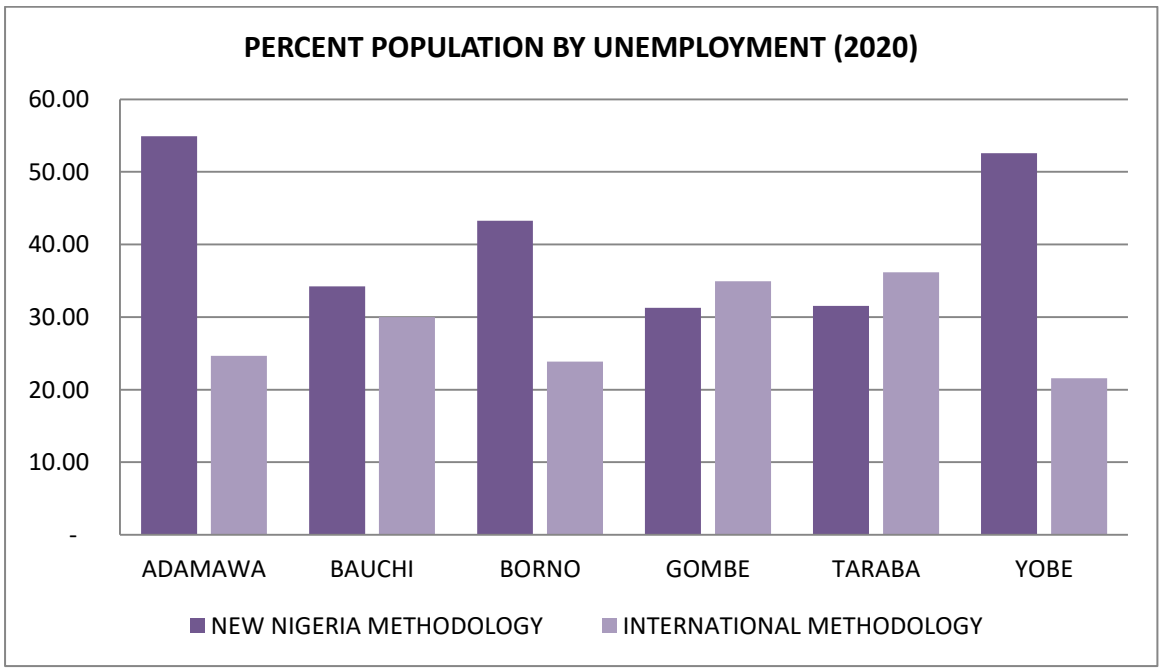
5.3.5 Socioeconomic Environment for States in North East Zone




PERCENT POPULATION BY AGE GROUP (2020)
70.0
60.0
50.0
40.0
30.0
20.0
10.0
-
ADAMAWA
BAUCHI
BORNO
GOMBE
TARABA
YOBE
AGE 0-19
AGE 20-59
AGE 60-74
AGE 75+


PERCENT YOUTH POPULATION BY LITERACY (2010)
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
-
ADAMAWA
BAUCHI
BORNO
GOMBE
TARABA
YOBE
LITERACY IN ENGLISH (%)
LITERACY IN ANY LANGUAGE (%)


PERCENT ADULT POPULATION BY LITERACY (2010)
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
-
ADAMAWA
BAUCHI
BORNO
GOMBE
TARABA
YOBE
LITERACY IN ENGLISH (%)
LITERACY IN ANY LANGUAGE (%)


PERCENT POPULATION BY UNEMPLOYMENT (2020)
60.00
50.00
40.00
30.00
20.00
10.00
-
ADAMAWA
BAUCHI
BORNO
GOMBE
TARABA
YOBE
NEW NIGERIA METHODOLOGY
INTERNATIONAL METHODOLOGY

STATE	TOTAL POPULATION	TOTAL POPULATION BY GENDER (2020)		TOTAL POPULATION BY AGE GROUP (%)				YOUTH LITERACY RATE (NATIONAL SURVEY 2010)		ADULT LITERACY RATE (NATIONAL SURVEY 2010)		UNEMPLOYMENT RATE IN 2020 (%)	
		MALE	FEMALE	AGE 0-19	AGE 20-59	AGE 60-74	AGE 75+	LITERACY IN ENGLISH (%)	LITERACY IN ANY LANGUAGE (%)	LITERACY IN ENGLISH (%)	LITERACY IN ANY LANGUAGE (%)	NEW NIGERIA METHODOLOGY	INTERNATIONAL METHODOLOGY
ADAMAWA	4,737,051	51.0%	49.0%	49.1	45.5	4.2	1.2	73.30	83.80	58.40	73.30	54.89	24.67
BAUCHI	7,420,595	51.0%	49.1%	58.2	37.6	2.9	1.4	39.50	69.80	26.60	65.70	34.22	30.01
BORNO	6,724,396	52.0%	48.0%	56.1	39.3	3.3	1.4	57.30	73.30	38.10	58.60	43.25	23.85
GOMBE	3,690,808	53.0%	47.0%	58.3	37.6	2.9	1.3	45.60	69.80	34.50	63.90	31.26	34.94
TARABA	3,428,869	51.0%	49.0%	55.9	39.8	3.0	1.3	76.20	79.60	56.90	62.70	31.55	36.17
YOBE	3,772,815	52.0%	48.0%	57.0	38.4	3.3	1.3	42.50	61.90	24.20	48.90	52.57	21.55

New Nigeria methodology defines as unemployed labour force who did not work at all or worked for less than 20 hours a week.
The international definition includes people aged 15 years to 64 years old who were available for work, actively seeking work but were unable to find work.

The major occupation of the people of Taraba State is agriculture. Cash crops produced in the state include coffee, tea, groundnuts, and cotton. Crops such as maize, rice, sorghum, millet, cassava, and yam are also produced in commercial quantity. In addition, cattle, sheep and goats are reared in large numbers, especially on the Mambilla Plateau, and along the Benue and Taraba valleys. Similarly, the people undertake other livestock production activities like poultry production, rabbit breeding and pig farming in fairly large scale. Communities living on the banks of River Benue, River Taraba, River Donga and Ibi engage in fishing all year round. Other occupational activities such as pottery, cloth-weaving, dyeing, mat-making, carving, embroidery and blacksmithing are also carried out in various parts of the State.

The major occupation of the people is farming as reflected in their two notable vegetation zones, the Saharan and Northern Guinea Savannah zones. Their cash crops are cotton and groundnuts while food crops include maize, yam, cassava, guinea corn, millet and rice. The village communities living on the banks of the rivers engage in fishing while the Fulanis are cattle rearers.

Their cash crops are cotton, groundnuts while food crops include maize, yam, cassava, guinea corn, millet and rice. The village communities living on the banks of the rivers engage in fishing while the Fulanis are cattle herders.

The major occupation of the people in the state is agriculture with crops like sorghum, millet, maize and groundnuts. Rearing of animals is also another form of agricultural practices by the people in the state. Small percentage of the people are traders and civil servants

A large number of farmers produce cereals (maize, rice, millet and sorghum), roots and tubers (sweet potatoes, cassava, and to a lesser extent, yams), legumes and pulses (cowpea, bambara nut, groundnut, and soya, cowpea) and horticulture crops (e.g. onions, lettuce, tomatoes, pepper, spinach, roselle, kenaf, etc.). Livestock produced include cattle, sheep, goats, pigs, and poultry. Poultry production is undertaken in every part of the state, as the practice is acceptable to all the ethno-religious groups in the state.

Agro-Climatic and Watershed Issues:

Increased population and livestock pressure on land seems to have accelerated desertification. In some areas, herders' tendency to move to less arid areas in search of greener pastures unsettle the local ecosystem and increase the rate of erosion of the land. Incidentally, pastoralists try to get away from the desert, but with their land use practices, obliviously set off another process of desertification in their new communities. They would move on soon after, taking with them their land use practices and leaving a trail of desert behind, and the chain goes on. Desert encroachment has disrupted ecological balance of most communities in Bauchi state a, having negative impact on the daily lives of people living there.

The residents of Bauchi are experiencing early dry up of their wells and other water sources and can still feel heat even during the peak of the harmattan period. A casual observer would have noticed the increasing frequency and sometimes intense, of unusual weather – linked phenomena in recent times (Okali 2004). Other effects of Climate Change include temperature rise, wild lives at risk of extinction,

rise in sea level, increased risk of drought and floods, stronger storms and increased storm damage, change in the pattern and amount of rainfall, increase in heat related diseases, economic loss and change in landscape (Nature, 2015 and IPCC, 2007).

The main Ecological problems in the state are drought and desertification accelerated by:

- Massive clearing of forest for security purposes as the result of the insurgency.
- Massive clearing of forest for fuel wood and farmlands expansion.
- Inaccessibility of most part of the state for any forestry operations/planting.
- Little rainfall range, over grazing and bush burning.

However, there are also problems of soil erosion and watershed in the southern and southeastern part of the state due among other reasons to the relative high rainstorms and also the sandy/loose nature of the soils. The step sloppy nature of the areas as the result of the volcanic mountains of Biu plateau and the basement complex of Mandara mountain also causes the erosion.

In Taraba state, evidence of climate change includes delayed onset date of rains, increase in number of dry days during the raining season and increase in maximum temperature. This leads to warmer seasons, increased frequency and intensity of weather extreme events such as drought, decline in rainfall amount by about 15-20%, increased incidence of dry spell. The problems of flood, high temperature and incidences of pests and diseases have also aggravated the farmers' loss which consequently increases the incidence of poverty and malnutrition in the state.

Excessive deliberate bush burning, soil erosion, desertification and deforestation are among the most adverse ecological problems in Taraba state. From December to February (during the peak of the dry harmattan season), a large part of the natural vegetation especially in the Northern part of the State, is easily turned into an ash laden, dark looking wilderness of burnt vegetation, posing serious threat to livestock rearing activities in the state.

The earth's temperature is rising as a result of increased atmospheric concentrations of greenhouse gases. Northern Nigeria and indeed Adamawa is not an exception. As a semi-arid area, the Adamawa state is generally vulnerable to climate change. The State has experienced serious droughts, shortening rainfall and floods that have negatively impacted the state's agricultural productive capacity. During the rainy season, most crops are facing issues such as flower abortions, unusual flowering or fruiting time and generally low yields due to the effects of climate change.

This may translate into substantial increase in poverty, hunger, and general food security challenges as a consequence of lower performance of rain-fed agricultural production systems.

5.3.5 Biophysical Environment for States in North West Zone

The States within the North West Zone of Nigeria include Zamfara, Sokoto, Kaduna, Kebbi, Katsina, Kano and Jigawa States.

The climate condition of Zamfara is tropical with temperatures rising up to 38 °C and above between March to May. Rainy season starts in late May to September while the mild season known as Harmattan lasts from December to February. Zamfara

state lies within the dry humid tropics. There is an annual fluctuation in the climate of the area from the North to the South of the State. Lines of Inter tropical Discontinuity (ITD) separate the dry continental air masses in the north from moist monsoon air masses in the south. The south westerly moist air mass brings wet season in the area from early May to late September with an average of 140 rainy days. Relative humidity is about 90% in the morning to about 60% in the afternoon. A mean annual rainfall of 849mm has been recorded for the area. By early October to late October a dry air brought from the Sahara by the north easterly wind gives condition of dry season which lasts till April with a monthly minimum, maximum and average temperatures of 19-21^{0}C, 33-35^0 C and 26-28^{0}C respectively.

The state is divided into two ecological zones: the Sudan savanna zone and the Southern Guinea zone in the northern and southern parts respectively. It is traversed by two major rivers, namely River Niger and River Rima, as well as minor rivers of Zamfara, Ka and their tributaries.

Sokoto state is dominated by plains, a lowland topography with an average height of about 300 meters above sea level. In a few places, the lowland is interrupted by isolated hills and escarpments such as those around Dange and Kalambaina. There are two major rivers, the Rima and Sokoto, and their tributaries. The Valleys of these rivers are wide and constitute one of the most fertile and intensely cultivated dry season farmlands in West Africa and Nigeria.

The drainage system in Sokoto state can be described as radical dominated by River Rima and its tributaries such as Sokoto, Gagare and Bunsuru rivers. Most of the rivers take their source from the south-eastern part of the northern region, especially in Zamfara and Kaduna states. The volume of water in these rivers is understandably low during the dry season and their tributaries are in most cases dry during this period.

Climate:
According to Köppen-Geiger Climate Classification, Jigawa State has three different climates, Tropical Savanna Climate, Hot Semi-Arid Climate and Hot Desert Climate. Dutse lies on 434m above sea level. Dutse's climate is a local steppe climate. There is little rainfall throughout the year. This climate is considered to be according to the Köppen-Geiger climate classification. The average annual temperature is 26.5 °C in Dutse. About 743 mm of precipitation falls annually.

Temperature: The warmest month of the year is April, with an average temperature of 28.8 °C. In August, the average temperature is 23.4 °C. It is the lowest average temperature of the whole year.
Temperature in Kano is generally high throughout the year, though December through February, the city is noticeably cooler. Night time temperatures are cool during the months of December, January and February, with average low temperatures ranging from 11° C to 14° C. The lowest temperatures are recorded in the months of December and January while April and May are the hottest months. A gradual increase occurs from January to April where maximum value reaches as high as 43º C. The mean annual temperature ranges from 26ºC to 32ºC.

Rainfall*:* This shows variation within the months and not just the monthly totals, it shows the rainfall accumulated over a sliding 31-day period centered around each

day of the year. Kaduna experiences *extreme* seasonal variation in monthly rainfall. The *rainy* period of the year lasts for *7.4 months,* from *March 25 to November 6, with a* sliding 31-day rainfall of at least *0.5 inches*. The *most rain* falls during the 31 days centered around *August 26,* with an average total accumulation of *12.0 inches.*

Hydrogeology

Most of the state is on the lower valleys of the Sokoto and Rima rivers where loss of water to infiltration and seepage is significant. There is a significant loss of water due to infiltration and seepage into the sedimentary rock formation. There is also high evaporation due to high temperatures. On the plain's gradients are generally gentle and drainage is not so dense. Most river are wide and shallow. Sokoto state therefore has three principal source of water supply: rainfall, surface and underground water. Rain water harvesting is however not common due to high evaporation among other seasons.

The geology of Kebbi State is characterized by thick and vast sequences of sedimentary deposits of the Sokoto Rima-basin, which underline about 50% of the area. The rest being underlain by Precambrian Basement complex rocks. The predominant soil type in Kebbi State, however, is the Ferrugirious tropical soils. Their main features include a sandy surface horizon underlain by weakly developed clayey, mottled and sometimes concreting subsoil. The landscape of Kebbi State is dominated by extensive floodplains (Fadama) of the inland river valley systems. The Niger River flows southwest across part of the state and the Rima River flows southerly through the center of the state to join the Niger. Both rivers have broad flood plains.

Katsina State is located on Nigeria's inselberg landscapes that are generally undulating, characterized by numerous domed hills and occasional flat-topped ridges. General elevation of the area is between 305 – 610 meters above sea level. The inclination of the relief of Katsina is oriented from north to south. The southern fringe of the region begins from the northern margin of the Kaduna plains around Sabuwa and Funtua, rising up to as high as 700 meters above mean sea level and with an average of 550m in the low laying areas. The area further descends northwest across Bakori and Kankara to the central areas of Safana, Dutsin-ma and Kankia. The relief of this part of the region ranges from 450m to 560m above mean sea level. The falls in relief reached Jibia and Kaita areas at the extreme northern part of the region and the border with Niger Republic. At this point, the altitude falls to as low as an average of 450m above mean sea level. The extensive Plain of Katsina region is dissected by numerous river systems that emanate from various parts represents a major catchment area of the Sokoto River Basin.

Geology:

The entire Kaduna state is underlain by a basement complex of igneous and metamorphic rocks of mainly Jurassic to Pre-Cambrian ages. The basement complex rocks are essentially granites, gneisses, migmatites, schists and quartzites. The geology of Kaduna North is predominantly metamorphic rocks of the Nigerian basement complex consisting of biotite gneisses and older granites (Kaduna State, 2003). Three soil profile pits were sited and dug on crest slope position on cultivated fields within each of the four (4) parent material locations. Soils were sampled within pedogenic horizons and the morphological properties observed in field were described based on procedures in the USDA Soil Survey Manual (Soil Survey Division Staff, 1993).

Kano State is underlain by Precambrian rocks of the Northern Nigeria Basement Complex which comprises three groups of rocks namely, migmatites and (high grade) gneisses derived from Birrimain sedimentary rocks through high grade metamorphism and granitization; the Younger Metasediemnts of Upper Proterozoic age which are low grade metamorphic rocks folded along with migmatite and gneisses during the Pan-African orogeny; and the Older Granite series which were intruded during the Pan-African orogeny. The aquifers of the Basement Complex rocks are the regolith and the fractures in the fresh bedrock which are known to be interconnected at depth. Rocks of the Younger Granites series which are Jurassic in age are also a prominent feature in the study area.

The Basement complex consists of granite rocks extending up to Yadai towards the North and Gabasawa towards the East. Aeolian sand from wind deposits cover most part of the area with a thickness of about 5 m in the upland and 10 m along the lowland plains. The geological structure influences the relief as well as landforms which are relatively flat, with some undulation especially around upstream. The high plains consist of areas of low relief, usually less than 20 m and areas of grouped hills where the hill may rise higher than 100 m above the plains.

The rock types expose to the surface in the area are made of two main groups, the sedimentary rock of the Cretaceous – Tertiary Sokoto basin and the rocks of the crystalline shield of northern Nigeria. Gundumi formation occupied the NW, NE and part of SW in Zamfara state, this formation account for 21% of the sedimentary rocks in the state. It consists of clay mostly with inter-bedded sand and gravel lenses, the age of the Gundumi is upper Cretaceous Kogbe.

Topography:
The state has a total land area of approximately 22,410 square kilometers. Its topography is characterized by undulating land, with sand dunes of various sizes spanning several kilometers in parts of the State. The southern part of Jigawa comprises the basement complex while the northeast made up of sedimentary rocks of the Chad Formation. The main rivers are Hadejia, Kafin Hausa and Iggi Rivers with a number of tributaries feeding extensive marshlands in north-eastern part of the State. Hadejia – Kafin Hausa River traverses the state from west to east through the Hadejia-Nguru and empties into the Lake Chad Basin.

Vegetation:
Most parts of Jigawa lie within the Sudan Savannah with elements of Guinea Savannah in the southern part. Total Forest cover in the state is below national average of 14.8%. Due to both natural and human factors, forest cover is being depleted, making northern part of the state highly vulnerable to desert encroachment. The state enjoys vast fertile arable land to which almost all tropical crops could adapt, thus constituting one of its highly prized natural resources. The Sudan savannah vegetation zone is also made up of vast grazing lands suitable for Livestock production.

Kano state falls within two agro-ecological zones namely, Northern Guinea Savannah and the Sudan Savannah. The southern part of the state is in the Northern Guinea Savannah, which has an annual rainfall of 600-1,200mm. The central and northern parts are in the Sudan Savannah, with annual rainfall of 300-600mm (Kano State Government, 2012).

The vegetation of Katsina State is the Sudan Semi-Arid enriched with varieties of Grasslands, Shrubs, trees and the spare drought-resistant trees. The predominant animals of the Sudan Savanna vegetation belt of Katsina are the Grazers, Kangaroos, Antelope, Rodents, birds, insects and reptiles. There is usually about 50-150 cm of rain per year which is not distributed evenly throughout the year. The general vegetation pattern in the State is Sudan grasslands with dotted shrubs. However, the natural vegetation has been modified over the years due to human activities, including intensive cultivation, bush burning, livestock grazing and browsing.

The vegetation of the state is Sudan type. It is characterized by woodland and short grasses. The trees are shorts and have developed a series of drought adaptation mechanisms, such as long roots systems, leaf shedding during dry season, thin leaves and hard backs. The shrubs are mainly acacia species and are thorny. Along the river courses plant density is higher.

Natural Resources

Different types of mineral resources are found in many locations across Katsina State. The major once include: Gold, Uranium, Iron ore, Nikel, Asbestos, Kaolin, Silica Sands, Fire Clay, Lead Oxide, Manganese, Ball Clay and various types of precious stones.

Apart from fertile soil and rivers for agriculture as well as livestock, Jigawa state is also blessed with abundant Solid Minerals deposit capable of feeding medium to large scale industries for optimum industrial operation. Examples are granite, Kaolin, and soda ash (trona).

Kaduna State is endowed with mineral resources spread across almost all its 23 LGAs. There are at least 85 mineral exploration licenses, 40 Quarry licenses, 15 Mining Leases and 3 Small Scale Mining Leases within the state. Some of the mineral resources in Kaduna State are: Gemstones, Industrial Minerals, Gold, Cassiterite, Tantalite, Wolframite, Columbite, Manganese, Molybdenum, Lithium, Nickel.

In addition to fertile land, Rivers and streams for Agricultural and pastoral practices, Katsina Sate is blessed with different types of mineral resources in many locations across Katsina State. The major once include: Gold, Uranium, Iron ore, Nickel, Asbestos, Kaolin, Silica Sands, Fire Clay, Lead Oxide, Manganese, Ball Clay and various types of precious stones.

Agriculture

The Agriculture sector in Kano contributes more than 70% of its Gross State Product. Approximately 50% of the populace is directly or indirectly engaged in some form of agricultural activity including crop, livestock and fishery production. Kano is presently the most irrigated State in Nigeria, with more than 20 dams providing about 2 million cubic metres of water to support agricultural and industrial activities. Current annual production of grains exceeds 4 million metric tons with an estimated value of N721.20b. Cereals (Rice, Wheat and Barley), Legumes (Groundnut), Oil Seeds (Soya Beans, Sesame and Castor), Fibers (Cottons and Sisal), Spices (Ginger, Chili Pepper) being the major export crops produced in the State. Kano is also a major producer of non-staple crops, such as sweet potato, tomato, cassava and cowpea.

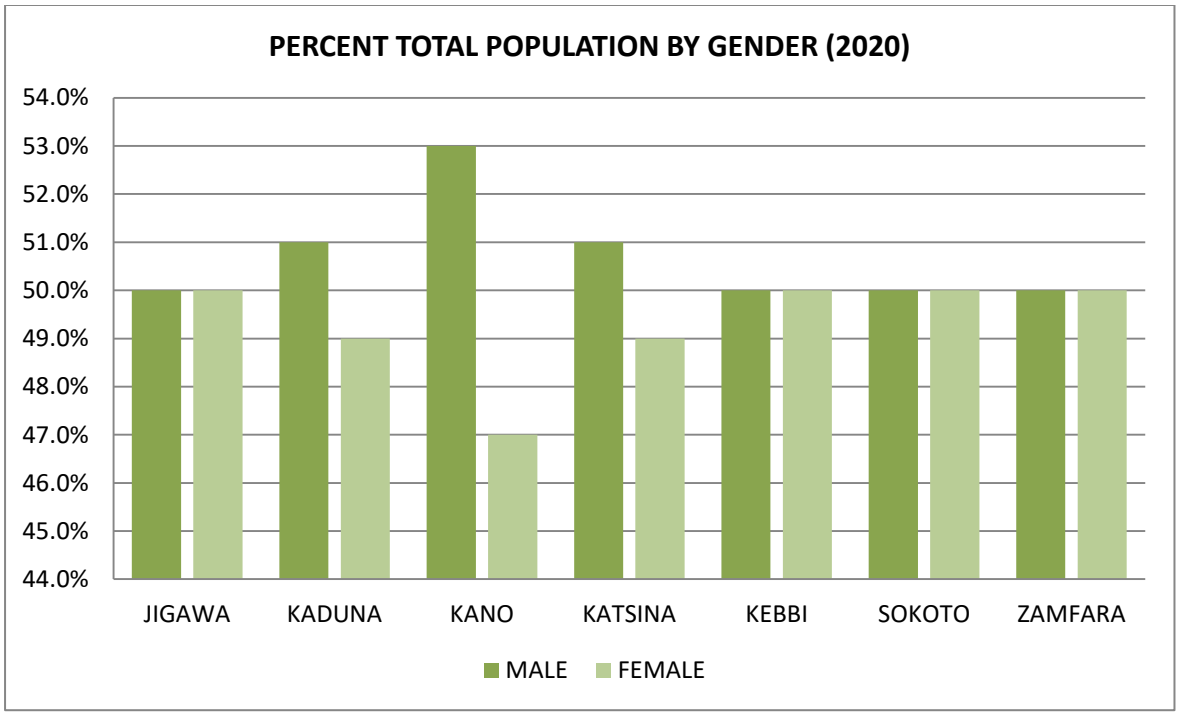
The State also supports the production of horticultural crops such as banana, sugarcane, onion, Mango, etc. (Kano State Government, 2018).

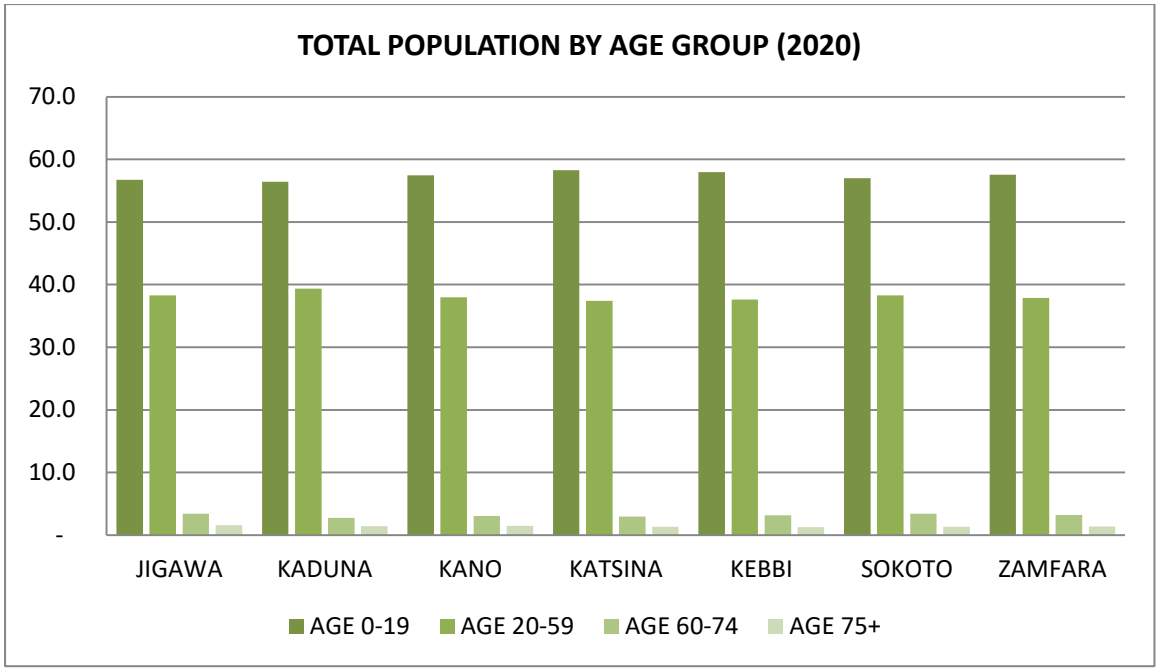
Kano State is richly endowed with a number of mineral resources such as: Gemstones, Granite, Glass Sand, Gold, Columbite, Illuminite, Copper, Kaolin, Feldspar, Cassiterite.

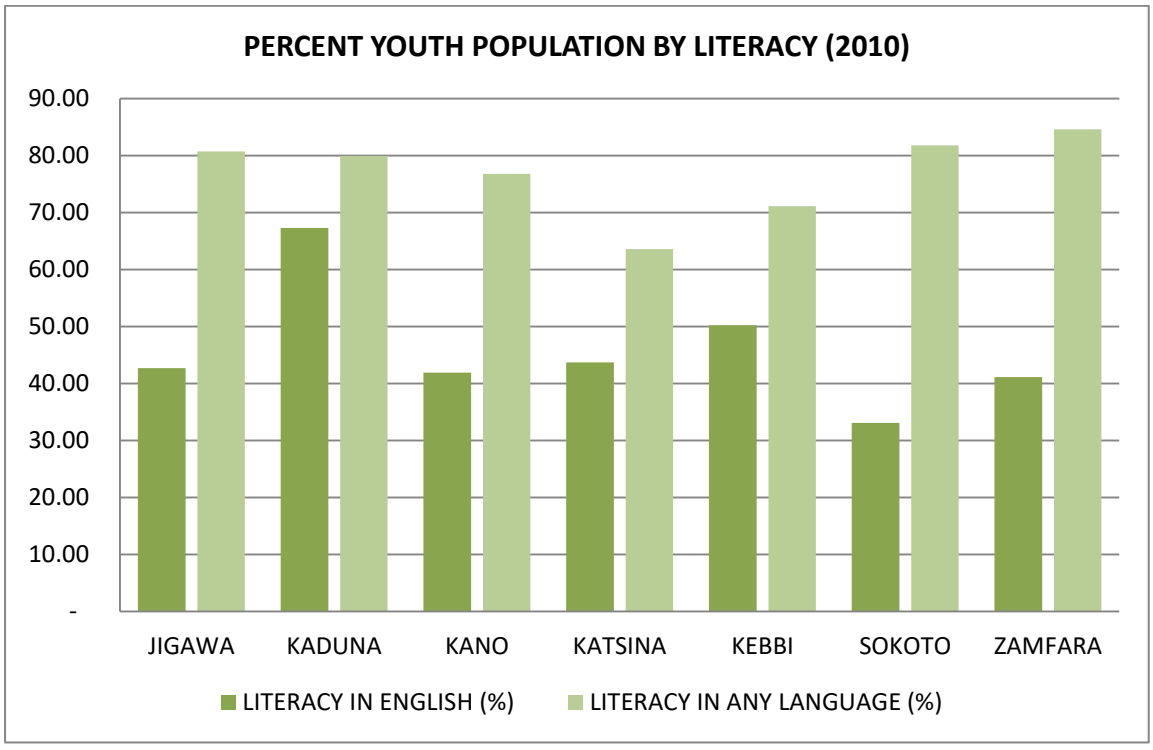
Agriculture is the main occupation of the people of Katsina State. Farming is mostly practiced in the traditional way using traditional implements such as hoe and ox-driven plough. Modern farming is equally gaining ground in the State with large-scale farming. The crops grown in the State include, Millets, Guinea Corn, Groundnut, Maize, Cotton, Rice, Yam, Cassava, Sugar cane and Soya beans. Animal husbandry is another occupation in the State. This is why the State has abundant meat and milk. Not only are those, vegetables grown in abundance. Vegetables such as tomatoes, onions, lotus and pepper. A part from Agriculture, craft works is another traditional occupation of the people of Katsina State. These include Cloth Weaving, Iron works, Pottery and Ceramics, Leather works, Wood and Calabash carvings and Raffia works.

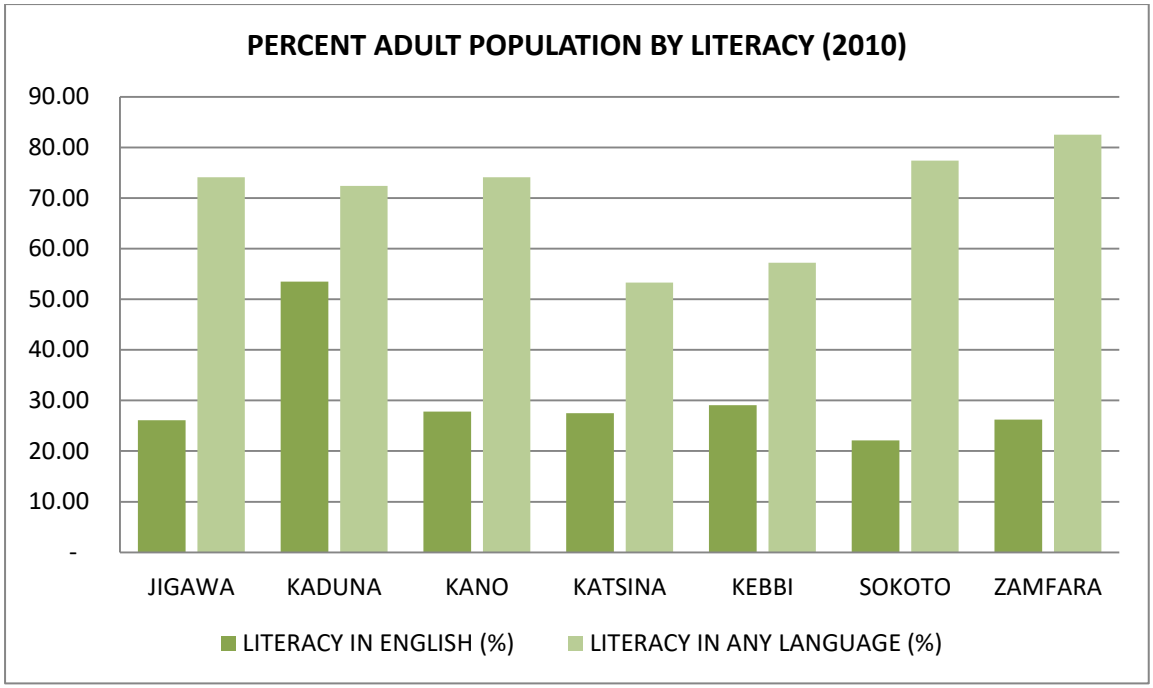
The vastness of agricultural land comprising upland, Fadama and several wetland areas creates an opportunity for all-year-round agricultural activities. The major crops produced in Kebbi State are rice, millet, sorghum, maize, groundnut, cotton, wheat, sugar cane, sweet potatoes and cassava. Sesame, soya beans, bambara nuts and acha are grown as minor crops while vegetables such as tomato, onion, garlic, pepper, carrot and cabbage are also produced.

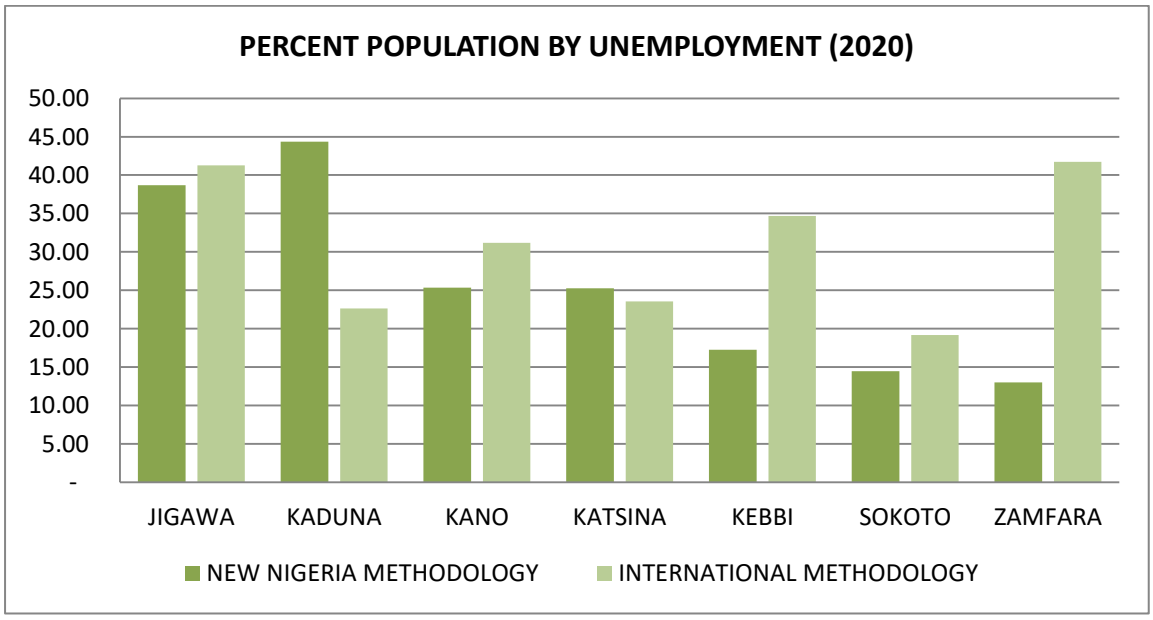
5.3.6 Socioeconomic Environment for States in North West Zone




TOTAL POPULATION BY AGE GROUP (2020)
70.0
60.0
50.0
40.0
30.0
20.0
10.0
-
JIGAWA
KADUNA
KANO
KATSINA
KEBBI
SOKOTO
ZAMFARA
AGE 0-19
AGE 20-59
AGE 60-74
AGE 75+


PERCENT YOUTH POPULATION BY LITERACY (2010)
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
-
JIGAWA
KADUNA
KANO
KATSINA
KEBBI
SOKOTO
ZAMFARA
LITERACY IN ENGLISH (%)
LITERACY IN ANY LANGUAGE (%)


PERCENT ADULT POPULATION BY LITERACY (2010)
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
-
JIGAWA
KADUNA
KANO
KATSINA
KEBBI
SOKOTO
ZAMFARA
LITERACY IN ENGLISH (%)
LITERACY IN ANY LANGUAGE (%)


PERCENT POPULATION BY UNEMPLOYMENT (2020)
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
-
JIGAWA
KADUNA
KANO
KATSINA
KEBBI
SOKOTO
ZAMFARA
NEW NIGERIA METHODOLOGY
INTERNATIONAL METHODOLOGY

STATE	TOTAL POPULATION	TOTAL POPULATION BY GENDER (2020)		TOTAL POPULATION BY AGE GROUP (%)				YOUTH LITERACY RATE (NATIONAL SURVEY 2010)		ADULT LITERACY RATE (NATIONAL SURVEY 2010)		UNEMPLOYMENT RATE IN 2020 (%)	
		MALE	FEMALE	AGE 0-19	AGE 20-59	AGE 60-74	AGE 75+	LITERACY IN ENGLISH (%)	LITERACY IN ANY LANGUAGE (%)	LITERACY IN ENGLISH (%)	LITERACY IN ANY LANGUAGE (%)	NEW NIGERIA METHODOLOGY*	INTERNATIONAL METHODOLOGY**
JIGAWA	6,516,170	50.0%	50.0%	56.8	38.3	3.4	1.6	42.70	80.70	26.10	74.10	38.69	41.29
KADUNA	9,335,595	51.0%	49.0%	56.5	39.4	2.7	1.4	67.30	79.90	53.50	72.40	44.35	22.65
KANO	14,932,151	53.0%	47.0%	57.5	38.0	3.1	1.5	41.90	76.80	27.80	74.10	25.36	31.20
KATSINA	8,823,248	51.0%	49.0%	58.3	37.4	3.0	1.3	43.70	63.60	27.50	53.30	25.28	23.54
KEBBI	5,040,859	50.0%	50.0%	58.0	37.6	3.2	1.3	50.20	71.10	29.10	57.20	17.25	34.67
SOKOTO	5,623,510	50.0%	50.0%	57.0	38.3	3.4	1.3	33.10	81.80	22.10	77.40	14.48	19.18
ZAMFARA	5,096,128	50.0%	50.0%	57.6	37.9	3.2	1.4	41.10	84.60	26.20	82.50	12.99	41.73

*=New Nigeria methodology defines as unemployed labour force who did not work at all or worked for less than 20 hours a week.
**=The international definition includes people aged 15 years to 64 years old who were available for work, actively seeking work but were unable to find work.

Agriculture and gold minning are the main occupations of the people of the state and the central source of income. Irrigation is required for cereals and legumes hence its slogan "farming is our pride". And also, Home of Shari'ah.

The people of Katsina state are mainly agricultural and fishing society. They cultivate rice, yam, millet, Guinea corn, onions, tomatoes, sorghum, maize. Due to the availability of vast landmass, the people practiced large scale cultivation of crops and commercial agriculture. The people also engage in artisan fishing as there is the presence of several rivers and water bodies in the state. Also, trading, craft making such as the building of cane chairs, hats boat making, etc. to earn a living. These activities are tremendously important as they provide huge economic potential to the people of the area. A huge amount of revenue is generated and the people in the rural areas depend on the revenues from them. The people also engaged in wanting wildlife, lumbering and local craft production. The people also engaged in a local cottage industry in which they produced goods that are sold to the outside world. They produced groundnut, groundnut oil and sugar. These activities the Katsina people engage in are activities that can easily be affected by climate change.

Agriculture is the major occupation in the state with like Guinea corn, millet, maze, rice, onion, garlic, pepper, potatoes, cassava, mangos, cashew and guava. All other occupation such as hide and skin and trading. A small percentage of the people of the state are public servant.

Agro-Climatic and Watershed Issues

Desertification and other related ecological problems had affected the lives and property of people in the northern states of Borno, Yobe, Jigawa, Katsina, Sokoto, Kebbi and Zamfara.

Jigawa state experiences a substantial temperature variation now due to climate change. Annual rainfall is between 600 mm and 1000 mm with an average of about 650mm. Most parts of the state lie within the Sudan Savannah although features of Guinea Savannah are observed in the southern parts. Jigawa state has vast fertile arable land that supports the production of almost all tropical crops. The Sudan savannah is made up of vast grazing lands suitable for livestock production. The state is largely characterized by informal sector activities with agriculture as the major economic activity. Over 80% of the population is engage in subsistence farming and animal husbandry. Recent studies indicated that the effects of climate change on livestock husbandry and practices reduced livestock feed intake, reduced animal growth rate, increased frequency of abortion, reduced birth rate, increased disease condition, increased incidence of parasites, increased mortality rate, reduces income, increased frequent migration with family and stock, increased competition over grazing facilities and conflict with other farmers.

Agriculture in the tropics like Kebbi state is hampered by upward trend in temperature, fragile soils, low yield potential, aridity and increase in drought risk as drier soil absorbs more rainfall. Rainfall shortages in that area is associated with damaging consequences such as food and water deficiencies, displacement and death of population. Increase in the surface temperature leads to an increase in heavy precipitation depending on several factors, which are; atmospheric circulation, vertical temperature profile, moisture holding capacity of the atmosphere and microscale processes (IPCC, 2007).

The earth's temperature is rising as a result of increased atmospheric concentrations of greenhouse gases. Northern Nigeria and indeed Kaduna is not an exception. As a semi-arid area, the Kaduna state is generally vulnerable to climate change. The State has experienced serious droughts, shortening rainfall and floods that have negatively impacted the state's agricultural productive capacity. During the rainy season, most crops are facing issues such as flower abortions, unusual flowering or fruiting time and generally low yields due to the effects of climate change. For instance, 1% increase in minimum temperature leads to 3.7% reduction in rice production in Kaduna. As rainfall becomes more variable, farmers are no longer able to rely on their traditional knowledge on the seasonality of climatic features. It has been predicted that 11% of the arable land would be affected by climate change, with consecutive reduction in cereal production, and on 16%percent agricultural GDP reduction.

In Kano state, many of the local government areas of the State have been severely affected by floods caused by heavy rains. Dambazau/Fajewa in Takai LGA, Dawan Kaya in Makoda LGA, Yar Sabo in Tofa LGA and YarTiti in Shanono LGA are some of the many flood and erosion prone areas of Kano State. The flooded and eroded terrains have created severe structural and environmental damages to the state and caused destruction to homes, properties, and farmlands as well as unprecedented siltation of community streams. There have been several local media reports that floods have led to several deaths of persons, damages to houses, bridges, culverts and roads over the last few years.

Katsina State lies in the semi-arid region of Nigeria and is one of the frontline states which bears the brunt of desertification significantly. Three different agro-ecological zones exist within the state. The extreme northern part of the state lies within the Sahel Savannah with rainfall on average of less than 600mm per year. The northern part lies within the Sudan Savannah with the rainfall average of about 800mm per year and the southern part lies in the Guinea Savannah with rainfall averages of 1000mm per annum. Given the land degradation being experienced in the State, there are afforestation programmes in the state that are focused on the establishment of plantations, woodlots, shelterbelts and trees on farmlands. Some of the planted trees include Azadirachta Indica (Neem), Acadia species and Eucalyptus.
The major ecological problems in the sokoto state are militated gully erosion and flooding. Bush burning, over grazing and excessive deforestation and land degradation.

CHAPTER SIX:
ENVIRONMENTAL AND SOCIAL IMPACTS IDENTIFICATION

6.1 Introduction

This Section documents the possible impacts that are likely to result from the project following interactions between the subproject components and the environmental elements. The method of impact identification and evaluation is also given in this Section. It should be noted that impacts identified are preliminary in nature. The potential for occurrence in each subproject shall be ascertained during further stages of project design and implementation.

Any subproject under the ACRESAL Project, whether it is simple and small, or large and complex has some level of impacts on the environment and socioeconomics. The environmental and social impacts may be beneficial or adverse, but the main objective of impact identification especially with emphasis to the ACRESAL Project is to identify and prioritize areas that are likely to be adversely affected by the implementation of subprojects and proffer suitable mitigation measures. Environmental and social impacts, by definition, imply an alteration of environmental and human conditions or creation of new sets of adverse or beneficial environmental and social consequences caused by the action under consideration.

6.2 Type of Impacts Envisaged Under the ACRESAL

For purposes of this ESMF, the identified impacts that are likely to be associated with the ACRESAL subprojects have been classified under three (3) phases of the intervention lifespan for each subproject. The phases include:

i) Preconstruction phase
ii) Construction phase
iii) Operational and Maintenance phase

6.3 Potential Positive and Adverse Impacts of the Project

6.3.1 The Potential Positive Impacts

The ACRESAL project is envisaged to have a range of positive environmental and social impacts. Some of these are a function of the objectives of the subprojects, while others are a function of the way in which the project is designed to meet its objectives. Some of the beneficial impacts associated with the project include:

1) Improved agricultural productivity.	2) Provision of proper and well-designed road drainage systems
3) Community development programs.	4) Rehabilitation of affected lands, vegetation and forests.
5) Reintegration of community and diversification of sources of livelihood.	6) Reduced fear perception of loss of property, inhabitation and ancestral origins of the communities.
7) Provision of employment.	8) Increased financial and technical collaboration between projects affected states and the project communities.
9) Reduction in hunger through the harnessing of previously degraded land for agricultural purposes	10) Control and Reduction of water body sedimentation rates due to erosion.

11) Improved health statistics.	12) Reduction in siltation of rivers due to improved land vegetation covers and decreases in slope.
13) Promotion of afforestation programs (with all its benefits)	14) Reduction in mortality/morbidity from landslides.
15) Minimization of flooding and control of coastal overflow.	16) Creation of engineered travel routes and access roads.
17) Increase in the life span of roads.	18) Increased opportunities for easy inter-state movement and business development.
19) Initiation/ kick-off of rapid production systems and agricultural practices.	20) Increase in social interactions
21) Improved livelihood enhancing activities	22) Creation of land mass for new development projects (farms, fruits farms, healthcare facilities, etc)
23) Improvement in the eco-balance.	24) Improvement on aquatic environment and fishing practices.
25) Increase in urbanization	26) Reduced level of land disputes and ethnic violence
27) Increase in business/commerce during and after the construction works.	28) Job creation opportunities.

The ACRESAL project will create jobs and provide skills that would meaningfully engage the youths within and outside the project influence areas. The project will be a real boost to the economy of the communities by creating direct and indirect employments create new sources of income and enhance old sources. Thus, improvements through ACRESAL will allow economies of scale and specialization, widen opportunities, expand trade, integrate markets, strengthen effective competition, enhance social interaction, and eventually increase real income and welfare of the society. These effects will, in general, provide real benefits to most, if not all, socioeconomic groups, particularly the poor.

6.3.2 The Potential Adverse Impacts

Implementation of ACRESAL Project could lead to some negative impacts on the social and physical environments of the project communities. The identified impacts will trigger the Nigerian safeguards requirements as well as the relevant World Bank Environmental and Social Standards (ESS). There are eight (8) out of ten (10) standards relevant to the ACRESAL Project. The relevant World Bank ESSs are described under Section 2.4.1 and they set out the requirements relating to the identification and assessment of environmental and social risks and impacts associated with this project.

The application of these standards, through the identification and management of environmental and social risks, will support the goal of reducing poverty and increasing prosperity in a sustainable manner for the benefit of ACRESAL project communities and their environment. The standards will further: (a) support achieving good international practice relating to environmental and social sustainability; (b) assist in fulfilling national and international environmental and social obligations; (c) enhance nondiscrimination, transparency, participation, accountability and

governance; and (d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.

Table 6.1: Potential Environmental and Health Impacts and Sources

Project Phase	Potential Impact Source	Potential Impact
Pre-construction phase	Land acquisition from members of the communities before the construction phase. Destruction of structures, economic trees and cash crops	• Negative perception and discontent expressions by members of the community. • Loss of people's properties and farmlands; • Decrease in accruable income. • Hostile and unfriendly community attitudes. • Unresolved issues with lands acquisition extending into the construction phase.
	Gender based violence/Sexual exploitation and abuse/Sexual harassment (GBV/SEA/SH)	• Degraded physical and emotional health of those who have experienced it. • Acute injuries and chronic pain, • Gynecological problems, depression, trauma and substance abuse. • Limit access to educational and economic opportunities, • Early marriage and adverse experience • Fear of physical or sexual abuse lead to high school dropout rates, • Curtailing of educational advancement and future economic opportunities. • Stigma and rejection associated with rape and other forms of sexual abuse.
Construction Phase under Project SubComponents A2, A3, B2 and B3.	Excavation, grading, compaction, filling and other civil works.	Excavation and compaction activities through construction works will alter the soil properties including loss of valuable top soils,
	Construction waste generation and disposal; Organic waste generation from agro-processing and marketing	Depletion of landfill resources; Air pollution and climate change effects; Sedimentation and soil erosion, Disruption of waterways and drainage corridors
	Channelization of flood waters	• Presence of undercutting in roads. • Increased flooding in other areas, which can lead to destruction of lands, crops and properties.
	Increased sedimentation and runoff during the construction activities, including dam reconstruction and rehabilitation. Water quality changes result from grading, dredging and filling of the roads etc.	• Disruption the natural food chain by destroying the aquatic habitat • Prevention of natural vegetation growth in water; • Contamination of local waterways causing harm to plants, fish and wildlife, and degrading water quality; • Increase in cost of treating drinking water and can result in odor and taste problems • Cause massive declines in fish populations • Alteration of water flow and reduction of water depth, making navigation and

Project Phase	Potential Impact Source	Potential Impact
		recreational use more difficult • Complaints from members of the community.
	Air pollution from fugitive dust and emissions from construction vehicles, plant and equipment. Dust is generated by excavation and earth moving operations. Exhaust emissions occur from poor maintenance of plant and equipment or over revving of engines	• Impairment in the health of local residents of the community especially cases of respiratory infection and respiratory disease symptoms. • Incidence of ocular disease symptoms. • Presence of suspended particulates exceeding acceptable limits. • Complaints from members of the community. • Nuisance to residents and other sensitive receptors
	Noise and Vibration from construction activities	• Complaints of disturbance from members of the community. • Damages of structures overtime as a result of the vibration caused by the heavy machineries.
	Toxicity to aquatic life resulting from use of agrochemicals during plantation development	• Contamination of local waterways causing harm to plants, fish and wildlife, and degrading water quality;
	Conversion of natural habitats or protected areas due to dam construction or agricultural development resulting in felling of trees and wildfires	• Destruction og the ecosystem; • Reduction of the richness in the number of available living species. • Reduction in the number of native wildlife.
	Gender based violence/Sexual exploitation and abuse/Sexual harassment (GBV/SEA/SH)	• Complaints of violations from members of the community. • Degraded physical and emotional health of those who have experienced it. • Acute injuries and chronic pain, • Gynecological problems, depression, trauma and substance abuse. • Limit access to educational and economic opportunities, • Early marriage and adverse experience • Fear of physical or sexual abuse lead to high school dropout rates, • Curtailing of educational advancement and future economic opportunities. • Stigma and rejection associated with rape and other forms of sexual abuse.
	Water Quality changes resulting from construction works, seepage of fuel from powered machineries into the watershed, discharge of untreated effluent into water bodies or effluent from workers in the campsites.	• Change in the water colour • Change in pH levels • Eutrophication • Increased cases of disease, illnesses (especially waterborne diseases) • Odour • Alteration of aquatic life.

Project Phase	Potential Impact Source	Potential Impact
	Impact on flora and fauna resulting from mobilization of equipment and construction activities including dam construction and rehabilitation such as grading, dredging, filling, excavation etc., Weed invasion/proliferation of opportunist species (weeds & pests)	• Reduction of the richness in the number of available living species including protozoans • Reduction in the number of native wildlife. • Alteration of various forms of plant and animal life • Presence of Wildlife species within community dwellings and corridors.
	Transportation & Traffic impact: Existing travel patterns will be negatively impacted during the construction phase of the project in the states.	• Complaints from members of the community. • Increase in noise and air pollution. • Increase in roadside hazards and accident
	Accidents occurring during the construction phase as a result of increased vehicular movements.	Increase in total number of accidents during the construction phase.
	Increased crime rates	Crime rate and dispute amongst members of the communities. Including Sexual Abuse and Explotation and Sexual Harassment (SEA/SH)
	Human Displacement Impact Sources including: Civil activities, re-vegetative activities, watershed management	Relocation of people and their sources of economy.
	Archeological & Cultural Loss Impact Sources including: Excavation/earth works, deforestation activities and other engineering activities e.g water channeling	Loss of valuable archaeological and historical artifacts Complaints from members of the community
	Social Stress & Disruption Impact Source: • Civil work activities. • Human Governance. (Corrupt practices)	• A collapse of the Laws, rules and norms within the community. • Increased anti-social behaviour
	Aesthetics Impact Source: Construction works	Diminished Aesthetic levels

Project Phase	Potential Impact Source	Potential Impact
	Public Health a) COVID19 b) HIV/AIDS and STDs Impact Sources include: 1. Influx of non-local workforce. 2. Low living standards of members of the host community which will increases likelihood of social vices such as prostitution, robbery, etc. b. Water-Borne Diseases (e.g. Cholera, Dysentery, Amoebiasis, Salmonellosis etc.) Impact Sources include: 1. Poor environmental sanitation habits exhibited by members of the contractor's workforce. 2.Overload of existing sanitation facilities. c. Malaria • During construction activity through creation of pools of stagnant water. • Poor environmental sanitation habits by members of the contractor's workforce. • Movement of waste into the watershed	• Exposure to corona virus. • Increased outbreaks of HIV/AIDS and other STDs. • Increased cases of opportunistic infections within the work force, and members of the host communities. • Increased outbreak of water borne diseases amongst the workforce and the local population. • Increased Gender-Based Violence (GBV) including but not limited to: intimate partner violence (IPV), forced and early marriage, early pregnancy, human trafficking, sexual abuse and explotation and sexual harassment • Increased outbreak of water borne diseases amongst the workforce and the local population. • Increased cases of fevers amongst workers and members of the host communities.
Operation & Maintenance Phase under Project SubComponents A2, A3, B2 and B3.	Topography Impact Sources include: • Construction activities including movement of goods and services. • Agricultural activities.	• Scarification of landscape • Increase in vehicular accidents
	Air Quality Impact Source include: Increase in vehicular traffics	• Complaints from members of the community. Complaint from localresidents on cases of respiratory problems. • Increase in particulate matter more than 10 microns in size (PM-10) and dust above the ambient air quality levels.
	Public health impacts resulting from: 1. Poor environmental sanitation habits exhibited by members of the contractor's workforce. 2. Overload of existing sanitation facilities.	• Increased outbreak of water borne diseases amongst the workforce and the local population. • Increased cases of fevers amongst workers and members of the host communities.
	Noise and Vibration Impact Source include: Movement of heavy duty equipment and operational trucks	• Reported cases of noise and vibration disturbance by local residents.
	Water Quality Impact Sources include: Roadway runoff, wastes (municipal	• Changes in pH levels • Turbidity • Change in water colour

Project Phase	Potential Impact Source	Potential Impact
	solid wastes, agricultural wastes, untreated effluent, hazardous wastes e.t.c)	• Odour; • Disruption of drainage channels
	Traffic and Transportation Impact Source: Increase in traffic within the roads and access roads of the project areas	• An increase in traffic in the areas around the projects implementation
	Occupational Health & Safety a. PPEs b. Emergency Response & First Aids Impact Sources include: Exposure of workers to accidents, working in potential weather extremes, contact with natural hazards such as animals, insects, carnivorous and poisonous plants.	• Injury of workers and the public during the operation and maintenance activities

Social Impact Management Plan

This social impact management plan as outlined below will ensure that the project and its implementing agencies will incorporate lessons learned and the recommendations identified in the report of the Global Gender-Based Violence Task Force Report and in the SEA/SH Good Practice Note in assessing Gender-Based Violence and Sexual Exploitations and Abuse risks and defining mitigation measures. The plan could be redefined during implementation and further consultation undertaken in the light of what has been outlined in the table below.

Table 6.2 : Potential Mitigation Measures of Social Impacts

Expected Adverse Impact	***Potential Mitigation Measures***			
	Contractor	***SPMU/FPMU***		***World Bank***
		Project-specific – With World Bank Support of the Monitoring/ Supervision Consultant	***Broader Enabling Environment***	
All Disputes	Follow GRM provision	▪ Establishment and operation of an effective GRM accessible to community members—ideally with involvement of the community and LGA level committee and Community Based Organizations to facilitate early identification of problems and targeted mitigating interventions by SPM; ▪ Establishment and operation of an effective GBV GRM accessible to community members and project contractors—ideally with involvement	▪ Supportive	• Inclusion of relevant provisions in the ESMP and Legal Agreement; • Provision of advice on expected or likely issues based on Bank experience; • Implementation support to verify compliance with the ESMP and CESMP; • Monitoring of GRM resolution rates and identification of

Expected Adverse Impact	*Potential Mitigation Measures*			
	Contractor	*SPMU/FPMU*		*World Bank*
		Project-specific – With World Bank Support of the Monitoring/ Supervision Consultant	*Broader Enabling Environment*	
		of the Ministry of Women Affairs, Children and Social Protection to facilitate the discrete ▪ Provision of information to communities on how to use the two types of GRM to report issues; ▪ Monitoring and taking appropriate actions to ensure CESMP provisions are met; ▪ Inclusion of relevant provisions in the ESMP; ▪ Inclusion of relevant provisions in the SPMU contract.		recurring issues to discuss with FPMU/SPMU.
Land acquisition for the project	▪ Fair compensation for affected structures and crops at current market value ▪ Provision of compensation and assistance to vulnerable groups ▪ Provision of differentiated treatment for vulnerable people ▪ Signing of agreements with local authorities and communities. ▪ Ensure the ownership of land is effectively established to mitigate the possibilities of taking land owned by women for public interest without ensuring the affected women are provided with land for land replacement option	• Ensure consultation with PAPs, obtain permit, transfer title and documentation	▪ Supportive ▪ Government to provide adequate fund for the payment of RAP and livelihood restoration	Ensure compliance
Risk of social conflict	▪ Awareness of historical and cultural nature of the project area when dealing with affected communities, ▪ Ensure that communication tools portray correct and concise information ▪ Provision of information regarding Worker Code of Conduct ▪ Provision of cultural sensitization training for workers regarding engagement with local community. ▪ Provision of a one paragraph Sexual	▪ Consultations with and involvement of local communities in project planning and implementation processes; ▪ Awareness-raising among local community and workers. ▪ Ensure the Contractor adheres to Workers code of conduct and local tradition,		

Expected Adverse Impact	*Potential Mitigation Measures*			
	Contractor	*SPMU/FPMU*		*World Bank*
		Project-specific – With World Bank Support of the Monitoring/ Supervision Consultant	*Broader Enabling Environment*	
	Exploitation and Abuse and Harassment Policy, as an addendum to the Contractor workers' contract, to be signed as a commitment to adhere to Worker Code of Conduct and GBV prevention with accompanying training. ▪ Commitment to prioritizing the hiring of competent locals including women to the maximum extent to avoid inter or intra-community tension with migrant workers			
Increased risk of illicit behavior and crime (including prostitution, theft and substance abuse)	▪ Paying adequate salaries for workers to reduce incentive for theft; ▪ Hiring of local workforce; ▪ Creation of supervised recreation areas in workers' camp as well as temporary rest areas at work sites; ▪ Cooperation with local law enforcement; ▪ Introduction of sanctions (e.g., dismissal) for workers involved in criminal activities; ▪ Provision of substance (drug and alcohol) abuse prevention and management programs for workers involved in the project site ▪ Hiring of young women in the project areas to mitigate the risk of prostitution and sexual transactions. ▪ pay wage equal to men and women on the basis of equal job performed and merit.	▪ Ensure assignment of adequate enforcement staff; ▪ Enforcement of laws on drug abuse and traffic; ▪ Police monitoring to prevent drugs trafficking; ▪ Sensitization campaigns for both workers and local communities.		
Adverse impacts on community dynamics	• Provision of services in the workers' camp to reduce the need for workers to use local community facilities; • Provision of entertainment and events for workers within camp to reduce incentives for mixing with local community (Satellite Television, diner, bar). • Restriction of public	▪ Liaison with civil society organizations to create integrative action plans; ▪ Provision of upfront information on potentially detrimental impacts on local communities.	▪ Investment in community participation and engagement programs.	

Expected Adverse Impact	*Potential Mitigation Measures*			
	Contractor	*SPMU/FPMU*		*World Bank*
		Project-specific – With World Bank Support of the Monitoring/ Supervision Consultant	*Broader Enabling Environment*	
	access to camps and construction areas to be managed by o assigning security personnel to manage access, o fencing of camps, o installation of appropriate signage			
Impact on Community Cultural Traditions	• Contractor is to ensure the strict implementation of Labor Management Plan including Workers Code of Conduct to minimize engagement with the locals and to ensure workers are educated on the local traditions and proper interactions. Actions disapproved by the communities or by their traditions must be corrected, improved and proper consultation must be held with the leaders to ensure satisfaction of redress mechanism.	▪ Provision of upfront information on potentially detrimental cultural impacts on local communities ▪ Liaise with community based organizations to create integrative action plans.		
Influx of Additional Population ("Followers")	▪ Contractor to hire workers through a systematic process managed by the HR office and avoid hiring "at the gate" to discourage spontaneous influx of job seekers and migrant workers. ▪ Development of a detailed and sitespecific labor influx management plan. ▪ Prioritize the hiring of the locals for qualified skilled and unskilled work ▪ Train women in variety of skilled and non-skilled jobs such as operating construction equipment, involving them in supervisory jobs, inform communities of all hiring opportunities in construction areas.	▪ Communications campaign to manage expectations and discourage spontaneous influx of job seekers; ▪ Coordinate with Local government to address this additional influx of the "followers" to ensure that no illegal and unsafe settlements develop; ▪ Review and ensure adherence to labor influx management plan.		
Increased burden on public service Provision	▪ Workers' camp to include wastewater disposal and septic systems; ▪ Identification of authorized water supply source and prohibition of use from other community sources; ▪ Identification of separate nonhazardous solid and liquid waste disposal sites	▪ Contingency plans for temporary rise in demand for utilities and public service provision.	▪ Investment in and capacity building of local public service providers.	

Expected Adverse Impact	*Potential Mitigation Measures*			
	Contractor	*SPMU/FPMU*		*World Bank*
		Project-specific – With World Bank Support of the Monitoring/ Supervision Consultant	*Broader Enabling Environment*	
	▪ Identification of separate service providers for community and workers' camp/construction site; ▪ Worker Code of Conduct on water and electricity consumption.			
Increased communicable diseases (including STDs and HIV/AIDS)2	▪ Vaccinating workers against common and locally prevalent diseases; ▪ In association with the National AIDs Control Program - contract a HIV service provider to be available on-site; ▪ Implementation of HIV/AIDS education program; ▪ Information campaigns on STDs among the workers and local community in collaboration NACA.SACA, ▪ Provision of condoms.	▪ Upgrade of health centers at camp and construction sites. This should be included in contractor's contract. The clinic should be approved by MoH; o Free testing facilities; o Provision of condoms; o Monitoring of local population health data, for transmissible diseases.	▪ Awareness raising about public health impacts from labor influx.	
Gender-based violence, including sexual harassment, child abuse and exploitation	▪ All workers will be required to sign Codes of Conduct that strictly prohibit Sexual Abuse and Explotation and Sexual Harassment; ▪ Mandatory and regular training for workers on SEA/SH, required lawful conduct in the project site and legal consequences for failure to comply with SEA/SH laws and policies in accordance with the Codes of Conduct; ▪ Commitment / policy to cooperate with law enforcement agencies investigating perpetrators of gender-based violence; ▪ Creation of partnership with local offices of the Ministry of Women Affairs, Children and Social Protection, NGOs and community women groups to report workers' misconduct and complaints/reports on gender-based violence or harassment through the GBV GRM; ▪ Provision of opportunities for workers to regularly return to their families; ▪ Provision of opportunities for workers to take	▪ Capacity building for the FPMU/SPMU to act on GBV complaints (local law enforcement is to be involved only if the survivors permit); ▪ Information and awareness raising campaigns for community members, specifically women and girls; • Sensitization of men and boys in the community SEA/SH issues. ▪ Provision of information to the project site about the contractor's policies and Worker Code of Conduct (where applicable). • Risk assessment including focus group and in-depth interviews with women and girls in the community to better understand types opf GBV prevelant, help seeking behavior, appropriate GRM reporting channels etc. • Regular consultations with women and girls in the community throughout the project	▪ Increased security presence in nearby communities; ▪ Reinforcement of police force where needed; ▪ Deployment of female police officers with GBV awareness in project area; ▪ Application of long-term communitybased approaches to address the issue; ▪ Enforcement of laws on sexual violence and human trafficking.	▪Provide data collection tools, shared database and training for the organization conducting the service provider mapping ▪Provide support and review for the ESMP, GBV Action Plan, Codes of Conduct and other relevant documents

Expected Adverse Impact	*Potential Mitigation Measures*			
	Contractor	*SPMU/FPMU*		*World Bank*
		Project-specific – With World Bank Support of the Monitoring/ Supervision Consultant	*Broader Enabling Environment*	
	advantage of entertainment opportunities away from rural host communities. ▪ Commitment to providing alternative work schedules or shifts to accommodate the hiring of more local female workers. This ensures they can carry out their domestic duties and avoid potential domestic abuse for reasons justified in the ESIA. ▪Sinage on the project site that prohibits GBV, and posted Codes of Conduct ▪Separate toilet facilities in separate areas for men and women and other worksite mitigation measures	• Mapping and quality assessment of GBV service providers in the project area to ensure that survivors have access to quality care (medical, psychosocial, legal, security, shelter, livelihood) • GBV GRM with operators trained in a survivor-centered approach and the Accountability and Response Framework		
Child labor and school drop out	▪ Ensuring that children and minors are not employed directly or indirectly on the project.	▪ Communication on hiring criteria, minimum age, and applicable laws.	▪ Enforcement of legislation on child labor.	
Local inflation of prices and crowding out of local consumers	▪ Appropriate mix of locally and nonlocally procured goods to allow local project benefits while reducing risk of crowding out of and price hikes for local consumers.		▪ Monitoring of local prices and security of supply.	
Increased pressure on accommodation and rents	▪ When the local community supply of accommodation is limited, the project should establish workers' camp facilities with sufficient capacity for workers— including sub-contractors—and associated support staff.	▪ Inclusion in contract of funding for establishment of workers' camp.		
Increased traffic and rise in accidents	▪ Preparation and implementation of a traffic management plan to be approved by monitoring/ supervision consultant; ▪ Building additional/separate roads to project and workers' camp sites, where necessary; ▪ Organization of commute from camp to project to reduce traffic; ▪ Road safety training and defensive driving training for staff; ▪ Sanctions for reckless driving.	▪ Coordinate with local government, contractor and communities to identify accident hotspots and formulation of solutions.	▪ Upgrading and Maintaining roads affected by project (unless designated as contractor responsibility)	

Expected Adverse Impact	Potential Mitigation Measures			
	Contractor	SPMU/FPMU		World Bank
		Project-specific – With World Bank Support of the Monitoring/ Supervision Consultant	Broader Enabling Environment	
Risk of marginalizing Vulnerable Groups	▪ To mitigate impact associated with age vulnerably, the SPMU when conducting the assessment under Safeguards policies/ESMF shall identify disadvantaged or vulnerable individuals or groups that will be directly or indirectly affected in the project area, and a process whereby differentiated measures will be developed to address circumstances or needs of such individuals or groups.			

6.3.2.1 Impacts on Protected Areas and Natural Habitats

Natural habitats are land and water areas whose ecological functions have not been essentially modified by human activities. Subprojects like constructions, excavations are likely to lead to significant conversion or degradation of natural habitats. For ACRESAL project, in the event that a subproject of any participating state is identified to be located in a protected area, the potential impacts associated with conversion or degradation of natural habitats must be considered for such a subproject. The special ecosystems that may be impacted by the ACRESAL project are discussed below.

Special Ecosystems

Northern Nigeria is dominated by savanna vegetation types - Guinea, Sudan and Sahel savanna. The landcover is mostly cropland with scattered shrubland and some herbaceous vegetation (particularly in the north-east and north-west) and some growing urban centers. The density of trees and grasses decrease northwards responding to climatic conditions and the diversity of region's natural ecosystems. Natural ecosystems form an important and integral part of the drylands of the region and harbor important biodiversity as well as genetic reservoirs for many species of flora and fauna that people depend on for their livelihoods. The economy is characterized by a large rural-based traditional sector with about 80% of the population deriving its means of livelihood from agriculture. The natural ecosystems in northern Nigeria that are formally protected include national parks, gazetted forests, and wetlands. All these protected areas suffer varying degrees of degradation and invasion, and are all in need of urgent care and support.

The Project Development Objective (PDO) of ACRESAL Project is to increase the adoption of climate resilient landscape management practices in targeted arid/semi-arid watersheds in Northern Nigeria. The project aims to address the drivers of watershed degradation in the targeted areas through support for watershed planning and implementation of rapid strategic investments in the watershed, including

improvements to the management of special ecosystems. This includes work related to wetland improvements, water management and biodiversity as well as stabilization of Oasis buffer areas and improved water provision, and improving management systems for targeted protected areas. ACRESAL will support national parks which are considered to be particularly at risk, and which form major parts of the prioritized watersheds under the project. About 200,000 ha are expected to benefit from improved management. The project also aims to support communities with improved capacity and investments to improve sustainable livelihoods, including agricultural productivity in northern Nigeria.

National Parks, Forests & Protected Areas:
Nigeria is blessed with rich and unique array of ecosystems, and a great variety of wild fauna and flora. This rich natural endowment is a product of the climatic variations resulting into various north-south gradations of habitats and ecosystems. There are seven national parks in Nigeria, and recently additional 10 protected areas were upgraded to national parks. Four of the seven national parks (Chad Basin, Gashaka-Gumti, Kamuku, and Kainji Lake) are located in the semi-arid region of northern Nigeria. They together cover about 15,492 km2 (about 70% of the total area covered by Nigerian national parks) and are globally recognized for their species richness, endemism, and protection of ecosystem resources that sustain the socio-economic livelihoods of communities in their respective region. Also, seven of the 10 newly upgraded national parks are located in the project area of northern Nigeria (Falgore, Hadejia wetlands, Allawa Kogo, Pandan, Marhai, and Kampe). The Nigeria National Park Service (NNPS) is responsible for preserving, enhancing, protecting and managing vegetation and wild animals in these national parks. The NNPS is a parastatal under the Federal Ministry of the Environment and works closely with the Nigerian Tourism Development Corporation (NTDC).

National Parks with Locations and Sizes

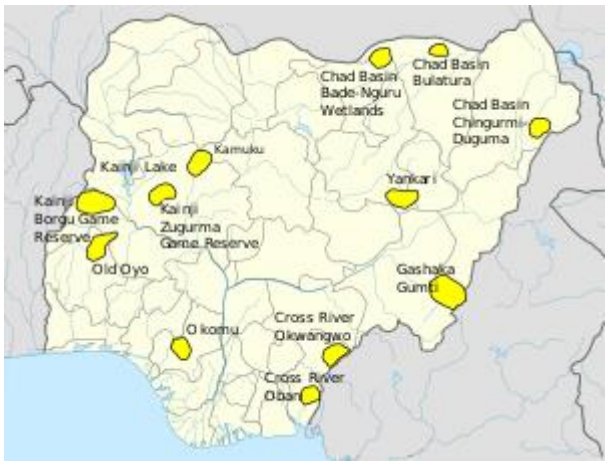
SN	NAME	STATE(S)	HEAD OFFICE	SIZE
i	Chad Basin	Borno/Yobe	Maiduguri	2,258 sq.km
ii	Cross River	Cross River	Akamkpa	4,000 sq.km
iii	Gashaka-Gumti	Adamawa/Taraba	Serti	6,731 sq.km
iv	Kamuku	Kaduna	Birnin Gwari	1,121 sq.km
v	Kainji Lake	Kwara/Niger	New Bussa	5,382 sq.km
vi	Okomu	Edo	Arakhuan-Udo	202.24 sq.km
vii	Old Oyo	Oyo	Oyo	2,512 sq.km
Estimated Total Conservation Area				22,206.24 sq.km

Chad Basin National Park is situated within present day Borno and Yobe States, covering a total land area of 2,258km^2. It is geographically situated between latitudes 11.^{o}00'-N13.^{o}00'N and longitudes 13.^{o}00' – 15.^{o}30'E. The Park is composed of three Sectors which are spatially remote from one another i.e. one Sector: Chingurmi-Duguma sector is located in Borno state while the other two sectors - Wetlands and Bulatura Oases are located in Yobe state.

Gashaka-Gumti National Park is located in the mountainous region of north-eastern Nigeria adjacent to the international border with Cameroon, and immediately to the north of Mambilla Plateau. The largest and most scenic of all the seven National Parks, this conservation area lies between latitude 6^{o} 55' and 8^{o} 05' north, and longitude 11^{o}11' and 12^{o}13' east and covers a total area of 6,731 sq.km. The Park lies within Adamawa and Taraba States and is contiguous with Faro and Tchabal Mbado National Parks in the Republic of Cameroon. The Park experiences varying pleasant weather conditions, depending on one's location within the Park. These range from tropical dry humid, tropical moist humid in the lowlands to sub-tropical highland weather on the high plateau around Chappal waddi, Sabere and Fillinga.

Kainji Lake National Park is located in the northwest central part of the country between latitude 9°40'N and 10°30'N and longitude 3°30'E and 5°50'E in Niger and Kwara states. The National Park with a total area of 5340.82sq/km separated into two distinct non-contiguous sectors namely Borgu sector with an area of 3970.02 sq/km and Zugurma sector with an area of 1370.80 sq/km respectively. The Park is a typical inselberg landscape with round hills wide pediments/plains separating them and incised river channels slopping down towards the River Niger valley. Some of the Rivers in the Park include. Oli Menei, Doro and Manyara Rivers, etc.

Kamuku National Park is located in Birnin Gwari, Kaduna State of Nigeria. It is situated between latitudes 10°40'N; Longitudes 6°11'E and 6°36E in the north-central part of Nigeria. Kamuku National Park boasts of land area of about 1,120sqkm of typical Savannah Woodland vegetation. Kamuku shares the same ecosystem and boundary with the luxuriant Kwiambana Game Reserve in Zamfara State, separated only by a natural boundary-the River Mariga. Thus, the Park distinctly represents one of the best remaining blocks of the Sudan-Guinea Savannah vegetation in the country's protected area system. The Park has rich, close canopy vegetation of Savannah woodland type with dominant species of Isoberlina, Afzelia, Daniellia, Detarium, Raphia, etc and a few lily plant species. Tall, tough grass cover populates the marshy areas of the Park especially during the rainy season.



Location of National Parks in Nigeria

Available data indicate that there are about 9.1 million km2 of total forest area which are protected in Nigeria. Of these forests, 4.4million km2 exist in northern Nigeria. This constitutes about 9.9% of total land, Dada et al (2006). The forests are most environmentally important as they serve as the home for wild animals like antelopes, monkeys, elephants, snakes, etc and help to prevent soil erosion, and help to

prevent soil erosion, wind erosion and desert encroachment. The forests beautify the environment, serve as tourist attraction, and help in the purification of the air by removing carbon-dioxide (during photosynthesis) and adding oxygen (during respiration). Additionally, the forests provide employment for the people among who are the forest guards.

Biodiversity Protection and Management

While the forests have many important uses only proper ecosystem management will ensure the continuous supply of forest products and environmental sustainability. Given the aridity of northern Nigeria, the project area is not home to traditional forests, but the scattered brush and trees are also threatened by the need of fuelwood/charcoal and bush burning to clear land for agriculture. The greatest threat facing the special ecosystems, particularly the forests is the clearance of the forest for firewood and for agricultural use. There are little formal environmental protection programs. Habitat destruction is linked to farming methods, bush burning, fuel wood collection, grazing, etc. The physical consequences of moisture deficit and steady deterioration of the physical environment result in the entire northern Nigeria being vulnerable to crop failures as vast proportion of the region is characterized by varying levels of deficient moisture quality, late onset, early retreat of rainfall and shorter hydrologic growing season (HGS). Delayed onset often leads to late planting of crops, while premature cessation and shorter HGS leads to wilting and dryness of the crops before maturity and consequently, poor yield. Onset, cessation and length of the HGS are more critical to plant (Adefolalu, 1986a).

The main causes of Habitat losses have led to serious impacts on wildlife population. The indiscriminate hunting of wildlife for food to compliment subsistence farming and bush burning has led to biodiversity loss and ecosystem depletion. The high rate of population growth is crucially among the set of factors that degrade the environment and threaten biodiversity in the country. The direct causes of biodiversity loss are associated with economic policies, cultural practices, poor law enforcement and weak laws. Also, low budgetary allocations to the forestry sub-sector have curtailed national efforts to reforest large areas that have been deforested. Consequently, the forest exploitation, vegetation clearance and dam construction are the major causes of natural gene pool loss that is occurring in regard to several species. Notably, the largest threat to conservation of biological diversity has been identified as poverty.

For gazetted forests, the ACRESAL project will support the government's efforts to improve the management of forests, increase access to fuelwood in the main cities, and to strengthen non-timber forest product value chains for forest-dependent communities. To address challenges identified in the forestry sector, the project will set up a combination of incentive-based agroforestry schemes, agricultural intensification, bush fire control, establishment of fuelwood plantations on degraded gazetted forest lands, to increase fuelwood production and meet the energy needs of high-consumption urban hubs. It also includes efficient production of charcoal, transhumance management, and Non-Timber Forest Product (NTFP) value chain development.

A protected area strategy should be a plan that balances the environmental needs with the economic needs. The remedial strategy to reduce the impacts of anthropogenic factors should include the practice of agroforestry, rainwater harvesting, local irrigation techniques, utilization of wetter sites, contour ridging and terracing to conserve nutrient and water run-off, cautionary expansion of cultivated

sites, and the maintenance of a viable seed stock well-suited to variable climatic conditions. The strategy should be developed and implemented in a coordinated, open and participatory manner. For it to be effective the process will involve the cooperation between all the levels of government; federal, state, local government, traditional councils, NGOs and local communities. Public and stakeholder participation will also be very important while a Protected Areas Strategy Advisory Committee will be established at the initial stage of the process. Throughout the process of developing and implementing the Protected Areas Strategy; opportunities will be created for meaningful public participation. This can be achieved through workshops, distribution of handbills, open houses, public meetings, community consultation and meetings with interested groups.

Site-Specific Plans As Needed

Under ACRESAL, the subprojects' site-specific ESMP and the Biodiversity Assessment Plan (BAP) shall provide necessary environmental and social assessment for the specisl ecosystems. The potential project related risks to and impacts on habitats and the biodiversity that they support will be identified through these assessments. The assessment undertaken will include identification of the types of habitats potentially affected and consideration of potential risks to and impacts on the ecological function of the habitats. The assessment will encompass any areas of potential biodiversity importance that may be affected by the project, whether or not they are protected under national law. The extent of the assessment will be proportionate to the risks and impacts, based on their likelihood, significance and severity, and will reflect the concerns of project affected parties and other interested parties.

6.3.2.2 Biological and Physico-chemical Impacts

Impacts of this sort relate to effects on biological resources such as vegetation, wildlife, crops, and aquatic life. Impacts affecting soil and landforms, or vulnerability to soil erosion, floods and sedimentation, would be considered as physical impacts. Chemical impacts relate to subproject activities that will cause a chemical change in air/water/soil quality. Emissions from tractors or bulldozers, for example, may change the amount of sulphur dioxide (SO_2) content of ambient air, while untreated effluent discharged directly into water bodies may change the chemical characteristics of the water bodies.

The biological component covers all elements, including different forms of plant life, their functions and interaction with other components of the ecosystem. Another component of a biological system is the animal life, which ranges from microscopic protozoans to large animals occupying different niches.

In the planning process of the ACRESAL Project, the consideration of under-listed four major points should be made to avoid or minimize the adverse impacts on biophysical components:

- All activities, which may affect the biophysical component of the project area(s), should be carefully analysed and measures to mitigate adverse negative impacts should be implemented.
- Flora and economic plants should be protected and conserved.
- Keystone animals constitute important players in food chain, and may be endangered, rare, threatened, and endemic species, and form an important component of biodiversity. They should not be affected by the project

activities. Measures to protect such animals and their habitat from any adverse impacts should be included in the development activity package, and,
- Any activities, which affect bio/geo-chemical cycle within the ecosystem should be carefully analysed and efforts should be made to minimise the impacts through the implementation of appropriate measures.

6.3.2.3 Social Impact

A study of socio-economic impacts would examine the subproject activities that will alter the existing social and economic conditions of the communities within or around the project states. Socio-economic impacts may prove either adverse or beneficial. For example, the construction of new road networks designed to enhance the movement of goods and services would be beneficial; while the project might also result in water logging that could produce a salinity problem with adverse consequences.

Social impacts can be subdivided into the following:

i) **Demographic impacts** - such as displacement and relocation effects; and changes in population characteristics,
ii) **Socioeconomic impacts** - including income and income multiplier effects, employment rates and patterns, effects on prices of local goods and services, and taxation effects,
iii) **Cultural impacts** - traditional patterns of life and work, family structures and leadership, religious and tribal factors, archaeological features, social networks and community cohesion,
iv) **Institutional impacts** - including demands on the government and social service, NGOs housing, schools, criminal justice, health, welfare and recreation, and,
v) **Gender impacts** - the implications of the projects on the roles of women in society, income-generating opportunities, access to resources, employment opportunities, gender-based violence and equity.

For the ACRESAL, analysis must include the following sociocultural parameters:

- Quality of life,
- Social organisation and structures,
- Cultural life, including language, rituals and general lifestyle. A cultural life makes a social group immediately recognisable as being distinct from other groups, and,
- Dispute-resolution institutions and processes; relationships between generations and value systems.

The first step in the analysis of social impacts would be the identification of social communities such as: ethnic/tribal group, occupational groups, socio-economic status, and age and gender groups. The distribution of production systems is also another important aspect to be analysed.

Identification and analysis has to be made on:

- The existing local institutions and their systems of operation i.e. Bio-physical resource utilization
- Conflict resolutions,
- Authority and leadership structures,
- Their capability of handling the issues.

Information on vital issues such as resource availability and utilization, impact of inadequate compensation are extremely useful for formulating environmental and social mitigation strategy in the process of ESMPs preparation under the ACRESAL subprojects. Wider social groups can be broadly categorised into three resource user groups namely:

- **Category 1**: those who are resident from generation to generation;
- **Category 2:** new settlers, who have comparatively less knowledge of the resource base of the area for the subprojects and of sustainable resource-use practices, and usually devastate the area through excessive use of biophysical resources, and,
- **Category 3:** Non-resident people, who often visit the area for exploitation of biophysical resources and are potentially more dangerous than either of the above types.

For ACRESAL, it is important to analyse all three types of resource users. Involving the people in all levels of subproject implementation should enhance the Knowledge, Attitude and Practices (KAP) of category (1). Categories (2) and (3) of resource users have to be linked with local authority, leadership or any other kinds of regulating agencies in order to protect the biophysical resources.

Particular attention must be paid to the consideration of tribal, low- caste, ethnic and minority groups in implementation of projects; these groups in the society, become most vulnerable to resettlement/dislocation and changes in socioeconomic status. Otherwise, this might, in turn, create more environmental problems, as they will be forced to adopt inappropriate production systems. However, in some of the project states, native inhabitants are provided resource-use or land use rights through constitutions, policies/regulation and cultural inheritance; but in many cases, such rights are nullified due to socio-economic and political situations. In some cases, one tribal group dominates and others are ignored. In such circumstances, the primary concern of the ESIA consultant or procured contractor is not to encroach upon the lands and other properties of these vulnerable groups of people.

From findings on the participatory public consultation with the communities during visits to priority sites per state; it is recommended that two important aspects be considered in the identification of social impacts in ESIA:

1) It is always advisable to avoid involuntary resettlement, mostly in cases where vulnerable groups of people are involved, and,
2) In cases, where projects require land acquisition from marginalized territories, the people affected should be compensated adequately so that their standard of living is improved or, at the least, is at the similar level.

6.3.2.4 Cultural Impacts

For the ACRESAL Project, it is important that the ESIA consultant(s) considers project impacts on cultural heritage. Areas of study should include historic sites, religious shrines or areas, or traditional practices that may be affected. Cultural resources refer to archaeological, historical, religious, cultural and aesthetic values. Cultural resources are part of the resource base, it is therefore important that the development options, under consideration are screened for potential impacts on

cultural properties. Additionally, establishments such as museums, universities, departments of archaeology, and other relevant agencies should be consulted.

Any project that involves a large-scale modification or disturbance of land and is located in an area where there are cultural resources will require an intensive survey by qualified archaeologists. On the basis of findings of intensive survey, the decision-makers have to decide whether or not the project should go ahead or whether to adopt project alternatives or devise mitigation measures to be adopted, along with institutional training and monitoring requirements, etc. In all these processes, involvement of local communities is necessary. If in the project site, there are some buried materials of archaeological/ historical value, discovered within three meters under the earth's surface, they are called "Archaeological Chance Finds", and the project construction contractor should comply with the following rules and Federal or State archaeological laws:

- Notify relevant departments of such findings,
- Request a site inspection,
- Completely halt work until inspection results are received, and
- Decide whether or not to proceed with further work.

In the event of relocating sacred religious shrines from the project area, the first step is to determine whether the shrines are of national or local significance. This has to be confirmed by consulting a national heritage register. If it is a national treasure, then the concerned MDAs, NGOs and local people should agree on whether relocation is possible. However, such an intervention should be scientifically sound, locally acceptable and nationally agreeable. If the shrine to be relocated is only of local significance, the local people, community leaders, NGOs and others should reach a consensus and the local people should be involved in the process of relocation. Alternatively, if there is a series of shrines of archaeological and historical value, likely to be affected by development activities, then a strategy for restoration, conservation and management should be developed and implemented.

6.3.2.5 Health Impact

Coronavirus (COVID-19) Pandemic Response Integration

The rapidly developing Coronavirus (COVID-19) global pandemic will affect Project, operations and activities during 2021 and 2022. The pandemic will continue to have significant effects on Nigeria’s economy, including direct and indirect income from external investments, as well as freedom of movement and levels and types of rural service provision. It will also continue to divert capacity and other resources from government, civil society and rural communities to the prevention and effects of the pandemic. Furthermore, the pandemic will have health, economic and social impacts the lives of staff, communities and government partners, and is likely to change the donor landscape in the short- to medium-term. While Nigeria may benefit from the geographic isolation of many rural communities, with a comparatively low national population and low population density, the country’s limited health services capacity presents a potentially high risk should the infection rate rise in the country. At the same time, the financial implications of the pandemic will increase the importance of employment opportunities and income for rural communities, particularly for Project Component B. While the pandemic remains a risk, the Project must ensure preparedness, including assessing transmission risks during the course of work and potential direct impacts from the pandemic, and develop management plans for COVID-19. Measures may include reducing exposure and transmission by reducing

travel, adhering to safety protocols, increasing remote working practices, and limiting direct Project interventions in communities while risks remain high.

Additionally, the Project should:

- Align and coordinate with government and civil society actions related to the COVID-19 pandemic where appropriate;
- Assist in communicating official information regarding the pandemic to communities and partners;
- Ensure staff are prepared and trained to carry out their work safely in the Project office(s), with partners and communities, including provision of equipment where it can reduce risks, increasing opportunities for remote work where required and ensuring national quarantine and isolation recommendations are adhered to;
- Ensure all community engagement should follow minimum protocols to curtail risk of infection within and between communities;
- Regularly monitor the implementation and effectiveness of measures undertaken by the Project.

Due the fluid situation around the pandemic, risks and recommendations will be assessed under the E&S assessment and detailed in the ESMP, and routinely reviewed by the Project Steering Committee during the pandemic.

When social impacts are being investigated, the effects of a development project on individual mental and physiological well being (health status and trends) are often omitted or treated in an unsatisfactory manner. The World Health Organization (WHO) defines health as a state of social and individual well being and not just the absence of disease. If this view is accepted, then the links between health and social impacts are apparent. Often, not always, health impacts depend on environmental impacts, such change in habitat causing increase in vector or the likelihood of contact between the vectors and humans. The direct relationship between biophysical change and incidence of disease may be one of the important reasons. However, there are disease pathways, which occur solely, within a social context. A common example is an increased incidence of sexually transmitted disease resulting from the influx of a large construction labour force.

The following are reasons why the consideration of Health Impact Assessment (HIA), should be integrated into the E&S assessment process:

- Prevention is better than cure, as with other forms of assessment,
- It is specified in many forms of impact assessment legislation,
- Environmental degradation is linked with health impacts,
- Environmental, social and health outcomes can be improved,
- Systematic consideration of health issues improves the legitimacy of the decisions made and the process through they are taken, and
- Human health issues often prompt a public response and their involvement.

However, from past experience, the following are some difficulties in undertaking Health Impact Assessment:

i) Baseline data - Lack of such data on human health in local communities,
ii) Time scale

iii) Synergistic effects - The interaction of different chemicals, etc. can make it difficult to isolate the effects or effects responsible for ill health, variety of human responses to exposures,
iv) Lack of knowledge on dose-response relationship, and
v) Issues of confidentiality.

Some groups of individuals may be more exposed to harmful pollutants and their health status will decline. Also, some groups may suffer a decline in their standards of living and become poor. Such a change in socio-economic status can be accompanied by increased morbidity and mortality due to poor nutrition, unsanitary living conditions and reduced physical and financial access to healthcare facilities. Health impacts also can occur directly from development, particularly from hazardous installations, when an accident occurs, such as the release of a certain amount of a toxic gas or an explosion. Similarly, relocation of individuals and groups to new area can cause disaster development or increase in death and illness rates amongst those being relocated. The old and the young have been the most vulnerable to illness and death.

6.3.2.6 Economic Impact

The focus in economic impact assessment is the estimation of the change in economic variable caused by:

- Project construction and operation
- Workforce requirement and the income earned by workers,
- Materials and other inputs for the project, and
- Capital investment.

It is essential to estimate the size of labour force, skilled manpower requirement and the duration of their involvement. Requirement of manpower will vary at different stages of the project implementation; for example, the need for labour peaks at the midpoint of construction and then declines gradually. An estimation of capital expenditure on local materials, and services is also required for economic evaluation.

A thorough analysis of the labour force and the local economy requires information on:

- The categories of labour available,
- The categories of labour that are highly demanded and employed, not employed and partly employed,
- Estimation of unemployed labour; proportion of female looking for employment, and

The number and type of employment likely to be generated by the project implementation.

These data can be manipulated for analysing and predicting economic impacts. The money that comes into the area in the form of wages is the Initial Income Injection (III) into the local economy. Some part of such money will be spent on buying goods and services, helping to improve the economy of those who sell goods and services. Social effects are the outcomes of environmental and economic impacts. In the ACRESAL, with project activities going on, a large number of people will be attracted in search of employment. Such massive aggregation of people can place significant additional strains on the local infrastructure, environment and local government resources.

When economic impacts are being investigated, the focus is always on the effects of the nature and behaviour of the local economy. Commonly, the economic consequences for local and other governmental organizations are omitted. These consequences are termed fiscal impacts because they are concerned with changes in the costs and revenues of these organizations. It is envisaged that the ACRESAL will cause a large increase in local population and, as a result, cause stress on local services (such as health provision), infrastructure (such as roads and sewerage), and local resources. Key factors determining fiscal impacts include:

- Size of investment and labour force requirements,
- Capacity of existing service delivery and infrastructure systems,
- Local/regional tax or other revenue-raising processes, and
- Likely demographic changes arising from project requirements.

6.3.2.7 Pest Management

The agricultural subprojects are expected to have only minor use for nationally approved pesticides and there may not be significant issues of pest management and pesticide use to be addressed in the subprojects.

The World Bank Pest Management Policy under ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources could be triggered in a variety of subprojects such as:

- New land-use development or changed cultivation practices in an area;
- Expansion of agricultural activities into new areas;

It should be emphasized that *pests* are defined in the broad sense. In addition to agricultural insect pests and plant diseases, pests also include weeds, birds, rodents, and human or livestock disease vectors. Similarly, the FAO defines *pesticides* as any substance or mixture of substances:

Intended for preventing, destroying or controlling any pest, including a) vectors of human and animal disease, b) unwanted species of plants or animals causing harm during, or otherwise interfering with, production, processing, storage, transport or marketing of food, agricultural commodities, wood and wood products or animal feedstuffs; that may be administered to animals for the control of insects, arachnids or other pests in or on their body; intended for use as a plant-growth regulator, defoliant, desiccant, or agent for thinning fruit or preventing the premature fall of fruit; and, substances applied to crops either before or after harvest to protect the commodity from deterioration during storage and transport.

The use of pesticide for Pest Management could result to negative effects of pesticide misuse, which can result in the destruction of crop pollinators leading to the detriment of the environment and/or people's health. The negative effects of pesticide misuse, can result in the following:

- Destruction of crop pollinators leading to poor crop yields;
- Elimination of the natural enemies of crop pests and consequent loss of natural pest control that keeps the populations of crop pests very low;
- Development of pest resistance to pesticides, encouraging further increases in the use of chemical pesticides;
- Contamination of the soil and water bodies;
- Pesticide poisoning of farmers and deleterious effects on human health;

- Unacceptable levels of pesticide residues in harvested produce and in the food chain; and,
- Loss of biodiversity in the environment.

6.4 Labor Influx and Gender Based Violence (GBV)

6.4.1 Labor Influx

The project may face an influx of non-local labor and working conditions issues as skilled laborers might not be available in some of the project sites. The project will take concrete measures to mitigate potential labor influx-related risks such as workers' sexual relations with minors and resulting pregnancies, presence of sex workers in the community, the spread of HIV/AIDS, forced marriage, human trafficking, sexual harassment of female employees and community members, sexual abuse and explotation, child labor and abuse, increased dropout rates from school, inadequate resettlement practices, and fear of retaliation, failure to ensure community participation, poor labor practice, and lack of road safety.

These risks require careful consideration to improve social and environmental sustainability, resilience and social cohesion. Therefore, the project will include mitigation measures such as:

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

The following guidelines lay out the principles that are key to properly assessing and managing the risks of adverse impacts on project area communities that may result from temporary ACRESAL induced labor influx.

i) The SPMU will have to hire, to the maximum extent, skilled and unskilled workers from affected communities in the project area. The SPMU will adopt or implement all possible measures to avoid if not minimize labor influx into the project area.
ii) The SPMU will assess and manage labor influx risk based on appropriate instruments such as those based on risks identified in the E&S assessment and the Bank's sector-specific experience in the country.
iii) Depending on the risk factors and their level, appropriate mitigation instruments need to be developed including the ESMP, Site-specific Labor Influx Management Plan and/or a Workers' Camp Management Plan,
iv) Risk factors to the SPMU that should be considered, include,
    - weak institutional capacity of the implementing agency;
    - predominant presence of contractors without strong worker management and health and safety policies;
    - anticipated high volumes of labor influx;
    - pre-existing social conflicts or tensions;
    - weak local law enforcement;

- prevalence of gender-based violence and social norms towards it in the community (acceptance of gender based violence);
- prevalence of transactional sex;
- local prevalence of child and forced labor;
- existing conflict situation between communities;
- absorption capacity of workers to the community (See http://pubdocs.worldbank.org/en/497851495202591233/Managing-Risk-of-Adverse-impact-from-project-labor-influx.pdf)

v) The SPMU will be required to incorporate social and environmental mitigation measures into the civil works contract and responsibilities for managing these adverse impacts. This will be a binding contractual obligation on the SPMU, with appropriate mechanisms for addressing non-compliance

The Supervision Consultant or Focal NGO shall be responsible for monitoring the contractor performance and adherence to the labor influx guideline and that of its Sexual Exploitation and Abuse (SEA) prevention and response obligations, including a protocol in place for immediate, timely, mandatory and confidential reporting in case of incidents to project community. This allows the SPMU to enforce the implementation of such mitigation measures, which are required to ensure the consultant's own compliance with Bank policy requirements. While the Bank reviews and clears project-level safeguard instruments such as the ESIA/ESMP, it is the SPMU's responsibility to: (i) ensure the safeguard instruments are reflected in the contractor's ESMP (CESMP), and (ii) ensure the project is implemented in accordance with the CESMP, safeguard instruments and other relevant contractual provisions.

6.4.2 Gender Based Violence, Sexual Exploitation & Abuse, and Sexual Harassment

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

Accordingly, Nigeria has an obligation to take all appropriate measures to prevent rape, ensure that there are adequate sanctions for rape in law and in practice, and ensure access to reparation for the victims. Furthermore, several human rights instruments require Nigeria to take special measures to protect the rights of individuals who are vulnerable to sexual violence, namely women, children, and persons with disabilities.

The United Nations Special Rapporteur on violence against women has provided guidance on States' due diligence obligations in combating sexual violence, noting that it must be implemented at both individual and systemic levels. Individual due diligence focuses on the needs of individual survivors and "places an obligation on

the State to assist victims in rebuilding their lives and moving forward," for instance through the provision of psychosocial services. Individual due diligence "requires States to punish not just the perpetrators, but also those who fail in their duty to respond to the violation." As for systemic due diligence, it includes ensuring "a holistic and sustained model of prevention, protection, punishment and reparations for acts of violence against women.

International Treaties

- 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)

Regional Treaties

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

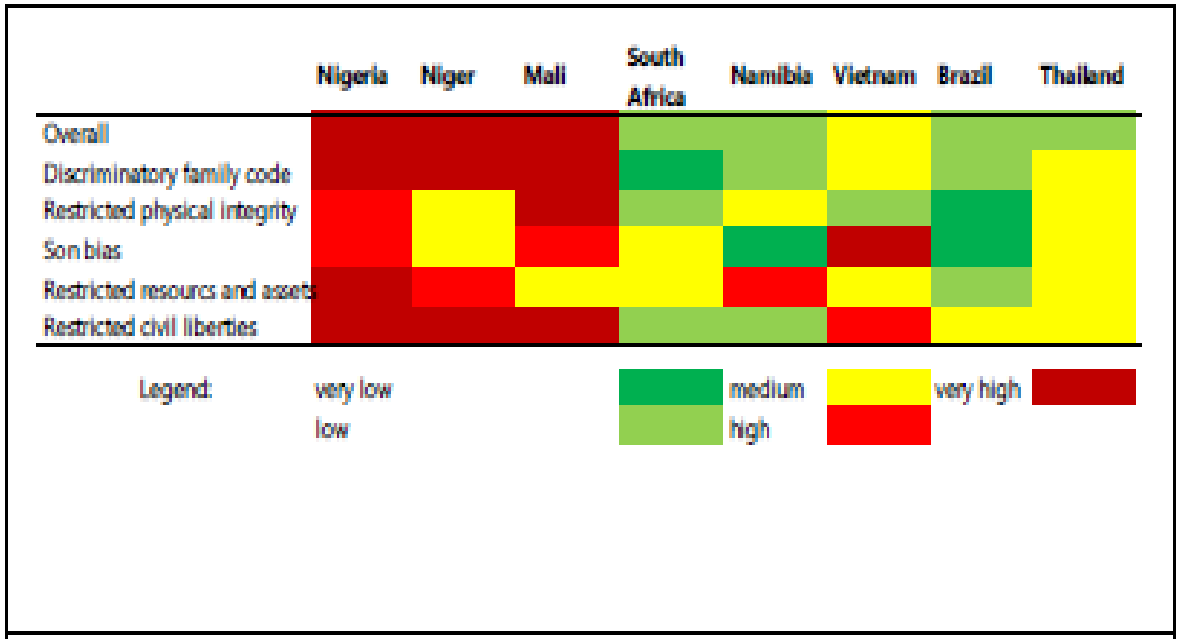
National polices

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

Nigeria is among the 10 percent of countries worldwide that exhibit the highest levels of gender discrimination according to the OECD's Social Institutions and Gender Index (see the Figure 6.1), with an assessment of "high" or "very high" in all of the evaluated categories (discriminatory family code, restricted physical integrity, son bias, restricted resources and assets, restricted civil liberties). It also falls into the group of countries with highest gender inequality in human development outcomes (UNDP 2016).

The indicator is defined as the ratio of the gross enrollment rate of girls to boys in primary and secondary education levels in both public and private schools. Women have an enormous impact on the well-being of their families and societies, but their potential is sometimes not realized because of discriminatory social norms, incentives, and legal institutions. Although their status has improved in recent decades, gender inequalities persist. Education is one of the most important aspects of human development, and eliminating gender disparity at all levels of education would help to increase the status and capabilities of women. This indicator provides a measure of equality of educational opportunity and relates to the third MDG that seeks to promote gender equality and the empowerment of women.

Figure 6.1 Nigeria Degree of Gender Inequality according to the Social Institutions and Gender Index



Gender-Based Violence (GBV) remains pervasive and underreported in the country, largely constraining women's autonomy and life chances. The 2013 Demographic Health Survey (DHS) indicates that nationally 38 percent of women between the ages of 15-49 have experienced some form of physical or sexual violence from the age of 15, and 11 percent experienced physical violence within the 12 months prior to the survey. 45 percent of women who experienced violence never sought help or never told anyone about the violence. Besides interpersonal and sexual violence, child marriage and Female Genital Mutilation are the other culturally harmful practices prevalent across Nigeria. Conflict in the North East has further contributed to a steep rise in targeted violence against women and children by Boko Haram increasingly for abduction and violence. Women are increasingly being used as instruments of war, making them vulnerable to stigmatization and rejection from their families and communities. Figure 1 below illustrates pervasiveness of GBV Nigeria on regional:

6.4.3 GBV Risk Management Mechanisms

A GBV workshop shall be conducted during the project preparation to sensitize the SPMU staff on the key principles and specific requirements to address GBV/SEA/SH. As such specific measures to reduce and mitigate the risk of GBV/SEA/SH in the project are identified to include:

i) GBV/SEA/SH assessment of project;
ii) Mapping and quality assessment of GBV service providers (medical, psychosocial, legal, security, shelter and livelihood) in order to create referral pathways for immediate quality care for survivors
iii) Mandatory contractors' code of conduct on GBV/SEA/SH;
iv) Appointment of NGO for the implementation of mapping, sensitization and GRM of GBV/SEA/SH in ACRESAL;
v) Appointment of a GBV Specialist/Consultant to monitor GBV/SEA/SH in ACRESAL
vi) Community and workers' sensitization on GBV/SEA/SH;

vii) Provision of referral units for survivors of GBV/SEA/SH;
viii) Provisions in contracts for dedicated payments to contractors for GBV/SEA/SH prevention activities against evidence of completion;
ix) GBV GRM with reporting channels and operators trained in a survivor-centered response and the Accountability and Response Framework
x) Contractor and SPMU requirement to ensure a minimum target of female employment with incremental rewards of the obtainment of this target.

The following actions are recommended for immediate implementation:

- Hiring a dedicated GBV/SEA specialist or retraining SLOs for the project,
- Including in the focal NGO's ToR services for managing social risks associated with GBV/SEA in the project,
- Building and improving FPMU/SPMUs, 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,
- Developing a clear ACRESAL GBV Action Plan including an Reporting and Response Protocol,
- guide relevant stakeholders in case of GBV/SEA incidents,
- Strengthening operational processes of ACRESAL states project area on GBV/SEA,
- Identifying development partners and cultivating pragmatic partnership on GBV/SEA prevention measures and referral services,
- Developing Codes of Conduct for civil works contractors with prohibitions against GBV/SEA/SH,
- Consultations with women and girls on safe and appropriate reporting channels for the GRM
- Operationalizing GBV/SEA specific grievance redress mechanisms,
- Providing financial support implementation of the GBV/SEA actions described herein, including training and awareness building for various stakeholders,
- Establishing inter-ministerial committee to advance GBV/SEA actions described above.

Overall, GBV risks in the project target areas 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 labor 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 "Labor Influx Management Plan" and "Workers Camp Site Management Plan".

CHAPTER SEVEN:
ENVIRONMENTAL AND SOCIAL MITIGATION PRINCIPLES

7.1 Environmental and Social Mitigation Principles

The objective of the ESMF is to provide a framework for preventing and mitigating the negative impacts associated with ACRESAL and its subprojects. The subprojects may have different levels of environmental and social impacts.

The mitigation principles are considered broadly as they capture all levels of impacts that each subproject could present in the communities. These mitigation principles will also be useful and fundamental in the preparation of mitigation strategies which will be developed and implemented in the ESMPs prepared for the subprojects.

This ESMF institutionalizes the mitigation measures through assigning implementation responsibilities and formulation of contract clauses for incorporation into contract documents. The potential impacts of the subprojects and their mitigation measures are indicated in the Table 8.1 below.

Table 7.1 Identified Impacts and Mitigation Measures

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
Pre-construction phase	Land acquisition from members of the communities prior to the construction phase.	• Contact local stakeholders in time to address and identify issues on land acquisition during this phase. • Ensure that adequate public notices are provided of planned activities. • Resettlement Action Plan (RAP) activities should be included. • Development of project level grievance mechanisms to alleviate responses from affected communities. • Community involvement will be included through persuasion and provision of guidance if need be.	• SPMU • RAP Implementation Committee • RAP Consultant	• Focal NGO, MDAs (State Ministries of Information, Ministries of Human Capital Development, Ministries of Land); • CBOs and Community Leadership; • FPMU and WB
	Community Perception Community involvement is useful at this stage. The members of the Community may have negative perception about the project if not properly managed.	• Adequate and timely information will be provided to affected owners. • Creating proper complaints procedure. • Providing for compensation on damage to property outside the actual project corridor. In the event that impacts occur on land outside that compensated for, compensation will be evaluated and settled as soon as it is reasonably	• SPMU, CBOs; • Focal NGO; • Site Committee; • Consultant	• FPMU, WB

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
		possible after the damage is suffered. • Making sure the land acquisition activities will where possible, be scheduled with due regard for crop cycles to minimize unnecessary impacts on livelihoods and enable the continuation of economic agricultural activities.		
Construction Phase *Physical Impact*	***Climate Change*** (significant contributor to land degradation and other forms of economic and social vulnerability) ***Impact Source*** Intense civil works activities employing the use of heavy machinery fuelled by diesel and other petroleum products leading to gradual and steady build-up of carbon emissions in the atmosphere.	Strengthening of Nigeria's capacity to promote low carbon, climate resilient development, primarily through technical assistance and institutional capacity building through the ACRESAL's climate change component. Since this component may include pilots on renewable energy, the activities of this component would be screened using the checklist contained in this ESMF for potential environmental and social impacts.	• Contractor	• FMEnv, FPMU, SPMU and World Bank
	Soil Impact **Impact Source:** Excavation, grading, compaction, filling and other civil works.	• Erosion control measures such as water bars, gabions, straw bales, and re-vegetation will be implemented during and after construction phases. • Re-vegetation efforts will be implemented to ensure long-term recovery of the area and to prevent significant soil erosion problems.	• Contractor	• SPMU and FPMU, MDAs (Ministries of Works, Ministries of Environment, Ministries, of Agriculture. Ministry of Works, ESIA Consultant.
	Waste Generation and disposal of excavated waste from constructional sites	• Measures will be taken to ensure that waste is handled in an adequate manner. • Minimize windblown materials from the waste disposal site • Cover dumped waste as quickly as possible	• Contractor	Environmental Officers of the FPMU and SPMU, MDAs(Ministry of Environment, Ministry of Works) ESMF/ESIA Consultant
	Landslides	• Geotechnical investigation of the soil geomorphology • Good designs • Adequate supervision of the contractor • Proper sequencing	• Contractor	• Environmental Officers of the FPMU and SPMU, Project Engineers, ESIA Consultant
	Geomorphology & Hydrology	• Good use of engineering best practice must be	• Contractor	Environmental Officer of the ACRESAL-FPMU and

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
	Impact Source: Civil works, agricultural practices, heavy rain splashes	maintained during construction. • Ensure wastewater from cleaning of equipment and other civil works is not disposed of in water bodies instead it should be collected and treated.		ACRESAL-SPMU, FMENV,
	Topography Excavation and other machinery activities on the land surfaces	• The construction works such as road grading, filling of large holes should be carried out. • Old drainage systems should be maintained if available and new ones should be constructed. • Re-vegetation efforts will be implemented to ensure long-term recovery of the area. • Site specific safety plans should be developed and properly implemented by construction companies executing sub-projects. • Per the requirements of ESS6, for small dams, generic dam safety measures designed by qualified engineers should be prepared. • Effective public consultation through active involvement of all affected stakeholders.	• Contractor	ACRESAL-SPMU Environmental Safeguard Officers, Project Engineer, Ministry of Works ACRESAL-SPMU, Ministry of Works ACRESAL-SPMU Environmental, Natural Resources Officers, Project Engineer, Ministry of Agriculture and Rural Development ACRESAL-SPMU ACRESAL-SPMU ACRESAL-SPMU, ESIA and RAP Consultants
	Land use Level of co-operation from indigenous peoples with regards to land acquisition for project activities and resettlement	• Ensure that all necessary safeguard policies such as the ESS5 (Involuntary resettlement) and relevant legislation are used in addressing the issue of land use.	• Contractor	• FPMU and SPMU
	Channelization of flood waters Channelization implies any activity that diverts a steam channel so as to alter the amount and speed of water flowing through it.	• Good watershed management practices will be established such as planting buffer width of trees along each side of the stream (s).	• Contractor	• ACRESAL-SPMU, ESIA Consultant, Ministry of Agriculture and Rural Development.
	Impact on Air Quality due to mobilization of equipment, construction activities such as earthworks,	• Dust suppression method should be in place to minimize airborne particulate matter that may result from the construction activities. Routine watering of the	• Contractor	• ACRESAL-SPMU Environmental Safeguard Officer, FMENV, NESREA, ESIA Consultant ACRESAL-SPMU Environmental Safeguard Officer,

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
	grading, filling, excavation, Vehicle emissions, Road dust. Improved quality ofservice from urban infrastructure such as drains, lawns, etc.	construction sites and access roads will keep the dust level down. • Provide breathing protection masks for employees and other taskspecific Personal Protective Equipment (PPE). • Reduce travel distances by placing constructions campsites close to work areas. • Ensure that vehicles and other equipment are regularly inspected and schedule maintenance if need be. Also ensure that vehicles and machineries comply with international standards for exhaust emission. • Maintenance of engines and exhaust gas checks tominimize exhaust emissions		FMENV, NESREA
	Increased sedimentation and runoff This impact is site-specific and will be of concern to project sites close to water streams. Sediments can significantly impact surface waters and wetlands with silts and pollutants such as heavy metals, hydrocarbons and toxic substances. Runoff from rainfall can further lead to erosion of the road. Drainage channels from the roads to nearby watercourses are receptors of soils eroded from the road surfaces. These eroded sediments can adversely affect the aquatic ecosystem and can even increase the risk of flooding and eutrophication.	• Regular inspection of the project sites will be needed. • Construction like dykes, sediments basins should be considered in order to divert the flow of sediments. • Define watershed boundaries and pollutants of concern, and conduct resource inventory and information analysis. • Identify sensitive areas in order to protect surface water and prevent nonpoint source pollution.	• Contractor	• ACRESAL-FPMU, ACRESAL-SPMU, FMENV, Ministry of Works, Ministry of Agriculture and Rural Development, NESREA
	Water Quality	• Mobile toilet facilities,	• Contractor	• ACRESAL-SPMU

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
	The water quality will be impacted by wastewater discharges from construction activities and behavioural practices of workers associated with the ACRESAL. This could lead to increase in turbidity and siltation affecting use by man, land mammals and aquatic organisms.	which will be provided for the workforce be maintained, emptied daily and disposed of at approved sites. • Sewage can be composted in compost bin (mixtures of sewage, straws and hays), which can be feed to soils as source of manure for the community. Thus recycling of sewage waste. • The Contractor should ensure that proper storage facilities are provided at worksites. They should be leak proof and fitted round with bunds to prevent leakage into the water streams. • Development and implementation of proper Waste Management Plans (WMPs) by the Contractor(s).		Environmental Safeguard Officer, FMENV, SMOE, NESREA
Construction Phase ***Biological Impact***	***Impact on flora and fauna*** Clearing of vegetation. Biodiversity will be affected as a result of the civil activities from the construction phase. Vegetation/vegetative covers will be destroyed in the course of implementing civil works and establishment of construction campsites. Exposure of the plant surfaces to dust particularly during the transportation of materials will destroy them (impairment of photosynthesis). Most faunas, which may have created niches for themselves, will be disturbed especially borrowing mammals, reptiles, amphibians	• Identify any Site of Special Scientific Interest. • Co-operate with relevant MDAs such as the Federal Department of Livestock, Privately owned wildlife conservation parks, Zoos and Zoological departments of Universities, for the housing of possible animals that may be relocated as a result of the construction. • Ensure that affected flora species are transferred and raised in available nurseries.	• Contractor	• SPMU and FPMU, MDAs (Ministries of Works, Ministries of Environment, Ministries, of Agriculture. Ministry of Works, ESIA Consultant.

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
	and insects. Weed invasion/proliferation of opportunist species (weeds & pests).			
	Impact on Wildlife During Land clearing, Civil works, Deforestation, Hunting activities.	• Ensure that the necessary safeguards Standards such the ESS6 on Biodiversity Conservation and Sustainable Management of Living natural Resources and relevant legislatives are used in addressing the issue of wildlife. • Liaise with Zoos Management Authorities in the affected States and Universities to provide temporary habitats for accommodating animal species until new habitats are provided. • Afforestation practices should be encouraged.	• Contractor	• ACRESAL-FPMU and ACRESAL-SPMU, Natural Resources Officers, Ministry of Agriculture and Rural Development
	Use of Pesticides	• Encourage and ensure the embrace of Integrated Pest Management (IPM) • Ensure the following in the selection and use of pesticides: ✓ They must have negligible adverse human health effects; ✓ They must be shown to be effective against the target species; ✓ They must have minimal effect on non-target species and the natural environment. The methods, timing, and frequency of pesticide application must be aimed to minimize damage to natural enemies; and, ✓ Their use must take into account the need to prevent the development of resistance in pests. ✓ Pesticides to be used should comply with permissible environmental standards (FAO, UNEP) ✓ FAO's Pesticide storage and stock control manual, Revised guidelines on good labelling practice for	• Contractor	• ACRESAL-FPMU, ACRESAL-SPMU, Environmental Safeguard Officers, MOH, Ministry of Agriculture, FMENV.

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
		pesticides, Guidelines for the management of small quantities of unwanted and obsolete pesticides, Guidelines on Management Options for Empty Pesticide Containers, and Guidelines on personal protection when using pesticides in hot climates would serve as guide. ✓ Consistent with World Bank ESS9, ACRESAL financing will not be used for formulated products that fall in WHO classes IA and IB, or formulations of products in Class II, if they are likely to be used by, or be accessible to, lay personnel, farmers, or others without training, equipment, and facilities to handle, store, and apply these products properly.		
	Transportation & Traffic impact: Existing travel patterns will be heavily impacted during the construction phase of the project in the states.	• A good traffic management plan should be developed which will specify; safety rules on speed limits while driving, trainings to enable drivers to be responsive to local conditions, procedures for dealing with accidents involving injury to local people and livestock and restriction of heavy vehicle movements to specific access roads. • Carefully site stock piling areas, work depots and work sites in good locations, which will alleviate possible traffic congestions. • Information on road closure should be made publicly on local radio stations and television. Signage advising on closures and detours should be strategically placed along the roadsides. • Ensuring that all road signs are put in place and detours made possible to divert traffic.	• Contractor	• ACRESAL-FPMU, Environmental Safeguard Officers, ACRESAL-SPMU, Ministry of Works,

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
		• Ensure alternative footpaths are provided for local residents. • Relevant Federal Government Agencies such as the Federal Road Safety Commission will be engaged by the contractor all through the construction period to ensure that safety is maintained throughout the construction phase.		
Construction Phase ***Socio-economic Impact***	***Accident*** Accidents are bound to occur during the construction phase as a result of movement of materials, equipment, pedestrians and livestock.	• Ensure that workers are provided with health and safety equipment such as High visibility vest, helmets, earplugs, safety glasses, and safety boots and, stress on the need to use them always. • Ensure that proper signs and barriers are put up within the project location sites. • Applying Standard Operating Procedure (SOP) during the project activities to all workers. • Managing the working hours based on the laws • Implement generic dam safety measures for small dams.	• Contractor	• ACRESAL-FPMU, ACRESAL-SPMU, MDAs (Ministry of Works, Ministry of Labour
	Migration Nomads and indigenous people will be predominately affected during movements of equipment into the project areas by construction companies implementing sub-projects. Source: Movement of heavy equipment., Civil work activities.	• Implement RAP	• Contractor	Environmental and Social Officers of the ACRESAL-FPMU and ACRESAL-SPMU (RPF Consultant/RAP Consultant)
	Employment The construction phase of the sub project and main project are bound to bring in both positive and negative impacts in the project areas.	• Ensure that individuals from project affected communities are employed as labourers and artisans, including women. • Public consultation will be implemented to address any situation of wrong notion created by	• Contractor	• ACRESAL-FPMU, ACRESAL-SPMU, Ministry of labour, Ministry of Works.

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
	Employment will be on the increase as local artisans and labourers will be sort for as part of the workforce. Migrants will be expected to flood into the areas as well. This impact will have an indirect influence in the increase in crime rate, traffic, and hike in rents, prostitution and spread of diseases.	members of the communities. • The campsite for workers should be located remotely away for the community. • Contractors and Project managers should ensure that the workers are prohibited from patronising prostitutes and the use of alcohol and drugs within the site areas.		
	Human Displacement Impact Source: Civil activities, re-vegetative activities, watershed management	• Resettlement Plan (RAP) activities should be considered in the affected areas. • World Bank ESS5 addressing Land Acquisition, Restriction on Land Use and involuntary resettlement will be applied for this impact in the affected communities. • Compensatory activities should be established based on replacement value or market value and affected person could be employed based on experience and qualification.	• Contractor	• Social and Natural Resources Officers of the ACRESAL-SPMU and ACRESAL-FPMU, Ministry of Finance
	Archeological & Cultural loss **Impact Source:** Excavation/earth works, deforestation activities and other engineering activities e.g water channelling	• The Social Officer needs to ensure that thorough discussions are carried out during the Focus Group meeting addressing issues on Archaeology and cultural. • The World Bank ESS8 relevant to this situation Physical and Cultural Resources will be applied to enable the Social Officer administer the right tool to avoid cases of conflicts in the communities.	• Contractor	• Environmental, Social and Natural Resources Officers of the ACRESAL-SPMU and ACRESAL-FPMU, Ministry of Finance
	Social stress & disruption Impact Source: • Civil work activities. • Human •Governance.	• Root causes should be identified and addressed. • Address governance and mobilize communities. • Engage the private sector, and possibly introduce a market-based solution to take advantage	• Contractor	• Social Officers of the ACRESAL-SPMU and ACRESAL-FPMU, Ministry of Finance

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
	(Corrupt practices)	of good Nigerian entrepreneurship and creativity.		
	Aesthetics Impact Source: Construction works	• Proper use engineering best practice; • Employ an aesthetics expert to the contractor team.	• Contractor	• Environmental Officers of the ACRESAL-SPMU and ACRESAL-FPMU,
Construction Phase ***Public Health***	***HIV/AIDS and STDs*** Impact Sources • Influx of non-local workforce. • Low living standards of members of the host community which will increases likelihood of sexual abuse and explotation, sexual harassment, prostitution, human trafficking, early and forced marriage, robbery, etc.	• Sensitization of employees on SEA/SH, HIV/AIDS and STD awareness programme in each of the project areas. • Other activities will include treating other sexually transmitted diseases, distributing condoms, and providing counseling, screening, and support services for employees. • Medical examinations should be performed on new employee and repeated regularly throughout the term of employment. • Each contractor should have operating procedures that control unsafe behaviours amongst personnel especially considering the fact that there will huge influxes of workers and the likely spread of STD's due to possible sexual interactions between workers and members of the project affected communities. •Referral pathways for access to quality services for GBV survivors	• Contractor	Environmental and Social Officers of the ACRESAL-SPMU and ACRESAL-FPMU, SMOE
	Water-Borne Diseases (e.g. Cholera, Dysentery, Amoebiasis, Salmonellosis etc.) Impact Source • Poor environmental sanitation habits exhibited by members of the contractor's workforce. • Overload of existing	• Initiate assistance for those already infected or at risk, and conduct community awareness training. • Support local Blood Transfusion Service in any health facility located within the project area, to enable them commence HIV screening for all donors. • Provision of proper human waste disposal facilities for the construction workers.	• Contractor	Environmental Safeguard Officers of the ACRESAL-SPMU and ACRESAL-FPMU, SMOE

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
	sanitation facilities. ***Malaria*** • During construction activity through creation of pools of stagnant water. • Poor environmental sanitation habits by members of the contractor's workforce. • Movement of waste into the watershed	• Good sanitation including proper waste disposal at its operation and residential accommodations. • Participate in environmental sanitation initiatives in communities where its workers are domiciled. • Avoid any deterioration in public health and environmental sanitation as a result of the project. • Participate on improvement of community sanitation and public health through the community development programs. • Involvement of NGOs and civil societies in waste management and healthcare activities. • Maintenance of good drainage at construction areas to avoid creation of stagnant water bodies. • Proper reservoir operation, engage in disease surveillance and insecticide sprays to prevent the proliferation of the disease vector; conduct routine medical check-ups and development of medical facilities. • Government programs to improve existing medical and health services in the local communities should be supported as much as possible by the Project. This includes Mosquito control programs such as the distribution of insecticide treated nets to affected community members. • Provision of good sanitation including proper waste disposal at its operation and residential accommodations. • Participate in environmental sanitation initiatives in communities where its workers are		

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
		domiciled.		
	Occupational Health & Safety ***a.PPEs*** ***b.Emergency Response & First Aids***	• The contractor will ensure that Personal Protective Equipment (PPE) are made available to all workers. • The Contractor should ensure that necessary measures to avoid and minimize the negative health and safety impacts such as trainings for employees be established. • Contractors should develop Occupational Health and Safety Systems (OHSMSs), which will include policies, plans, procedures, processes and programs. • Contractors should posses operating practices for the following: ✓ Accident investigation and control ✓ Hazards investigation and analysis ✓ Hazard communication programme ✓ Work place violence ✓ Work stress risk assessment/ work stress management plans ✓ Ergonomics ✓ Heavy equipment safety ✓ Fire and fuel safety • Implement generic dam safety measures for small dams. • Ensure that workers use protective gears during all working activities. • Proper disposal of construction spoil and any hazardous waste will be stored in areas clearly designated and labeled. • It will be very appropriate if a good health care unit is made available in the campsites. • First Aid Services should be provided at the campsites to provide immediate attention to accident victims before referring them to nearby clinics if need arises.	• Contractor	ACRESAL-SPMU and ACRESAL-FPMU, Ministry of Works, Ministry of Labour

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
	Topography Impact Source: • Construction activities including movement of goods and services. • Agricultural activities.	• Embarking on tree planting exercises, which can serve as a wind barrier and help stabilise the soils. • Training activities targeted at local farmers to improve awareness. • The affected population identified will participate in the planning and/or decision making process for the alternative livelihood options and the process and agreement will be in line with relevant operational policies. • Good engineering practices to be included in contract documents and contractor's performance will be monitored and reported.	• Contractor	• ACRESAL-FPMU, ACRESAL-SPMU, Natural Resources Officers, Ministry of Agriculture and Rural Development.
	Land use Impact Source: • Civil works. • Farming practices. • Livestock including overgrazing.	• Encouragement of early and on-going consultation within the local community. • Providing complimentary livelihood (promoting alternative means of income (which is sustainable and adaptable for each community). • Improve roles of NGOs and Civil Society. • Ensures these exercises are conducted in environmental sustainable manners • If land acquisition and/or land donation is involved, resettlement policy framework will be applied • Good engineering practices to be included in contract documents and contractor's performance will be monitored and reported.	• Contractor	• Environmental, Social and Natural Resources Officers of the ACRESAL-FPMU and ACRESAL-SPMU
	Air Quality Once the ACRESAL subprojects are completed for the entire 19 states, the roads are bound to be really busy and this will adversely affect the members of the community Impact Source: Increase in the	• Ensure that the air quality levels are constantly monitored which can be obtained from relevant local air pollution control agencies/ metrology units in the states. • Surrounding the roadsides with vegetation will be encouraged as the trees will serve as windbreaks and keep dust	• Contractor	Environmental Officers of the ACRESAL–FPMU and ACRESAL-SPMU, NESREA, Ministry of Agriculture and Rural Development

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
	number of vehicles that ply the route of the 19 subproject states.	from spreading long distances.		
	Noise and Vibration Impact Source: • Increase in number of vehicles plying the road	• The traffic management plan should be used to address movement of vehicles during the early hours of the morning when members of the community are still asleep. • Keeping proper records of complaints in the complaints register.	• Contractor	• Environmental Officers ACRESAL-FPMU, ACRESAL-SPMU, NESREA
	Water Quality Impact Source: Roadway runoff, wastes (municipal solid wastes, agricultural wastes, effluent, hazardous wastes e.t.c)	• Development of proper Waste Management plans by the Contractor (s). • Roadway runoff will not be placed directly into watercourses but allowed to flow over grassed or pervious pavements in order to permit the settling out of fine materials. • Divert the flow of surface water around the site to prevent contamination from storm water (by pollutants, soil or any other material from the site). • It is also important to develop a site drainage plan to reduce storm water flow and sediment load before storm water is discharged from the site.	• Contractor	• Environmental Safeguard Officers ACRESAL-FPMU, ACRESAL-SPMU, FMENV,
	Traffic and Transportation Impact Source: • Increase in traffic within the roads and access roads of the project areas in the ACRESAL states. • Increase in economic growth. • Increase in migration	• Ensure that all road signs are completed with speed limits zones and traffic signs in place. • Provide pedestrian pathways within the settlements of the communities. • Measure suggested for the construction phase should be carried forward to the operational stage.	• Contractor	ACRESAL-FPMU, ACRESAL-SPMU, NESREA
	Employment, Working Opportunities Impact Source: • Demobilisation of the workforce. • Improved accessibility • Improved economic growth	• Conducting a persuasive approach of community involvement, and proactively providing guidance to help maintain the road and bridges. • Co-operating with the relevant departments to help in building economic centres such as market places.	• Contractor	• Environmental Safeguard Officers, FONGO, ACRESAL-FPMU, ACRESAL-SPMU, Ministry of labour.

Project Phase	Potential Impact Source	Mitigation Measures	Roles and Responsibilities	
			Implementation	Monitoring/Enforcement
	Impact Indicator: • Presence of new small business enterprises • Improving economics of families	• Requesting the state and local governments to build feeder roads to connect the settlement areas with the road.		
	Occupational Health & Safety a***. PPEs*** ***b. Emergency Response & First Aids*** Impact Source: Exposure of workers to accidents, working in potential weather extremes, contact with natural hazards such as animals, insects, and poisonous plants.	• Development of inspection and maintenance programmes. • Clearly mark road signs and hazards symbols with in the location to minimise road accidents.	• Contractor	• ACRESAL-FPMU, ACRESAL-SPMU, Environmental Safeguard Officers, Natural Resources Officers, NESREA, Ministry of Labour, Ministry of Health

CHAPTER EIGHT:
ENVIRONMENTAL AND SOCIAL MANAGEMENT PROCESS

This ESMF incorporates an overall environmental and social management process for the ACRESAL Project and its subprojects. The process involves distinct steps and associated activities that are linked to deliver a robust and veritable management framework in line with the stated objectives of the ESMF. The management process will help identify the critical social and environmental issues associated with ACRESAL subprojects, and ensure that positive impacts are optimized and negative impacts are minimized or mitigated. The management process will help to improve the understanding of the subprojects by the local communities and this will increase trust between the State PMU (Project Management Unit) and the local community.

The environmental and social management procedure to be followed shall include the following steps:

i) Subproject identification and screening
ii) Preparation of appropriate E&S safeguard instruments;
iii) Stakeholders' consultations;
iv) Disclosure of safeguard instruments;
v) Incorporation of the ESMP in construction bid documents;
vi) Implementation of the ESMP;
vii) Monitoring and evaluation of the ESMP Implementation.

Each element of the E&S management procedure is described in further detail in the following sections.

8.1 Subproject Identification and Screening/Scoping

8.1.1 Subproject Identification

All States participating in the ACRESAL project are required to generate a long list of their prioritized sites requiring ACRESAL intervention. The states will be further required to be involved in a site selection and prioritization exercise (Workshop) in which the states shall confirm their approval for the sites selected and the associated tentative contract sums.

Prior to the workshop, each state shall work with state-level stakeholders (communities, technical and steering committees, and governors), to confirm that all identified sites meet the procedures for site selection defined in the Project Concept Note. The site selection criteria to be used shall include:

a) Degree of desertification and land degradation at sites
b) Level of complaints raised by communities
c) State of gully erosion (stable, slight, moderate, severe, or catastrophic);
d) Size of affected population (disaggregated by poverty rate);
e) Risk to human life;
f) Risk to physical assets; risk to natural assets;
g) Proximity of sites to major access routes
h) Replication potential of the site treatment;
i) Readiness of the state to cover the cost of resettlement (if required); and,
j) No on-going competing intervention in the same sub-watershed.

8.1.2 Screening of ACRESAL Subprojects

The objective of screening is to determine the appropriate level of environmental and social impact assessment and management for a proposed subproject. All potential subprojects under the ACRESAL shall be screened for Environmental and Social (E&S) risks and impacts prior to subproject approval for implementation by the respective SPMU. A designated officer or Consultant of the SPMU can carry out the screening. The screening process will include robust assessment of the subproject and associated activities to determine the following:

i) The appropriate subproject categorization EA;
ii) Applicable World Bank environmental and social standards (ESS);
iii) Potential for environmental and social liability; and,
iv) Cultural or other sensitivities.

Additionally, each site intervention under ACRESAL shall be screened for possible triggering of WB ESS5 (Involuntary Resettlement). Civil works and other intervention activities could result in land acquisition or the displacement of families or businesses on a temporary or permanent basis. Works such as drainage trenches or canals could also result in loss of access even when agricultural, commercial, or residential plots themselves are not affected. Land acquisition for project works will trigger the ESS5 standard even when people are not displaced.

Environmental and Social screening process distinguishes subprojects and activities that will require thorough environmental review to prevent/mitigate negative environmental impacts or those which will provide opportunities to enhance positive impacts. Thus, one of the objectives of the screening process is to rapidly identify those subprojects, which have little or no environmental or social issues so that they can move to implementation in accordance with pre-approved standards or codes of practices for environmental and social management. In other words, based on environmental screening, subprojects with no significant impacts are cleared from further environmental inquisition while subprojects with some impacts proceed to the level of conducting an environmental assessment, which will be evaluated to clear the subproject.

Screening shall be done early in the planning process by trained state PMU staff, in consultation with specialists who design and supervise the site interventions. Project designs will seek to minimize displacement and loss of access to the extent feasible. Consultations with and participation of affected people and possible host communities are mandatory. The concerns and aspirations of communities will be taken into consideration. Modifications of drainage in the upper watershed of active gullies could require restrictions on building construction, pavement, and on agricultural activities. Abbreviated Resettlement Action Plans (ARAPs) will be prepared for displacements of fewer than 200 people, while those involving more than 200 people will be subject to full RAPs.

Consequently, a checklist has been prepared for the screening of subprojects.

Scoping is the process of determining the most critical issues of the subproject to study and involves community participation. It is at this early stage that environmental and social safeguards can most strongly influence the subproject proposal. For successful implementation of subproject activities under the ACRESAL, scoping should occur early in the project cycle, as is consistent with

international best practices including World Bank Safeguards Standards and the Nigerian EIA Law. The scoping process will aid in the identification of the key environmental and social issues and is perhaps the most important step in ensuring subproject safeguards. The scoping process under the ACRESAL will involve participation from several stakeholder groups, particularly decision makers (Federal and State governments), MDAs, CBOs, NGOs, the project affected communities and the scientific community. All these groups will have an interest in helping to deliberate the issues, which should be considered (scoping is designed to canvass their views).

Scoping is important for two reasons. Firstly, so that problems can be pinpointed early allowing mitigating design changes to be made before expensive detailed work is carried out. Secondly, scoping is done to ensure that detailed safeguards activities are only carried out for important issues. It is not the goal to carry out exhaustive studies on all environmental and social impact issues for all subprojects. If key issues are identified and a full scale ESIA is considered necessary, then the scoping should include terms of reference for these further studies. At this stage the option exists for cancelling or drastically revising the subproject should major environmental and social problems be identified. Equally, the need for the ESIA process may be terminated should the impacts be found to be insignificant. Once this stage has passed, the opportunity for major changes to the subproject is restricted.

8.1.3 Risk Categorization/Classification

Based on the scope of the ACRESAL, the number of participating States and the level and spread of stakeholders that will be involved in the project, significant environmental and social impacts are envisaged for the ACRESAL Project. The project is therefore classified as High Risk or Category I. This ESMF, however, recognizes that most subproject activities under ACRESAL are expected to have generic environmental and social issues that are manageable through standard procedures and codes of practice. As such, site-specific ESMPs will usually be sufficient to satisfy WB and national requirements. In the unlikely event that a subproject presents itself as High Risk or EIA Category I during the screening, a site-specific ESIA shall be required for such subproject. Following the screening and scoping exercise, the terms of reference (TOR) for the preparation of the ESMP (or ESIA as the case may be) shall be developed and submitted to the FPMU and World Bank for review and approval.

ACRESAL subprojects will fall into one of the three Nigeria EIA categories: I, II and III, or into one of the four WB Classifications: *High Risk*, *Substantial Risk*, *Moderate Risk* or *Low Risk.* In determining the appropriate EIA category or risk classification, the relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the proposing State (including any other entity responsible for the implementation of the subproject) to manage the environmental and social risks and impacts in a manner consistent with the EIA requirements and WB ESSs.

High Risk or Category I projects are those whose impacts are sensitive, diverse, unprecedented, felt beyond the immediate project environment and are potentially irreversible over the long term. Such projects require full EA.

Substantial Risk and Moderate Risk or Category II Projects will result in adverse environmental impacts on human populations or environmentally important areas--including wetlands, forests, grasslands, and other natural habitats-that are less adverse than those of High Risk or Category I projects. In general, such impacts are localized; do not affect sensitive area/resources, and reversible, unlike High Risk or Category I projects. All category II projects will also require EA. However, the scope will be reduced.

Low Risk or Category III Projects are generally benign and typically do not require EA. However, all such projects should be screened to determine if specific environmental management plans (e.g., waste management plan) are required.

8.2 Preparation of Appropriate E&S Safeguard Instruments

All subprojects under ACRESAL shall be subjected to the conduct of an environmental and social assessment based on the findings of the screening exercise and underpinned by Environmental and Social Management Plans (ESMPs) to achieve health, safety, and environmental and social regulatory compliance objectives, institutional requirements and other related commitments. An ESMP is an important element of the ACRESAL's overall E&S Management strategy to ensure environmental, social, and health performance of the entire project and subprojects. To this end, the ESMPs will also include some focus on policy, management of personnel, competence building, communications with the public, and monitoring.

As previously indicated, this ESMF recognizes that most subproject activities under ACRESAL are expected to have generic environmental and social issues that are manageable through standard procedures and codes of practice. As such, it is envisaged that for most subprojects, site-specific Environmental and Social Management Plans (ESMPs) will usually be sufficient to satisfy WB and national safeguard requirements. In the unlikely event that a subproject presents itself as High Risk or EIA Category I during the screening, a full-fledged Environmental and Social Impact Assessment (ESIA) shall be required for such subproject.

8.3 Environmental and Social Management Plan (ESMP)

8.3.1 Introduction

The Environmental and Social Management Plan (ESMP) for each subproject will be required at the proposal stage. Each participating State PMU shall as part of its proposal, submit an overview of how environmental and social issues of the subproject will be addressed on a continuous basis. The plans will also specify standards proposed for the subproject to ensure environmental sustainability and social acceptability. The standards and plans proposed shall also address social issues including involuntary resettlement and legacy issues. Environmental assessment will determine the extent of impacts and how the impacts will be mitigated, or minimized by planning, approaching the activities in an environmentally sensitive manner and adopting specific mitigation measures.

The following steps shall be taken in preparing site-specific ESMP in accordance with relevant and applicable WB Safeguards Standards and the EIA Act of Nigeria. The ESMP process starts with:

1) Preparation of the TOR in consultation with the EIA department of the FMEnv, and key stakeholders within a given watershed.

2) The draft TOR will be sent to the World Bank for review and concurrence.
3) Preparation of the ESMP will include collection of baseline data and elaborate consultation with key stakeholders especially potential PAPs within a given watershed where the intervention will take place.
4) The draft ESMP report will be shared with the affected communities in a format of town hall meeting or stakeholder workshop.
5) The draft report would also be sent to the World Bank and the FMEnv for review. The feedback from the review of the draft ESMP report shall be incorporated into the final ESMP report.
6) Upon being cleared by the FMEnv and the World Bank, the ESMP will be disclosed publicly at bothe the federal and state levels as well as the World Bank website.

8.3.2 Baseline Data Information

Baseline data information is an important reference point in preparing the ESMP. The term "baseline" refers to the collection of background information on the biophysical, social and economic settings of the proposed subproject area. Normally, information is obtained from secondary sources when there exists facility of database, or the acquisition of new information through field assessments. The task of collecting baseline data starts right from the period of subproject inception however; a majority of this task may be undertaken during scoping.

Objectives of Baseline Data Collection

- To provide a description of the status and trends of environmental and social factors or variables (e.g., gully size, soil, vegetative cover, topography, geomorphology, drainage system¸ water quality, suspended particulate, sediment transport and waste management, demographic characteristics etc.) against which predicted changes can be compared and evaluated in terms of importance, and
- To provide a means of detecting actual change by monitoring once a subproject has been initiated.

For each site-specific ESMP prepared, this ESMF requires that baseline data on the original environmental, socioeconomic (demographic structure, settlement pattern, occupation, social networks) and health conditions around the ACRESAL prioritized sites be described and reported in the subproject safeguards documents. This will help establishments responsible for ESMF implementation (ACRESAL-FPMU, ACRESAL-SPMU, etc.) understand the baseline conditions of subproject areas before civil work activities begin, as well as provide a platform to monitor changes that may occur in the physical, biological and social environments due to developmental works. In particular, results of the documentation and analysis of the baseline conditions will inform the engineering designs and point to potential livelihood options subsequently.

The ACRESAL as a whole is geared towards maximization of positive impacts. The gathering of baseline data information will aid in the development of indicators to demonstrate the effect of civil work activities on all baseline conditions. Information on general baseline conditions of the States benefiting from the ACRESAL is provided in this ESMF document, however precise baseline information on

interventions especially for prioritized sites will be provided during and after the preparation of the site-specific ESMPs.

8.3.3 Potential Impacts Indentification of Subprojects

The most effective approach to identifying, assessing, and managing the impacts of a development project is through undertaking an Environmental and Social Assessment (ESA) with rigorous scientific analysis and stakeholder engagement.

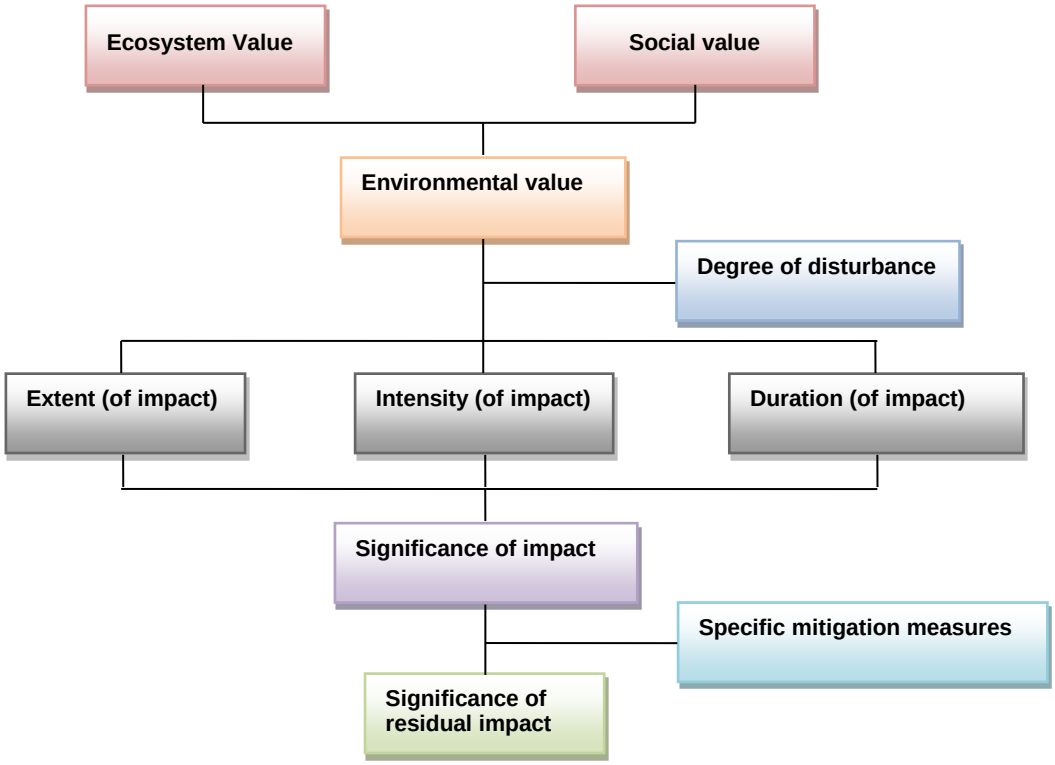


Figure 8.1 : Standard Flowchart for a Systematic Approach to Impact Assessment

A qualified Consultant shall be retained to conduct an Environmental and Social Assessment to identify potential impacts of any proposed subproject under the ACRESAL. The SPMU will need to procure ESIA/ESMP consultants to conduct these studies before subprojects are awarded for construction works.

8.4 Public/Stakeholders' Consultation Process

Consultations with the public/stakeholders for any subproject under ACRESAL are very important because it will give the communities and the potentially Project Affected Person(s) the opportunity to contribute in the subproject and give feedback information, aimed at strengthening the development project and avoiding negative impacts or mitigating them where they cannot be avoided. All consultations to be held under ACRESAL shall be carried out in compliance with the provisions of the Stakeholders' Engagement Plan (SEP). The SEP is discussed in more detail under Section 11.14.

8.5 Disclosure of Safeguard Instruments

Once the state participation criteria are met, the state will then phase into detailed design preparation, including the preparation of safeguards instruments, leading to implementation of ACRESAL activities. For states where detailed designs have been prepared, the ESMPs and RAPs shall be prepared and cleared by the World Bank.

These include screening processes to determine the appropriate environmental and social instruments to be prepared, approved, and disclosed prior to implementation of individual interventions.

Each site approved for intervention support shall be eligible for financing only after an integrated ESIA/ESMP and RAP/ARAP consistent with WB ESS1 -10 has been completed and disclosed. Effective integration of project management and ESMF implementation should result from the fact that the Federal Ministry of Environment and state Ministries of Environment are the lead executing agencies for ACRESAL.

8.6 Incorporating the ESMP into Construction Bid Document

The ESMP shall be implemented by the construction contractor under the supervision of the SPMU Environment and Social Safeguards Officer(s). Consequently, the ESMP should be incorporated into the construction bidding documents to enable the bidding contractors appropriately and adequately budget and plan towards its implementation. Contractors shall be required to implement the ESMP as well as a site-specific Contractors' ESMP to be supervised by the site environmental engineer responsible and accountable for its faithful implementation. The World Bank as well as the Federal and State PMUs will carry out supervision missions to ensure compliance.

8.7 Environmental and Social Safeguards Reviews

Since subprojects under ACRESAL are envisaged to be classified as WB Moderate/ Substantial Risk and Nigeria EIA Category II, the environmental and social issues that may arise for the subprojects would be addressed and mitigated through the preparation of an Environmental Social Management Plan (ESMP). All ESMPs shall be reviewed and cleared by the World Bank to ensure compliance with ESS1 and any other relevant policies, procedures and guidelines.

The application of ESMF to the ACRESAL subprojects enables preparation of standardized environmental and social safeguards documents for the appraisal and implementation of the subprojects. Annex III presents an Environmental & Social Screening checklist consistent with the Nigerian EIA Laws and World Bank safeguards requirements.

8.8 Monitoring and Enforcement of ESMP Implementation

In addition to the project and safeguards reports required, a quarterly audit on ESMP implementation shall be prepared by the ACRESAL-SPMU and delivered to the ACRESAL-FPMU and the Bank. Each subproject in the various States that may require an ESMP study (or RAP etc) will also be required to produce an annual audit report for delivery to the ACRESAL-FPMU and the Bank. The Table 6.1 below describes the Monitoring and Evaluation framework for the ESMP.

Table 8.1: Monitoring and Evaluation Framework for ESMP

S/N	PHASE BEING MONITORED	INSTITUTION RESPONSIBLE	PERFORMANCE INDICATOR	PERIOD TO BE CONDUCTED
1	**PREPARATION/PRE-CONSTRUCTION PHASE**	ACRESAL-PMU (Federal) ACRESAL-PMU (State) World Bank Task Team Independent	Have environmental and social accountability trainings been conducted; Have screening and scoping been carried out? Have studies been carried out and plans prepared?	Before initiation of civil works

S/N	PHASE BEING MONITORED	INSTITUTION RESPONSIBLE	PERFORMANCE INDICATOR	PERIOD TO BE CONDUCTED
		Consultant	Have environmental and social monitoring mechanisms been established? Have Grievance redress Mechanisms been established? Is there effective feedback from project affected persons? Have environmental, social, health and broader impacts been identified and mitigation measures designed	
2	**CONSTRUCTION PHASE**	World Bank Task Team NEWMAP-PMU (Federal) NEWMAP-PMU (State) CONTRACTOR/INDEPENDENT CONSULTANT	Is there community driven approach in- use/how are community reaction Is the Grievance redress mechanism effective Have standard operating procedures for best environmental practices been established? Does the contractor have a HAZCOM program? Are there Material Safety Data Sheets (MSDS)? Is a sustainable afforestation program in progress? Does the contractor have a safe-works procedure? Is there an emergency planning framework?	In the course of civil works or other intervention activities implementation
3	**OPERATION AND MAINTENANCE PHASE**	World Bank Task Team ACRESAL-SPMU (Federal) ACRESAL-FPMU (State)	• Are environmental and social monitoring mechanisms being implemented? • EMP document • Is disaster and emergency planning proactive? Has training on disaster management been conducted? • Is the traffic management plan being implemented? Who is responsible and why? • Is the EMP being implemented? • Success in mitigation measures. • Is disaster management in-place. • No of land slides • No of casualties. • Complaints from communities	Operational stage to project closure

CHAPTER NINE:
PUBLIC AND STAKEHOLDERS' CONSULTATIONS

9.1 ESMF Stakeholders Consultations

A key element in sustaining public support for the ACRESAL project is to sustain stakeholders' consultations and communication process throughout the project phases (preparation, implementation and post-implementation). As part of the ESMF process, stakeholders' engagement was structured to take place on a representation format based on the location of the states. States were selected to represent the arid and semi-arid landscapes within the project areas. The following considerations were made in the selection of the states for consultations with the stakeholders:

1. Agro-cluster nature of the area;
2. Level of security of the area; and,
3. Geopolitical coverage of the area.

Based on the above, the following states were selected for consultative visitation by the ESMF Consultants:

1) Sokoto State;
2) Niger State;
3) Nasarawa State;
4) Kano State; and,
5) Gombe State.

9.1.1 Identification of Stakeholders for ESMF

The stakeholders relevant to the ACRESAL project were identified and their necessary inputs and engagements solicited in the overall project process. The consultations provided opportunity for the stakeholders to have access to project information. Specifically, during the consultations, an overview of the ACRESAL project was presented, and the implications to the state, the project communities and project affected persons (PAPs) of its implementation were interactively discussed.

Stakeholders present in the state interactions included Commissioners, Permanent Secretaries, Directors, HODs of host state ministries of environment, other line ministries (MDAs), Community Based Organizations (CBOs), Non-Governmental Organizations (NGOs) and Representatives/Leadership of at-risk communities.

Additionally, a Focus Group Discussions (FGD) with the existing NEWMAP SPMU was held to gain an understanding of experiences and constraints that has faced Unit in the execution of NEWMAP subprojects in their respective states. Information in the following section is based on responses from the stakeholders and documented reports from the states.

9.1.2 Meeting with Stateholders

The meeting with the State stakeholders was held to give the states the opportunity to contribute to the initial processes of the ACRESAL: project and provide feedback information, aimed at strengthening the development project and avoiding early negative perception.

The issues presented and discussed with the states include:

a) The nature, scope and target areas of the ACRESAL project;

b) The anticipated impacts of the subprojects on the affected communities and farmer groups and individuals in close proximity to the sites;
c) Requirements for state participation in ACRESAL;
d) Transition of existing SPMUs for NEWMAP into the SPMUs for ACRESAL;
e) Relevant MDAs that will be involved in the ACRESAL project;
f) Expected outcomes of the ACRESAL project; and,
g) Areas of involvement of the participating MDAs in the ACRESAL project.

A general list of the stakeholder groups who attended the consultation meetings is presented in Table 9.1 below.

Table 9.1: List of the Stakeholder Groups at Consultation Meetings

S/N	STATE VISITED	DATE OF VISIT	VISITING CONSULTANTS	STAKEHOLDER GROUPS
1	Sokoto	January 25, 2021	Environmental and Social Management Framework (ESMF), Resettlement Policy framework (RPF), Integrated Pest Management Plan (IPMP), Labour Management Plan (LMP) and Stakeholders Engagement Plan (SEP)	1. Host Ministry (Ministry of Environment) 2. State PMU **Other Line Ministries** 1. Ministry of Agriculture 2. Ministry of Animal Health and Forestry Development 3. Ministry of Rural Development 4. Ministry of Water Resources 5. Ministry of Information 6. Ministry of Health 7. Ministry of Works 8. Ministry of Lands and Housing 9. Ministry of Local Governments **CBOs and NGOs** • JCDI (Jamaa Community Development Initiative)
2	Niger	January 27, 2021	Environmental and Social Management Framework (ESMF), Resettlement Policy framework (RPF), Integrated Pest Management Plan (IPMP), Labour Management Plan (LMP) and Stakeholders Engagement Plan (SEP)	Host Ministry (Ministry of Environment and Forestry) State PMU **Other Line Ministries** • Ministry of Agriculture and Rural Development • Honourable Member Niger State House of Assembly • Ministry of Finance • Ministry of Water Resources and dam Development • Ministry of National Guard-Health Affairs • Ministry of Works and Infrastructural Development • Ministry of Lands and Housing • Ministry of Local Governments and Chieftaincy Affairs • Niger State Environmental protection Agency • Civil Service Commission **CBOs and NGOs**

S/N	STATE VISITED	DATE OF VISIT	VISITING CONSULTANTS	STAKEHOLDER GROUPS
				a. AYEAID (African Youth Empowerment in Agriculture and Industrial Development) b. NTA Media c. Prestige
3	Nasarawa State	January 29, 2021	Environmental and Social Management Framework (ESMF), Resettlement Policy framework (RPF), Integrated Pest Management Plan (IPMP), Labour Management Plan (LMP) and Stakeholders Engagement Plan (SEP)	Host Ministry (Ministry of Environment and Natural Resources) State PMU **Other Line Ministries** • Ministry of Agriculture and Water Resources • Ministry of Community and Rural Development • Ministry of Lands, Survey and Physical Planning • Ministry of Works, Housing and Transport • Ministry of Women Affairs and Social Development **CBOs and NGOs** • Source of Hope Foundation • Herders **Private Sector** • GoldAgric Nigeria Limited • BODAN (Borehole Drillers Association of Nigeria)
4	Kano State	February 1, 2021	Environmental and Social Management Framework (ESMF), Resettlement Policy framework (RPF), Integrated Pest Management Plan (IPMP), Labour Management Plan (LMP) and Stakeholders Engagement Plan (SEP)	Host Ministry (Ministry of Environment and Forestry) State PMU **Other Line Ministries** • Ministry of Agriculture and Natural Resources • Ministry of Finance • Ministry of Water Resources and Rural Development • Ministry of Works and Infrastructure • Ministry of Lands Management • Ministry of Local Governments and Chieftaincy Affairs • Ministry of Women Affairs • Office of Head of Civil Service
5	Gombe State	February 3, 2021	Environmental and Social Management Framework (ESMF), Resettlement Policy framework (RPF), Integrated Pest Management Plan (IPMP), Labour Management Plan (LMP) and Stakeholders Engagement Plan (SEP)	Host Ministry (Ministry of Environment and Forestry Resources) State PMU **Other Line Ministries** • Ministry of Agriculture • Ministry of Local Government and Community Affairs • Ministry of Water Resources • Ministry of Lands and Survey • Ministry of Works, Housing and Transport • Ministry of Women Affairs

Situation Report - Sokoto State

The formal stakeholder consultation and interactive session was held in the Deputy Governor's Conference Room, Cabinet Office at 10.00am prompt on January 25, 2021 with the Principal Officers of the State MDAs, representatives of CBO, NGO and Community Leadership in attendance.

Present at the interactive stakeholder consultation sessions were:

Host Ministry (Ministry of Environment)

- Honourable Commissioner
- Honourable Permanent Secretary
- Public Relations Officer
- Sokoto State Environmental protection Agency

State PMU

- Project Coordinators
- Environmental Safeguard Officer
- Social Livelihood Officer
- Project Engineer
- Procurement Officer
- Communication Officer
- Project Accountant
- GIS Officer

Other Line Ministries

- Ministry of Agriculture
- Ministry of Animal Health and Forestry Development
- Ministry of Rural Development
- Ministry of Water Resources
- Ministry of Information
- Ministry of Health
- Ministry of Works
- Ministry of Lands and Housing
- Ministry of Local Governments

CBOs and NGOs

- JCDI (Jamaa Community Development Initiative)

Situation Report - Niger State

The formal stakeholder consultation and interactive session was held in the LEGBO KUTIGI CONFERENCE ROOM, MINNA at about 11.00am on January 27, 2021 with the Principal Officers of the State MDAs, representatives of CBO, NGO and Community Leadership in attendance. The complete list of attendees at the meeting is included in Annexure XI.

Present at the interactive stakeholder consultation sessions were:

Host Ministry (Ministry of Environment and Forestry)

- Honourable Permanent Secretary

- Director, Department of Environmental Health
- Director, Department of Climate Change

State PMU
- Project Coordinators
- Environmental Safeguard Officer
- Social Livelihood Officer
- Project Engineer
- Procurement Officer
- Communication Officer
- Project Accountant
- GIS Officer
- Auditor

Other Line Ministries
- Ministry of Agriculture and Rural Development
- Honourable Member Niger State House of Assembly
- Ministry of Finance
- Ministry of Water Resources and dam Development
- Ministry of National Guard-Health Affairs
- Ministry of Works and Infrastructural Development
- Ministry of Lands and Housing
- Ministry of Local Governments and Chieftaincy Affairs
- Niger State Environmental protection Agency
- Civil Service Commission

CBOs and NGOs
- AYEAID (African Youth Empowerment in Agriculture and Industrial Development)
- NTA Media
- Prestige

Situation Report - Nasarawa State

The formal stakeholder consultation and interactive session was held in the TA'AL Conference Hotel, Lafia, Nasarawa State at about 10.00am on January 29, 2021. The attendees to the meeting included Principal Officers of the State MDAs, CBOs, NGOs and Community Leadership levels. The complete list of attendees at the meeting is included in Annexure XI.

Present at the interactive stakeholder consultation sessions were:

Host Ministry (Ministry of Environment and Natural Resources)
- Honourable Commissioner
- Directors

State PMU
- Project Coordinator
- Environmental Safeguard Officer

- Social Livelihood Officer
- Project Engineer
- Procurement Officer
- Monitoring and Evaluation Officer
- Project Accountant
- Auditor

Other Line Ministries

- Ministry of Agriculture and Water Resources
- Ministry of Community and Rural Development
- Ministry of Lands, Survey and Physical Planning
- Ministry of Works, Housing and Transport
- Ministry of Women Affairs and Social Development

CBOs and NGOs

- Source of Hope Foundation
- Herders

Private Sector

- GoldAgric Nigeria Limited
- BODAN (Borehole Drillers Association of Nigeria)

Situation Report - Kano State

The formal stakeholder consultation and interactive session was held at Ten by Ten Restaurant Conference Room at about 11.00am on February 01, 2021. The attendees to the meeting included Principal Officers of the State MDAs, CBOs, NGOs and Community Leadership levels. The complete list of attendees at the meeting is included in Annexure XI.

Present at the interactive stakeholder consultation sessions were:

Host Ministry (Ministry of Environment and Forestry)

- Honourable Commissioner
- Honourable Permanent Secretary
- Director, EPC
- Director, EF

State PMU

- Project Coordinator
- Environmental Safeguard Officer
- Social Livelihood Officer
- Project Engineer
- Hydrology Officer
- Procurement Officer
- Communication Officer
- Project Accountant
- GIS Officer
- Auditor

- Natural Resource Officer
- ICT officer

Other Line Ministries

- Ministry of Agriculture and Natural Resources
- Ministry of Finance
- Ministry of Water Resources and Rural Development
- Ministry of Works and Infrastructure
- Ministry of Lands Management
- Ministry of Local Governments and Chieftaincy Affairs
- Ministry of Women Affairs
- Office of Head of Civil Service

Situation Report - Gombe State

A formal stakeholder consultation and interactive session was held in the Maidugu Hall at about 10.00am on February 05, 2021. The attendees included the State, MDAs, CBOs, NGOs and Community Leadership levels. The complete list of attendees at the meeting is included in Annexure XI.

Present at the interactive stakeholder consultation sessions were:

Host Ministry (Ministry of Environment and Forestry Resources)

- Honourable Commissioner
- Honourable Permanent Secretary
- Chairman House Committee Water and Environment
- Directors

State PMU

- Project Coordinator
- Environmental Safeguard Officer
- Social Livelihood Officer
- Project Engineer
- Procurement Officer
- Monitoring and Evaluation Officer
- Project Accountant
- Auditor
- Natural Resource Officer

Other Line Ministries

- Ministry of Agriculture
- Ministry of Local Government and Community Affairs
- Ministry of Water Resources
- Ministry of Lands and Survey
- Ministry of Works, Housing and Transport
- Ministry of Women Affairs

9.1.3 Focused Group Discussion

Focused group discussions were held with each of the NEWMAP SPMUs at the five state visited. The discussions were aimed at understanding the nature of the challenges face by each Unit in the execution of the existing projects going on with the respective states.

9.2 Concerns and Expectations Expressed by States Consulted

The summarized concerns and expectations of the state stakeholders are outlined in Tables 9.2 and 9.3 below. The detailed report of the stakeholder consultations are included in Annexure IX.

The general approach and responses to the concerns and expectations of the stakeholders were framed towards creating positive perception on the ACRESAL capacity to resolve the issues raised as well as highlighting the benefits of the anticipated subprojects to the state, local project communities and individuals including women and the youths.

Table 9.2: Expressed Concerns by Stakeholders

CONCERNS OF STAKEHOLDERS	CONSULTANT RESPONSES TO STAKEHOLDERS' CONCERNS
• What happens to ongoing projects which designs and safeguards instruments are already cleared by the Bank?	• It is anticipated that any ongoing subprojects which designs and safeguards instruments are already cleared by the Bank shall be allowed to proceed to implementation
• ACRESAL environmental and social hazards (e.g. road obstruction, noise and dust, etc.)..how will they be mitigated?	• The environmental and social risks and impacts associated with any subproject under ACRESAL shall be identified in the site-specific safeguard instruments prepared for the subproject. The mitigation measures for the identified risks and impacts shall also be included in the safeguard instruments
• Experience shows prolonged delays in the commencement of works. How will this be overcome?	• Any subproject implementation delays may result from the need to ensure that stipulated due processes are meticulously followed in subproject implementation. This is to foster project sustainability and effectiveness. • Nevertheless, this concern shall be brought to the attention of the WB and the FPMU.
• Will there be compensations for all lands taken up by the project?	• YES. Appropriate compensations shall be paid for all identified lands to be taken up by the project
• Any damages to homes, farmlands and businesses, will they be compensated for and by who?	• Where damages to structures, farmlands, economic trees and crops and businesses are identified resulting from the project, such assets shall be valuated and appropriate compensations shall be paid by the State through the SPMU
• Timely payment of compensation for project affected assets	• It is anticipated that all compensation payments shall be paid in a timely manner following stipulated due process. Where there are deviations, such situations should be brought to the attention of the project managers
• Experience has shown some abandonement of projects in the past and leaving site in worse condition	• This is not envisaged in this ACRESAL project.

Table 9.3: Expressed Expectations by Stakeholders

S/N	EXPECTATIONS OF STAKEHOLDERS	CONSULTANT RESPONSES TO STAKEHOLDERS' EXPECTATIONS
1.	• Improved road networks • Provision of pipe borne water	• It is envisaged that where construction and/or rehabilitation of community roads are part of the ACRESAL intervention subproject, improved road networks should be the outcome. • Similarly, where provision of pipeborne water is a part of the intervention, the community should expect pipeborne water at the end of the subproject. • Notwithstanding initial group positions, community expectations should generally and freely be expressed during the stakeholders' engagement sessions.
2.	• Educational facilities and training opportunities	• As indicated above, project communities are encouraged to generally and freely express their desires and expectations during all stakeholders' engagement sessions. • The outcome of such engagements usually form the thrust of the subproject interventions for the communities
3.	• Up-grading of healthcare facilities and services	• Please refer to the Consultant responses under S/N 2.
4.	• Job opportunities	• Please refer to the Consultant responses under S/N 2.
5.	• Enhanced economic activities – farming, trading, etc	• Please refer to the Consultant responses under S/N 2.
6.	• Alternate sources of energy to current use of only firewood	• Please refer to the Consultant responses under S/N 2.
7.	• Other sources of livestock feeds	• Please refer to the Consultant responses under S/N 2.

The issues and concerns raised were fully addressed during the stakeholders' meetings. Specific mitigation measures to address some of the project impacts were also explained during the meetings.

The ACRESAL project is a development that the people are enthusiastically awaiting with high expectations of the benefits that the project will bring to the people. The project is expected to reduce desertification in the project areas, significantly improve the livelihoods of members of communities in the states and create employments for the youths of the project communities. Compensations shall be paid for structures, economic trees, useful land, lives and property that may be acquired by the ACRESAL Project. This project therefore is expected to have both short and long-term benefits to the host communities in the states and the Nigerian nation at large.

9.3 Public/Stakeholder Consultation Plan for ACRESAL

Public and stakeholders consultation for the ACRESAL subprojects will entail informing community stakeholders on the need to carry out the subprojects in (a) in their environment, (b) the scope of the subproject, and (c) the need for the community to own and safeguard the project as beneficiaries and stakeholders. The rural communities will mostly be the beneficiaries of this project. Therefore, effective

and close consultation with them is a pre-requisite for the successful running and execution of the ACRESAL subprojects. In recognition of this, efforts will be made to carry out the community consultations in the states with potentially affected individuals/households when resettlement and compensation concerns are involved.

The consultation would be an on-going activity taking place throughout the entire project process. Stakeholders participation and consultation would take place through meetings, radio programs, requests for written proposals/comments, filling in of questionnaires, explanations of project to the locals, making public documents available at the federal, state and local levels. At the local level, suitable locations will include the community squares, mosques halls, residences of traditional or recognized leaders. These measures would take into account the low literacy levels prevalent in these rural communities by allowing enough time for responses and feedback. Notwithstanding, the best guarantors for public interest are the community and religious leaders who are responsible members of their local communities and may also be potentially impacted (economically or physically) by the subproject.

Table 9.4 provides a summary of the stakeholder consultation activities to be considered in the engagement plan under ACRESAL.

Table 9.4: Summary of Stakeholder Consultation Plan

Activity	Stakeholders / Community	Timeline	Engagement Methods	Responsible Party (ies)
Pre-Construction / Prior to Project Commencement				
Project briefings, site tours, personal meetings, community sessions, consultation meetings, risk assessment and mapping sessions. ESMF, ESMP, RPF, SEP, RAP (if triggered) disclosures; Land acquisition process; Assistance in gathering official documents for authorized land uses; Compensation rates and methodology; Compensation packages ; Project scope and rationale; Project E&S principles; Resettlement and livelihood restoration options; Grievance mechanism Process	State Government , Local Government, Site committee, Women organizations, Residents of affected areas/ Community, GBV service providers, and interest groups. People potentially affected by land acquisition, Vulnerable households, NGOs	As required, subject to project updates and feedback from the community	Public meetings, separate meetings for women and vulnerable; Face-to-face meetings; Mass/social media communication (as needed); Disclosure of written information; brochures, posters, flyers, website; Information boards or desks; SPMU monthly newsletter	ACRESAL-SPMU team; Specialists responsible for land acquisition; ESMF, ESMP Consultant; RPF, RAP, SEP Consultant;
Development/dissemination of feedback and complaints mechanism and communications procedures including reporting channels for GRM ESMF, ESMP, RPF, SEP, RAP disclosures Grievance mechanism Project scope, rationale and E&S principles	State Government , Local Government, Site committee, Women organizations, Residents of affected areas/ Community, GBV service providers, and interest groups. Press and media, NGOs, Businesses and business organizations, Workers' organizations, Academic institutions, Relevant MDAs, General public,	As required, subject to any updates on the project	Face-to-face meetings; Joint public/ community meetings with PAPs; Trainings/workshops (separate meetings specifically for women and vulnerable as needed);	ACRESAL-SPMU team; Specialists responsible for land acquisition; ESMF, ESMP Consultant; RPF, RAP, SEP Consultant; World Bank

Activity	Stakeholders / Community	Timeline	Engagement Methods	Responsible Party (ies)
	jobseekers		Mass/social media communication; Disclosure of written information; Brochures, posters, flyers, website; Information boards or desks; Notice board for employment recruitment	
Briefings, Site Tours and Community Sessions for intervention works; Legal compliance issues; Project information scope and rationale and E&S principles; Coordination activities; Land acquisition process; Grievance mechanism process; ESMF/ESMP/RPF/SEP disclosures Project information: scope and rationale and E&S principles; Trainings on ESMF/ESMP requirements and other management plans; Grievance mechanism process; Feedback on consultant/contractor reports	Government authorities, Local communities, Key/ relevant stakeholders Government Departments from which permissions/clearances are required; Other project developers, Donors Other MDAs; Supervision Consultants/ contractors; Service providers, suppliers, and their workers	Prior to Work Plan approval	Face-to-face meetings; Invitations to public/community meetings; Submission of required reports Face-to-face meetings; Trainings/worksho ps Invitations to public/community meetings	ACRESAL-SPMU team; ACRESAL-FPMU team; Specialists responsible for land acquisition; ESMF, ESMP Consultant; RPF, RAP, SEP Consultant; World Bank
Construction and Operations				
Responding to issues and inquiries as per feedback and complaints mechanism	**Project Affected People** People potentially affected by project activities People residing in project area Vulnerable households	As required	Public meetings Separate meetings as needed for women and vulnerable; Individual outreach to PAPs as needed; Disclosure of written information; Information boards; Notice board(s) at construction sites Grievance mechanism SPMU monthly newsletter	ACRESAL SPMU team; Project Supervision team ESMP consultants Contractor/ subcontractors
Monthly/Quarterly reporting on status of project Project scope, rationale and E&S principles; Grievance mechanism; Project status; World Bank compensation requirements	All stakeholders Implementation committees for land use and compensation Project area residents and representatives in communities	Monthly/quarterl y/as required.	Face-to-face meetings; Joint public/ community meetings with PAPs	ACRESAL SPMU team; ACRESAL FPMU team; ESMP, RAP consultants Contractor/ subcontractors; World Bank
Briefings, site tours and community sessions for	Government authorities, Local communities, Key/	Prior to project completion	Public meetings, Trainings/worksho	ACRESAL SPMU team;

Activity	Stakeholders / Community	Timeline	Engagement Methods	Responsible Party (ies)
intervention works closure plan Project information – scope and rationale and E&S principles; Project status; Health and safety impacts; Employment opportunities; Environmental concerns; Grievance mechanism process	relevant stakeholders Press and media; NGOs; Businesses and business organizations; Workers' organizations; Academic institutions; Relevant MDAs; General public, jobseekers	Quarterly meetings during construction seasons; Communication through mass/social media as needed Notice boards updated weekly; Routine interactions Brochures in local offices	ps Disclosure of written information; brochures, posters, flyers, website, Information boards; Notice board(s) at construction sites; Grievance mechanism	ACRESAL FPMU team; ESMP, RAP consultants Contractor/ subcontractors; World Bank
Project information: scope and rationale and E&S principles; Training on ESMF/ESMP requirements and other sub-management plans; Worker grievance mechanism	SPMU staff Community Service providers, suppliers and their workers	Quarterly meetings during construction seasons Communication through mass/social media as needed Notice boards updated weekly Routine interactions Brochures in local offices	Face-to-face meetings Trainings/workshops Invitations to public/community Meetings	ACRESAL SPMU team; ACRESAL FPMU team; ESMP, RAP consultants Contractor/ subcontractors; World Bank
Prior to Project Closeout/Post-Construction				
Project briefings, site tours, personal meetings, community sessions, consultation meetings with stakeholders Satisfaction with engagement activities and Grievance mechanism process; Damage claim process	All stakeholders, State Govt , Local Govt, Site committee, Affected residents/ Community/ interest groups People residing in project area; Vulnerable households	As required, subject to approvals and feedback from the community	Outreach to individual PAPs; Community leadership and members; SPMU website Grievance mechanism SPMU newsletter	ACRESAL SPMU team; ACRESAL FPMU team; ESMP, RAP consultants Contractor/ subcontractors; World Bank
Grievance mechanism process; Issues of concern; Status and compliance reports	Press and media; NGOs; Businesses and business organizations; Workers' organizations; Academic institutions; Local Governments; Relevant MDAs; General public	As needed	Face-to-face meetings Submission of reports as required	SPMU management team; Relevant MDAs

CHAPTER TEN:
ESMF IMPLEMENTATION AND MANAGEMENT OF ACRESAL

10.1 Selection Criteria for ACRESAL States

ACRESAL is structured around a phased implementation approach. Participating states are initially supported with technical assistance activities for enhancing critical capacity and skills needed to develop integrated site designs to the highest international quality standards. To participate in the project, states will need to achieve specific readiness factors including approved engineering designs for water-related civil works within priority catchments. Excluding direct financial obligations, the specific criteria (relating to this ESMF) for state participation in ACRESAL: include:

- Security/Conflict Situational provisions;
- State Commitment to Banks Fiduciary and ESF requirements;
- Formation of Interim multi-sectoral State Project Management Unit (SPMU);
- Provision of office space for the SPMU;
- Long list and location of priority sites;
- State commitment to finance involuntary resettlements (as necessary) as their financial contribution to the project

10.2 Implementing the ESMF

Inplementation of the ESMF involves a process that identifies and assesses the potential concerns and implications that may arise with the project implementation, in order to influence the design and other engineering feasibility options and decisions, for informed and sustainable project development.

Key stages of the ESMF include subproject identification, screening, approval of screening decisions, preparation of E&S instruments, review and approval of instruments, monitoring and enforcement of implementation of ESMPs/standards/etc., monitoring and reporting on implementation of the ESMF, and modification of the ESMF as required based on experiences.

10.3 ESMF Implementation Budget

The total estimated budget for implementing the ESMF is given below.

Table 10.1: Total estimated budget for implementing the ESMF

S/N	ESMF activity	Cost $ (USD)
1	Trainings	2,300.000.00
2	ESIA/ESMP (including production of safeguard manuals)	2,460.000.00
3	Monitoring	980,000.00
4	**Total**	**5,740,000.00**

10.4 Implementation of ACRESAL

The successful implementation of the ACRESAL depends on the commitment of the sector and related institutions, and the capacity within the institutions to apply or use the ESMF effectively, and the appropriate and functional institutional arrangements, among others. This section addresses the key ACRESAL areas relevant to its successful implementation:

- Implementing the ESMF activities;

- Institutional arrangements;
- Capacity building;
- Grievance Redress Mechanism;
- Monitoring and Evaluation
- Environment and Social Audit;
- Health Impact Assessment
- Disclosure of the Safeguard Policies

10.5 ACRESAL Institutional Arrangements

Project implementation would follow the NEWMAP model and be implemented through existing NEWMAP Project Management Units (PMUs) already in place at the Federal Ministry of Environment and State Departments of Environments. However, given the multi-sectorial nature of this operation, the institutional arrangement of ACReSAL will be led by National Steering Committee that will be chaired by the Honorable Minister of Finance while the Honorable Minister of Environment shall serve as co-chair. Other members shall include Honorable Minister of Water Resources and the Honorable Minister of Agriculture and Rural Development (FMARD) and Heads of relevant Agencies and Departments.

The National Steering Committee shall ensure inter-ministerial coordination and policy direction and engagement of the prodder agro-climatic resilience engagements and related climate change actions. Since activity implementation will be State led, the would be a small and fit for purpose unit Federal Project Coordinating Unit to provide supervision and technical support to States as needed. States project steering committee similar to that at the Federal level will be established and also have a State Project Management Unit. State PMU (SPMU) will be staffed with a broad range of expertise, supplemented by secondments from the relevant MDAs. Details of the institutional arrangements of ACRESAL will be fleshed out in coordination with FGN during project preparation.

The ACRESAL will be implemented and monitored by the Technical/Steering Committee (Board) made up of relevant stakeholders from relevant institutions with the State Project Management Units (SPMUs) managing every day affairs of the subprojects in each State. The individual implementing agencies will constitute their PMUs and their responsibilities include:

- Coordination of the ACRESAL programmes and actions in the various States;
- Plan, coordinate, manage and develop the various subproject activities
- Prepare plans for ACRESAL management and development.

The SPMU shall liaise with the various levels of government and other identified stakeholders, namely the FPMU, relevant Federal MDAs, State MDAS, Local Government Council Offices, the communities, NGOs/CBOs, Traditional Rulers; Trade Unions/Local social and professional groups e.g., farmers, fishery groups, market women, road transport workers and the general public. The roles and responsibilities of these levels of institutions have already been defined in chapter 4 of this ESMF.

10.6 Capacity Building for ACRESAL

There will be need for technical capacity in the human resource base of the ESMF implementing institutions. This will ensure effective implementation of the ESMF, logistical facilitation as well as enable the implementing institutions to identify and understand the social and environmental issues associated with the ACRESAL Project. Appropriate understanding of the support mechanisms for implementing the ESMF will need to be provided to the various stakeholders implementing ACRESAL, including the FPMU and SPMUs.

To enhance the respective roles and collaboration of the relevant stakeholders, the following broad areas (not limited to) for capacity building have been identified as deserving of attention for effective implementation of the ESMF:

i) Project Management
ii) Watershed management
iii) Erosion Control
iv) Urban drainage management
v) Environmental Impact Assessment (EIA);
vi) Occupational Health and Safety
vii) Environmental Management Planning;
viii) Monitoring and Environmental Audit;
ix) Annual Environmental Report preparation and other reporting requirements;
x) Public participation techniques Public Hearing Procedure;
xi) Public awareness creation / educational techniques (on environmental, social and health issues).
xii) Gender-Based Violence

Capacity building efforts are needed at three different levels to enable taking specific responsibilities in the promotion of desertification, erosion control and watershed management programs at Federal, state and local levels. There is need to ensure that all authorities, institutions and organizations involved integrate their activities within appropriate coordinating mechanisms in order to give consistent signals for the management of desertification, erosion and watershed.

Capacity Building at Federal Level

At the federal level, capacity building needs to build upon the already existing ministerial institutions and the successful WB-supported programs such as the NEWMAP. They are primarily concerned with development and promotion of institutions and organizations that deal with policymaking and legislation. Already, there are existing Federal Project Management Unit (FPMU) responsible for Nigeria Erosion and Watershed Management Project. This unit is envisaged to evolve into the ACRESAL FPMU.

The NEWMAP FPMU consists of a multidisciplinary interdepartmental (inter-ministerial) committee for erosion control and watershed management and exchange of related expertise. The committee is made up of personnel from the major ministries concerned, such as Ministries of Agriculture, Environment, Forestry, Water Resources, and others, as appropriate.

Capacity Building at State Level

Capacity building at the ACRESAL state level will provide the link for the two-way feedback process between federal and local level activities. Already, there are

existing State Project Management Units (SPMUs) for participating NEWMAP States. These units are envisaged to evolve into the ACRESAL SPMUs. The state level will require more detailed integrated planning and management capacity building for proper and effective implementation at the level. The following capacity enhancement programs may be considered:

Motivation stage: Using mass education techniques to create awareness of the ACRESAL to the people in their various communities and to promote participation in the program.

Technical assistance stage: Training on actual planning, design, layout and physical or biological engineering interventions.

Follow-up stage: assistance to selected target groups by the extension agency in obtaining loans for farming inputs and in marketing their produce; and by the responsible government institutions in the maintenance of conservation structures and practices.

Capacity Building at Local Level

The actual development and implementation of ACRESAL subprojects will take place at the local level. A necessary precondition for sustainable adoption of solutions is that the changes must be profitable and provide tangible benefits to the communities and land users. Mechanisms need to be developed to influence the behaviour of community members in such a way as to motivate them to adopt the desired measures.

Capacity building efforts for desertification, erosion control and watershed management will mainly involve generation of scientific, technological and administrative knowledge, policy integration, creating of public awareness and making available material and human resources, as well as promoting strong responsible organizations and institutions based upon the existing institutional set-up.

Capacity development for community facilitators, GRC and field-level staff will be implemented because they are the organs that will reach out to the communities, and it becomes necessary for these staff and representatives to be well grounded with adequate information on the subproject. They will be able to communicate effectively in the local languages, understanding community dynamics and processes, negotiation and conflict resolution, and empathizing with communities and their needs. Building trust and maintaining good rapport with the people in the Project areas by providing relevant information on the project and responding effectively to their needs and concerns will help solve issues before they even become grievances. It is also important that the community facilitators, GRC and field-level staff provide feedback to the SPMU.

The Tables10.2 and 10.3 below highlight specific areas for effective institutional capacity needs. Training programs are scheduled for Environmental and social accountability, Health Impact Assessment (HIA), and Occupational health and safety management plan (OHSMP)

E&S Staffing Requirements at Federal and State Levels

Under NEWMAP, the E&S Safeguards Unit of the FPMU currently consists of the following safeguards officers:

1) Environmental Safeguards Specialist (ESS);
2) Assistant Environmental Safeguards Specialist (AESS);
3) Social and Livelihood Specialist (SLS);
4) Assistant Social and Livelihood Specialist (ASLS).

With respect to the technical expertise required in developing and implementing the ACRESAL E&S safeguards measures, the FPMU will be reinforced by a pool of consultancies at the highest standards available: (i) environmental experts advisory consultancy, and (ii) a social and livelihood experts advisory consultancy. The role of the pool of consultants shall be to collect, analyze and diseminate lessons coming out of the different states during implementation, including the reviews of the E&S safeguards instruments prepared for the various state subprojects.

Under NEWMAP, the E&S Safeguards Unit of the SPMU currently consists of the following safeguards officers:

1) Environmental Safeguards Officer (ESO);
2) Assistant Environmental Safeguards Officer (AESO);
3) Social and Livelihood Officer (SLO);
4) Assistant Social and Livelihood Officer (ASLO).

Given the evaluated performance of the E&S safeguards units at both the federal and state levels, it is envisaged that the E&S safeguards staffing structure and numbers as currently existing within the FPMU and SPMU may be adequate for the commencement of the ACRESAL project.

Table 10.2: Training Programs (Environmental and Social Accountability)

Training Required	Who to train	When	Training to be conducted by who	Institutional Responsibility to organize training	Training type	Training Costs USD ($)
WB E&S Awareness	ACRESALPMU (Federal), ACRESALPMU (States), FMENV, project affiliated MDAs	During project preparatory stage	World Bank	World Bank	All relevant cadre	Not inclusive in costs
WB Social accountability system	ACRESALPMU (Federal), ACRESALPMU (States), FMENV, project affiliated MDAs	During project preparatory stage	World Bank	World Bank	All relevant cadre	
Nigerian Environmental Guidelines	ACRESALPMU (Federal), ACRESALPMU (States), FMENV, project	During project preparatory stage	EIA Consultant	FMENV/ACRESALPMU (Federal),	All relevant cadre	100,000

Training Required	Who to train	When	Training to be conducted by who	Institutional Responsibility to organize training	Training type	Training Costs USD ($)
	affiliated MDAs					
Project Screening and Scoping	ACRESALPMU (Federal), ACRESALPMU (States), FMENV, project affiliated MDAs	During project preparatory stage	ESIA Consultant	FMENV/ACRESALPMU (Federal),	Training of Trainers	
Preparation of EA and EMP Term of Reference/Implementation	ACRESALPMU (Federal), ACRESALPMU (States), FMENV, project affiliated MDAs	During project preparatory stage	ESIA Consultant	FMENV/ACRESALPMU (Federal),	Training of Trainers	
Preparation and administration of questionnaires and stakeholders consultation/FDG	ACRESALPMU (Federal), ACRESALPMU (States), FMENV, project affiliated MDAs	During project preparatory stage	ESIA Consultant	FMENV/ACRESALPMU (Federal),	Training of Trainers	
GBV/SEA/SH awareness, monitoring and reporting	ACRESALPMU (States), Project community women and girls; Project community men and boys	During project preparatory stage	Women Consultants	ACRESALPMU (Federal), ACRESALPMU (States)	Training of Trainers	
Project Management (scope, implementation, time, budget, costs, resource, quality, procurement, monitoring and evaluation)	ACRESALPMU (Federal), ACRESALPMU (States), FMENV, project affiliated MDAs	During project preparatory stage	Project Management Consultant	FMENV/ACRESALPMU (Federal),	Training of Trainers	
Environmental and Watershed management systems						
Environmental and Social Audits	ACRESALPMU (Federal), ACRESALPMU	During project preparatory	ESIA Consultant	FMENV/ACRESALPMU (Federal),	Training of Trainers	

Training Required	Who to train	When	Training to be conducted by who	Institutional Responsibility to organize training	Training type	Training Costs USD ($)
	(States), FMENV, project affiliated MDAs	stage				
GPS/GIS Interpretation	ACRESALPMU (Federal), ACRESALPMU (States), FMENV, project affiliated MDAs	During project preparatory stage	ESIA Consultant	FMENV/ACRESALPMU	Training of	
Geo-morphology and climate change	ACRESALPMU (Federal), ACRESALPMU (States) FMENV, project affiliated MDAs	During project preparatory stage	ESIA Consultant	(Federal),	Trainers	
Grievance redress	ACRESALPMU (Federal), ACRESALPMU (States) FMENV, project affiliated MDAs	During project preparatory stage	ESIA Consultant	FMENV/ACRESALPMU	Training of Trainers	
Logistic and planning	ACRESALPMU (Federal), ACRESALPMU (States) FMENV, project affiliated MDAs	During project preparatory stage	Project Management Consultant	FMENV/ACRESALPMU	Training of Trainers	

Table 10.3 Training Programs [Occupational Health and Safety Management Plan (OHSMP)]

Training Required	Who to train	When	Training to be conducted by who	Institutional Responsibility to organize training	Training type	Training Costs USD ($)
Occupational Health and Safety Leadership Management	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors, Project affected Community representatives	During project Initiation stage (before commencement of civil works)	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	50,000
Safety performance assessment	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	
Hazard Analysis and Control	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	HIA Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	
Hazard Communication Program	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	HIA Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	
Effective Accident Investigation	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	

Training Required	Who to train	When	Training to be conducted by who	Institutional Responsibility to organize training	Training type	Training Costs USD ($)
Conducting Health and Safety Audits	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	
Job Hazard Analysis	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	
Occupational Health Risk Assessment	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	
Work Stress Risk Assessment	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	
Electrical safety	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	
Fire Safety	ACRESAL-PMU (Federal), ACRESAL-	During project Initiation stage (before commencement	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	

Training Required	Who to train	When	Training to be conducted by who	Institutional Responsibility to organize training	Training type	Training Costs USD ($)
	PMU (State), FMENV, project affiliated MDAs, Contractors	of civil works)				
Fall protection Plan	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	
Fleet Safety Management	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	
Disaster Management and Emergency Planning	ACRESAL-PMU (Federal), ACRESAL-PMU (State), FMENV, project affiliated MDAs, Contractors	During project Initiation stage (before commencement of civil works)	OHS Consultant	FMENV/ACRESAL-PMU (Federal),	Training of Trainers	

Note:
Trainings will be conducted by Local Consultants

10.7 Grievance Redress Mechanism (GRM)

For each subproject, the SPMU will establish a grievance redress mechanism (GRM) that will allow the general public in the subproject area, affected subproject communities or individuals, and PAPs to file complaints and to receive responses in a timely manner. A separate GBV GRM shall also be established to address issues relating to GBV/SEA/SH and any victims. The GRM system will record and consolidate complaints and their follow-up.

While the GBV GRM is designed to exclusively and confidentially handle matters of GBV/SEA/SH nature, the project GRM system will be designed to handle complaints perceived to be generated by the subproject or its personnel. It may also include disagreements about compensation and other related matters. The SPMU will assign

a specific staff member to ensure that this is functioning properly. The consultants should review any existing GRM systems (government/traditional) that are operative in the area and propose ways that the GRM may fit within these systems. Ideally the subproject GRM should have second and third levels of appeal (including the court system, if appropriate, for legitimate claims that cannot be resolved at lower levels). The functioning of the GRM system, how to register complaints (written, by phone, or in person), where to go and hours of service, all should be clearly explained in local language during initial public consultations on the subproject. Local language brochures should be provided reiterating the functioning of the GRM.

Purpose of Grievance Redress Mechanism

The people affected by the ACRESAL Project will raise their grievances about actual or perceived impacts in order to find a satisfactory solution. This is an important aspect in this ACRESAL project because land acquisition is indispensable through the course of the project.

The grievances, influenced by their physical, situational (e.g., employment), and/or social losses, can surface at different stages of the subproject cycle. Some grievances may arise during the project design and planning stage, while others may come up during project implementation. Not only should affected persons (AP's) be able to raise their grievances and be given adequate hearing, but also satisfactory solutions should be found that mutually benefit both the APs and the ACRESAL SPMU. It is equally important that APs have access to legitimate, reliable, transparent, and efficient institutional mechanisms that are responsive to their complaints.

Members of the Project Grievance Redress Committees (GRC)

The Grievance Redress Committees, GRC, will be mandated to deal with all types of grievances arising at the community level due to the ACRESAL and its subprojects with the exception of GBV/SEA/SH matters. As earlier indicated, a separate GBV GRC shall be established to address any grievances relating to any GBV/SEA/SH in accordance with the provisions of this ESMF under Section 7.6.3. The project GRC members will comprise of qualified, experienced, and competent personnel who will be able to interact and gain the trust of the AP's in their communities. The GRC should consist of both male and female representatives. They should be able to accept complaints, provide relevant information on the process, discuss the complainants' situations with AP's, and explore possible approaches for resolution.

The project GRC will include the following members:

- The Resettlement Policy Framework Consultant
- Social officer of the PMU;
- A representative of women residing the affected Project study area;
- A representative from the Private sector (if a private company is located within the affected area);
- A representative of a voluntary organization, NGOs;
- Members of Local Government area included in the affected area;
- A representative appointed by the Community head.

The project Committee will be responsible for the following:

- Communicating with the Affected persons (AP's) and evaluate if they are entitled to recompense;

- Publicizing within the Communities, the list of affected persons and the functioning of the established grievance redressal procedure;
- Recommending to the Social Officer of the PMU solutions to such grievances from affected persons;
- Communicating the decisions to the AP's;
- to acknowledge appeals from persons, households or groups who rightfully will not be affected by the ACRESAL and its projects, but claim to be,
- Recommending to the PMU whether such persons should be recognized as AP's, and,
- Communicatinge back the decisions to the Claimants.

Summary of the Community Grievance Procedure

The Accountability and Response Framework for both the GBV GRM and the project GRM should include the following:

● Many grievances arise due to failure to provide sufficient and timely information to communities. Accurate and adequate information about a project and its activities, and approximate implementation schedule, will be communicated to the communities, especially AP's, regularly throughout the ACRESAL process.

● Stakeholders from the community and PMU in the state and local level will be involved in the grievance mechanism design. The PMU will engage community representatives to identify key issues such as the types of disputes that could arise during the project activities, how people in the community actually want to raise concerns, the effectiveness of current ACRESAL PMU procedures for resolving complaints, and the availability of local resources to resolve conflicts. This will assist in shaping both the design and future improvements.

● All grievances related to resettlement will be managed though the Grievance Redress Committee (GRC). The objective of the Community Grievance Procedure is to receive, respond and address any grievances made to the Project. Grievances will be responded to as quickly and efficiently as possible, avoiding escalation of the issue, reducing negative impacts on the local population and maintaining a positive attitude towards the Project amongst stakeholders.

- All grievances related to GBV/SEA/SH will be managed through the provisions outlined under Section 7.6.3 of this ESMF.

● The Grievance Procedure will be available to local populace residing in the Project areas and other stakeholders directly affected by the Project (which may include landowners residing in urban centers). The Grievance Redress Committee representatives serving, as focal points are most effective if they are trustworthy, trained, knowledgeable, and approachable regardless of the ethnicity, gender, or religion of the complainant. Therefore, efforts will be made to ensure this. Local populations residing in the Project areas and other stakeholders directly affected by the Project will be informed about the grievance process transparency and credibility of the process and they will be provided with both verbal (through regular Stakeholder meetings) and written forms (such as newsletters).

● Other channels of presenting complaints could include presentation of complaints via third parties (e.g., village elites, community-based organizations, lawyers, NGOs etc.); community meetings; suggestion boxes (maybe placed in churches, village and market squares) allowing for

anonymity; face-to-face meetings; written complaints etc. This will be accessible to all especially more vulnerable groups such as women and youth.

Confidentiality and privacy for complainants should be granted.

● The grievance mechanism will be open to a wide range of concerns both those based in factual data and those arising from perceptions or misperceptions. Perceived concerns can be as critical to address as actual hazards. The mechanism should also be able to address multi-party and multi-issue complaints.

● Community consultations and dialogue for the project will be implemented. Efforts will be made to provide community members with opportunities to express their concerns, clarifying and respond to their issues and to find out their views. Receiving these feedbacks will benefit the community members, GRC and the ACRESAL PMU in all levels.

● Capacity development for community facilitators, GRC and field-level staff will be implemented because they are the organs that will reach out to the communities, and it becomes necessary for these staff and representatives to be well grounded with adequate information on the project. They will be able to communicate effectively in the local languages, understanding community dynamics and processes, negotiation and conflict resolution, and empathizing with communities and their needs. Building trust and maintaining good rapport with the people in the Project areas by providing relevant information on the project and responding effectively to their needs and concerns will help solve issues before they even become grievances. It is also important that the community facilitators, GRC and field-level staff provide feedback to the PMU.

● The design and operation of the grievance mechanism will consider cultural differences, such as communities' preferences for direct or indirect negotiation; attitudes toward competition, cooperation, and conflict; the desire to preserve relationships among complainants; authority, social rank, and status; ways of understanding and interpreting the world; concepts of time management; attitudes toward third parties; and the broader social and institutional environment.

● The GRC will make efforts to provide regular feedback to relevant stakeholders in order to clarify expectations about what the mechanism does and does not do; to encourage people to use the mechanism; to present results; and to gather feedback to improve the grievance system.

Scope of Grievances

Using the information gathered through the assessment of the situation in the community, the GRC will endeavor to review the type of grievances that are likely to arise. Generally, grievance mechanisms should be open to a wide range of concerns: both those based in factual data and those arising from perceptions or misperceptions. Perceived concerns can be as critical to address as actual hazards. They often arise when people do not have adequate information. The mechanism should also be able to address multiparty and multi-issue complaints. The members of the GRC have to establish the types of complaints that the mechanism will primarily target.

Community Expectations When Grievances Arise

The members of the community will expect that their grievances will be addressed by the ACRESAL PMU especially at the local level, which we will aim to achieve

through the GRC. When local people present a grievance, they generally expect to receive one or more of the
following:
• A concession in recognition of their problem
• An honest response to questions about ACRESAL activities
• An apology
• Compensation when applicable
• Modification of the activities that caused the grievance
• Some other fair remedy.

Steps in carrying out a Grievance Redress Mechanism
There is no ideal method of approach to grievance resolution however; the best solutions to conflicts are generally achieved through localized mechanisms that take account of the specific issues, cultural context, local customs, and the project state and its magnitude. The Grievance Redress Committees of the ACRESAL will endeavor to be holding meetings with the aggrieved person(s) or groups within a maximum of 3 weeks from the time of receiving the complaint.

The following steps will be followed throughout the Grievance Redress Mechanism process in the various Communities.

Methods that can be used to receive, & Register, Screen, Assess, and Respond to Grievance

To Receive and Register a Complaint
The channels for receiving and registering complaints is a simple process where local people can inform the GRC about concerns directly and, if necessary, anonymously or via third parties.
Reception procedures are most effective if they are convenient, culturally appropriate, simple to understand, and easy to use.
Multiple channels should be available to gather and forward the AP's concerns. At least one member of the committee should be independent of the Project team. The GRC will accept complaints, whether written or oral, record them on a simple form, to deal with the issue or if need be, forwarded to the focal point of contact at the ACRESAL PMU for further action. Diverse methods that are culturally appropriate should be used, including self-identified, confidential, or anonymous procedures (letters, suggestion boxes).

A member of the GRC should be available to receive complaints and log them into a central register.

Screening for Eligibility of Complaints
This process determines whether a complaint is eligible for inclusion in the grievance mechanism. The GRC should develop a screening procedure based upon few simple eligibility criteria that do not involve judging the substantive merit of the complaint.

Eligible complaints may include those where:
● The complaint is related to the project.
● The issues raised in the complaint fall within the scope of issues the grievance mechanism is authorized to address.
● The complainant has standing to file.

Ineligible complaints may include those where:
• The complaint is not related to the ACRESAL project;
• The nature of the issue is outside the mandate of the grievance mechanism;
• The complainant has no standing to file;
• Other community procedures are more appropriate to address the issue;
If the complaint is rejected, the complainant is informed of the decision and the reasons for the rejection. If eligible, the complainant will be notified, and the grievance will be processed and the next stage, which implies that assessment, will follow.

The GRC will ensure that all grievances are truly understood before they are responded. It must be established that all complaints received from the AP's receive a favorable judgment before rejecting.
Assessment procedures (who conducts the assessment and how is the assessment conducted)
Procedures to identify appropriate people in to whom a specific concern should be forwarded
Procedures to determine the appropriate resolution process (in consultation with complainant)
Procedures for making decisions on proposed settlements
Appropriate time frames for each step in the grievance resolution process (including screening, assessment, and resolution)
Notification procedures to the complainant about eligibility, assessment results, proposed settlement, and the like.

Assess the Grievance
At this stage the GRC will gathers information about the case and the key issues of concerns which will help to determine whether and how the complaint might be resolved.

Procedures for Assessing Grievance are as follows:
• Determine who will conduct the assessment. A Complaints Coordinator will be appointed to perform this task or directs it to an appropriate person(s) for assessment (production, procurement, environment, community relations, human resources).
• A representative from the GRC will endeavor to engage directly with the complainants to gain understanding of the nature of the complaint.
• Clarify the parties, issues, views, and options involved which includes:
✓Identify the parties involved
✓Clarify issues and concerns raised by the complaint.
✓Gather views of other stakeholders, including those in the GRC and PMU.

A Checklist of Grievance Handling Procedures
✓Determine initial options that parties have considered and explore various approaches for settlement.
• Classify the complaint in terms of its seriousness (high, medium, or low). Using this category, seriousness, will measure the potential to impact the community. The factors to consider will include: the gravity of the allegation, the potential impact on an individual's or a group's welfare and safety, or the public profile of the issue.

• Engage more directly with the complainant in the assessment process, and involve the complainant in influencing the resolution process to be selected, and settlement options.

Formulate a Response

Procedures to formulate responses are as follow:

• The Complaint Coordinator will be responsible for preparing the response that will consider the complainants' views about the process for settlement as well as provide a specific remedy. The response may suggest an approach on how to settle the issues, or it may offer a preliminary settlement.

• Meeting may be coordinated which will serve as a forum for the complainant to present the person's complaints; discussion amongst the complainant, the Complaint Coordinator, member(s) of the GRC will follow. If a direct meeting is not possible, consider meeting with a neutral third party serving as facilitator. The group would also discuss appropriate next steps during this meeting. If the proposal is a settlement offer and it is accepted, the complaint is resolved successfully and there is no need to proceed to the next step of selecting a resolution approach. If the complainant is not happy with the response about a resolution process or substance, the group should try to reach an agreement that would be mutually acceptable.

• If the case is complex and a resolution time frame cannot be met, provide an interim response facilitated through oral or written communication (best to the complainants preference) that informs the person of the delay, explains the reasons, and offers a revised date for next steps.

Process of Selecting Grievance Resolution Approaches

A variety of Grievance Resolution Approach will be incorporated which will accommodate differences in personal and cultural preferences. The grievance mechanism will offer a variety of grievance resolution approaches and the complainant should have influence over which approach to select. The approaches include the following:

Scenario 1: Where the GRC proposes a solution

This should be conducted as an Informal approach that will involve direct involvement of the GRC or a representative with the complaint. The GRC will propose a solution and offers it to the complainant. The GRC and community would jointly decide if the solution is acceptable and, hence, share decision-making authority. This process can be facilitated if the GRC conducts an initial assessment, and then make a settlement proposal that they hope the complainant will accept. The proposal should be based on consistent standards and criteria so that similar complaints receive similar remedies.

The following measures can help increase the acceptability of responses:

• There should be a rationale for the decision and presentation of any data that will be used to reach a conclusion (for example, value of land, crop, or animals; costs to repair a road).

• There should be an opportunity for the complainant to verbally present his, her, or their case to a GRC or representative. The representative should listen to and acknowledge the complainant's statement to help reach emotional closure and restore positive relations between the complainant and the PMU.

• Timely delivery of a response and rapid restitution once a decision has been made.

• Delivery of the GRC's response in writing and, when appropriate, a visit by a representative to explain the decision in person.

If the complainant rejects the proposal, Scenario 2 may be used.

Scenario 2: Where the Community and the GRC decides to make the decision together.

This option involves the GRC representatives and complainants sharing the decision-making and jointly engaging in a problem-solving approach to reach a resolution of the grievance by themselves. The process may involve only the GRC and complainant, or may be facilitated by a neutral third party without decision-making authority, such as a mediator.

This approach is likened to be the most accessible, natural, and unthreatening ways for communities and Project team to resolve differences. With the potential to resolve perhaps 90 percent of all grievances, “decide together” should be the center of any grievance mechanism’s resolution options. The complaints and the GRC representative however need to furnish themselves in their communication skills, dialoguing and negotiating skills for ease in relating with the people.

Scenario 3: Formal independent redress approach, such as arbitration using a neutral third party.

This approach can be used when the GRC and the complainants are unable to resolve a complaint themselves. The decision-making will lean on the independent, neutral party. The neutral party may be a trusted individual or a group in the community, a respected technical expert, or an independent arbitrator. In a typical arbitration case, the parties engaging in the process would decide if the decision is binding (the parties promise at the beginning of the process to implement the intermediary’s decision) or non-binding (the intermediary’s decision is a recommendation to the GRC and the community, and can be appealed in court or to some higher authority).

Scenario 4: The GRC and community engage traditional and customary practices

Rights-based approach based on legal, contractual, local and customary ways of grievance resolution, which will be evaluated and incorporated into the system. All societies have internal ways of handling their differences. The local people may decide to find succor in resolving the disputes from their traditional or religious leaders. Therefore the GRC will inventory traditional, religious and customary approaches for solving conflicts and consider how to adapt traditional, religious and customary dispute- resolution mechanisms to deal with community-GRC grievances. For this scenario, observers, testifiers, witnesses can be employed to verify the fairness, and assure that agreements comply with widely accepted community values and norms. Advisors and mediators can also be used which may include respected people in their communities. Members of traditional communities often seek advice from respected or wise members on how their differences can best be resolved. Disputants often ask for recommendations that comply with community norms and restore harmonious relationships.

10.8 Environmental and Social Management Plans (ESMPs)

ESMPs will be very important aspects and useful implementation tools for the management and mitigation of identified environmental and social impacts under the ACRESAL. The construction activities for ACRESAL subprojects shall be required to meet the specific E&S safeguard obligations as shall provided in the ESMPs which shall be incorporated into the contract specifications for the project. Work

programmes shall be developed for field work to guide and explain how the mitigation measures recommended in the ESMPs to be implemented during the subproject project execution. This shall be in addition to other contractual provisions for the subprojects.

A generic subproject related ESMP is provided below.

Table 10.3: Environmental and Social Management Plan Framework for ACRESAL (Generic)

Activity	Threat or Impact	Mitigation	Responsibility	Costs (USD)	Performance Indicator
Pre-construction phase	**Social Impacts** • *Community resources e.g. Land* • *Community perception* Damage to natural and planted vegetation GBV/SEA/SH Corona virus pandemic	Prepare RAP. Assessment of all possible social impacts and threats with respect to the ACRESAL as a basis for defining social protection, putting in place measures and procedures for enforcing social protection and social accountability, and setting up monitoring mechanisms to ensure adherence to measures proffered. Establishment of Grievance-address systems and Indigenous Peoples Planning Frameworks. Prepare ESMP. Baseline elemental Studies (water, air, soil quality). Conduct Health Impact Assessment (HIA) and subsequent Health Action Plan (HAP)/Health Management Plan (HMP). Implement required COVID19 Protocols	ACRESAL-PMU (Federal) ACRESAL-PMU (State) World Bank Task Team Independent Consultant ACRESAL-PMU (Federal) ACRESAL-PMU (State) ACRESAL-PMU (Federal) ACRESAL-PMU (State) Independent Consultant ACRESAL-PMU (Federal) ACRESAL-PMU (State) Independent Consultant	310,000 500,000	Have studies been carried out and plans prepared? Have environmental and social monitoring mechanisms been established? Have Grievance Address Mechanisms been established? Is there effective feedback from project affected persons? Have environmental, social, health and broader impacts been identified and mitigation measures designed. Has HIA been conducted, and impacts identified (health, social, environmental)
Construction phase	**Physical Impacts** • *Land degradation & Subsidence* • *Geomorphology & Hydrology* • *Topography* • *Land use etc.* Waste generation;	Integration of community driven interventions (legal, scientific and social) for achieving community participation and acceptance of project objectives amongst project affected persons. Good practice in the utilization of physical and biological engineering techniques for erosion sites rehabilitation and	World Bank Task Team ACRESAL-PMU (State) ACRESAL-PMU (Federal) ACRESAL-PMU (State) CONTRACTOR	160,000 1,000,000 500,000	Is there community driven approach inuse/ how are community reaction Have standard operating procedures for best environmental practices been established?

Activity	Threat or Impact	Mitigation	Responsibility	Costs (USD)	Performance Indicator
	Air, dust and noise pollution Water pollution; Erosion and Sedimentation GBV/SEA/SH Corona virus pandemic	management, including dam safety measures. Impacts Identification and ESMP implementation. Institute a Noise Hazard Communication Program (HAZCOM) for workers and project affected communities, Continued/sustainable afforestation program. Establishment of safe-work procedures for operations and activities Disaster/Emergency planning framework. Implement required COVID19 Protocols	ACRESAL-PMU (State) ACRESAL-PMU (Federal) ACRESAL-PMU (State) ACRESAL-PMU (State) CONTRACTOR/ INDEPENDENT CONSULTANT ACRESAL-PMU (State) CONTRACTOR/IN DEPENDENT CONSULTANT	4,000,000 80,000 50,000	Does the contractor have a HAZCOM program? Are there Material Safety Data Sheets (MSDS) Is a sustainable afforestation program in progress? Does the contractor have a safe-works procedure? Is there an emergency planning framework?
	Biological Impact • *Flora and Fauna* • *Wildlife*	Pre-construction site surveys; Vegetation and biomass management plan;	ACRESAL-PMU (State) INDEPENDENT CONSULTANT	50,000	ESMP Reports, Feasibility Study Reports
	Socio-economic Impacts • *Transportation & Traffic impact* • *Accidents* • *Migration* • *Community Perception-Employment* • *Human Displacement* • *Archaeological & Cultural loss* • *Social stress & disruption*	Institute traffic management plan. Reduce road congestion in project areas and access routes. Trainings to enable community motorists to be responsive to changes as per civil works. Institute a Resettlement Action Plan (RAP), Mechanism for the preservation of cultural heritage and Indigenous Peoples Planning Framework (IPPF).	ACRESAL-PMU (State) INDEPENDENT CONSULTANT World Bank Task Team ACRESAL-PMU (Federal)	20,000 50,000 500,000	Has a traffic management plan been made? Are government related agencies (Federal Road Safety Corps and Department of Road Transport Services) part of implementation of the traffic management plan?
	Public Health Impacts • *HIV/AIDS and STDs* • *Water-Borne Diseases (e.g. Cholera, Dysentery, Amoebiasis, Salmonellosis etc.)* • *Malaria* • *Occupational Health & Safety*	Conduct trainings on Occupational diseases and awareness campaigns on Sexually Transmitted Infections and other infectious Diseases. Conduct health screening Conduct Occupational Health Risk	World Bank Task Team ACRESAL-PMU (Federal) ACRESAL-PMU (State) INDEPENDENT CONSULTANT	50,000 50,000	Have health disease trainings been conducted? Have subsequent health screenings been conducted in project affected communities? Has an Occupational

Activity	Threat or Impact	Mitigation	Responsibility	Costs (USD)	Performance Indicator
	-PPEs	Assessment for contractors, personnel and project affected communities (broader effects/health impacts of project activities on communities is a very important issue)	ACRESAL-PMU (State) INDEPENDENT CONSULTANT	500,000	Health Risk Assessment Been Conducted?
Operation & Maintenance Phase	**Physical Impact** • *Land Degradation & Agriculture* • *Air Quality* • *Noise and Vibration* • *Water Quality* • *Morbidity and mortalities* • *Disasters*	Monitoring and Evaluation/Verification processes. Implementation of ESMP Disaster and Emergency planning framework.	ACRESAL-PMU (Federal) ACRESAL-PMU (State	TBD	Are environmental and social monitoring mechanisms being implemented? ESMP document Is disaster and emergency planning proactive? Has training on disaster management been conducted?
	Social Impact • Traffic and Transportation GBV/SEA/SH Community common (recreational) areas	**Monitoring and evaluation/verification processes.** Implementation of ESMP Disaster and Emergency planning framework.	ACRESAL-PMU (Federal) ACRESAL-PMU (State	100,000 100,000	Is the traffic management plan being implemented? Who is responsible and why? Is the ESMP being implemented? Success in mitigation measures. Is disaster management inplace. No of GBV/SEA/SH victims; No of land slides No of casualties. Complaints from communities

Table 10.4 Monitoring & Evaluation Framework for the ESMF

S/N	Phase Being Monitored	Institution Responsible	Performance Indicator	Period to be conducted	Costs (US$)
1	**Pre-construction phase**)	ACRESAL-PMU (Federal) ACRESAL-PMU (State) World Bank Task Team Independent Consultant	Have environmental and social accountability trainings been conducted Have studies been carried out and plans prepared? Have environmental and social monitoring mechanisms been established? Have Grievance redress Mechanisms been established? Is there effective feedback from project affected persons? Have environmental, social, health and broader	Before initiation of civil works	100,000

S/N	Phase Being Monitored	Institution Responsible	Performance Indicator	Period to be conducted	Costs (US$)
			impacts been identified and mitigation measures implemented?		
2	**Construction phase**	World Bank Task Team ACRESAL-PMU (Federal) ACRESAL-PMU (State) CONTRACTOR/ INDEPENDENT CONSULTANT	Is there community driven approach in- use/how are community reaction Is the Grievance redress mechanism effective Have standard operating procedures for best environmental practices been established? Does the contractor have a HAZCOM program? Are there Material Safety Data Sheets (MSDS) Is a sustainable afforestation program in progress? Does the contractor have a safe-works procedure? Is there an emergency planning framework?	In the course of civil works implementation	80,000
3	**Operation & Maintenance Phase**	World Bank Task Team ACRESAL-PMU (Federal) ACRESAL-PMU (State	• Are environmental and social monitoring mechanisms being implemented? • EMP document • Is disaster and emergency planning proactive? Has training on disaster management been conducted? • Is the traffic management plan being implemented? who is responsible and why? • Is the EMP being implemented? • Success in mitigation measures. • Is disaster management in-place. • No of land slides • No of casualties. • Complaints from communities	Operational stage to project closure	80,000

The other required specific E&S management plans include the following:

10.8.1 Occupational/Public Health, Safety and Security Management Plan

Selected Contractor shall be required to develop and implement an occupational and community health and safety plans that contributes to a healthy workforce and local community for the subproject. The health and safety plan shall be submitted to the SPMU and FPMU for necessary approvals prior to implementation. In developing the Plans, the Contractors shall evaluate possible hazards that may be associated with the project activities such as: (a) imported backfill material; (b) Hazards to the aquatic environment arising from toxic effects of imported material (pH, COD, salinity, dispersed material); (c) Flood hazards due to heavy downpour during the construction period; (d) Physical/mechanical hazards due to the movement of solid material in the event of an accident; (e) Hazards resulting from soil contamination.

Selected Contractor shall also be required to identify who and what can be affected assuming possible scenarios (such as construction failures). Consideration should be given to issues relating to the environment (water, soil, and biota), humans (life, health and living conditions), and economic losses of the population (damage to infrastructure, property) in

the event of the possible scenarios. Cooperation between the Contractor, the SPMU and the local community is recommended for emergency planning.

Selected Contractor shall fully comply with the WB Environmental, Social, Health and Safety (ESHS) obligations and bear the cost of implementation. Community Health, Safety and Security assessment will identify potential negative risks related to the different phases of the project. Some of the significant risks to be considered include:

- Possible pressure and/or additional demand on community health services associated with the influx of workers from outside the project area;
- Possible pressure and/or additional demand on utility services including water and wastewater system associated with the influx of workers from outside the project area;
- Possible pressure and/or additional demand for social services as a result of an increased family stress and violence;
- Possible sexual harassment and gender based violence;
- Possible illicit drug use and alcohol;
- Possible crime and criminal activities;
- Possible change in community wellness as a result of alcohol, and substance abuse associated with the influx of workers from outside the project area;
- Possible change in Community Health as a result of sudden spread of communicable and non-communicable diseases including sexually transmitted diseases (STDs) associated with the influx of workers from outside the project area;
- Possible pressure on traffic and transportation network associated with construction and operations activities; and
- Possible change in water and air quality associated with construction and operations activities.
- In addition to the potential negative impacts which would require mitigation, the rehabilitation of the dam also has the potential to improve community health safety and security through the following means:.
    - Improved access to medical facilities for communities due to the dam rehabilitation and the restoration of connecting roadways;
    - Improved healthcare infrastructure;
    - Improved workforce health awareness;
    - Improved standards of living of direct and indirect employees due to better income in the employees households; and
    - Improved standards of living of vulnerable groups and their households, including support to the elderly within the respective households.

10.8.2 Gender Based Violence/Sexual Exploitation and Abuse Management Plan

The Gender Based Violence/Sexual Exploitation and Abuse Management Plan (GBV/SEA MP) is required to identify and assess key risks, develop mitigation measures to prevent and respond to sexual exploitation, abuse and other forms of Gender Based Violence (GBV). Selected Contractor shall prepare and submit for approval of SPMU and FPMU, the necessary GBV/SEA MP to be implemented for the project. The GBV/SEA MP will set out a formal system by which the Contractor will carry out mitigation measures that will reduce any impacts relating to Gender Based Violence matters. The GBV/SEA MP shall include actions outlined in the SEA/SH Good Practice Note as well as the inclusion of an associated budget. A GBV Specialist and NGO shall be retained to implement and supervise activities.

Specifically, the GBV/SEA MP will provide details regarding the implementation of mitigation and management measures for impacts related to the possibility of or any existing risks which may lead to GBV/SEA issues. The scope of the GBV/SEA MP will cover pre-construction, construction and post construction/closure phases of the Project.

The risk indicators to be considered shall include but not limited to:

- Possible pressure and/or additional demand for social services as a result of an increased family stress and violence;
- Possible sexual harassment (including rape, sexual assault and harassment in all public and private spheres of life);
- Norms, attitudes and stereotypes around gender in general and violence against women in particular;
- Various forms of structural inequality or institutional discrimination on any particular gender.

10.8.3 Vegetation Clearing and Biomass Management Plan

The Contractor shall be required to prepare and submit for approval of SPMU and FPMU, a comprehensive Vegetation Clearing and Biomass Management Plan (VCBMP). Together with this ESMP, the VCBMP will provide the specific activities to be carried out to protect the natural biodiversity of the project area as well as maintain appropriate public access.

The specific objectives of the Plan are to:

- Identify appropriate, ecologically sustainable, and spatially-explicit management actions, such as re-vegetation with native plant species, based on biological and hydrological factors, as well as the reasonableness of costs, local community expectations, and other key considerations.
- Develop monitoring methods to evaluate progress toward Plan objectives, to apply adaptive management to enhance the likelihood of achieving those objectives, and to increase understanding of water and ecosystem interactions.
- Prepare for anticipated changes to the system, such as climate change and land-use changes.
- Prepare for implementation of rapid, active ecological restoration and other management strategies for threatened, endangered, and other native wildlife species potentially displaced by construction activities, and to enhance pollinator habitat.
- Provide consideration of proper implementation techniques, implementation costs, short- and long-term maintenance needs, water use/savings, and wildfire control.

The approved Plan shall form part of the construction documents and requirements for Contractor implementation through the project.

10.8.4 Air Quality Management Plan

Air quality plans identify potential control measures and strategies, including rules and regulations that could be implemented to reduce air pollutant emissions from construction equipment, on and off road motor vehicles, and other sources. The Contractors shall be required to prepare and submit for approval of SPMU and FPMU, a comprehensive Air Quality Management Plan (AQMP). The Contractors shall implement these strategies through rules and regulations, public education and outreach, and partnerships with other agencies and stakeholders.

10.8.5 Emergency Response and Incident Plan

The Contractor shall be required to prepare and submit for approval of SPMU and FPMU, a comprehensive Emergency Response and Incident Plan (ERIP). The Plan will describe the set of necessary actions to be taken in response to defined circumstances, across all hazards, and through the phases of mitigation, preparedness, response, and recovery during this project.

The Plan will provide necessary guidance for how to organize assets to respond to an incident (system description) and processes to manage the response through its successive stages (concept of operations). The Plan will document the combination of facilities, equipment, personnel, procedures, and communications existing within the Contractor's

organizational structure and designed to help in the management of resources during incident response.

The activities contained in the Plan will address the phases of mitigation, preparedness, response, and recovery and will identify potential hazards, assess their likelihood of occurrence, their potential impact and the organization's vulnerabilities to the impact, and also provide a basis for understanding how the hazard likelihood and organizational vulnerabilities can be addressed.

For the Plan to be effective, the emergency incident must be formally defined so that there is clarity and consistency as to what is being managed. This may be best accomplished by defining the incident response through delineation of response goals and objectives, and by explaining response parameters through the Emergency Response and Incident Plan (ERIP).

10.8.6 Water Management Plan

The Contractor shall be required to prepare and submit for approval of SPMU and FPMU, a Water Management Plan. The Plan will provide information about current water uses and charts a course for water efficiency improvements, conservation activities, and water-reduction goals.

An important step in creating a water management plan is to establish a water balance for the project. It is necessary to ensure that water supply, wastewater, storm water issues, and water efficiency Best Management Practices (BMPs) are taken into account prior to commencement of the construction works. Water emergency and other contingency plans should describe how the construction facility will meet minimum water needs during emergency or other water shortages.

10.8.7 Erosion and Sedimentation Management Plan

Selected Contractor shall prepare and submit for approval of SPMU and FPMU, a comprehensive Erosion and Sedimentation Management Plan. Together with this ESMP, the Plan will provide the specific activities to be carried out to protect the environment from erosion and sedimentation within the project area. It is important that an erosion and sediment control plan is effective in preventing illicit discharge. Appropriate consideration should be given to identify potential problems posed by the project area slopes, drainage patterns, and soil types in preparing an effective erosion and sediment control plan.

The erosion and sediment control plan shall be overlaid on the project grading plan(s) or site plan if there is no grading plan.

- The plan shall show what Best Management Practices (BMPs) will be used, when, and where, specific to the project scope, along with the total disturbance area and installation details and notes for the proposed BMPs. Measures will include those necessary to delineate areas of work, prevent erosion of unstable or denuded areas, plan for construction staging and storage logistics, construction of stabilized access points, and proper containment measures for construction materials and waste.
- The name and contact information for the person responsible for maintaining erosion and sediment control measures throughout the construction work shall be included as Erosion Control Point of Contact.
- Location, width, direction of flow and approximate location of top and toes of banks of any watercourses.
- Location and types of existing vegetation on the site. Within 10 meter of any cut or fill, the plan shall identify the location, diameter, species and appropriate elevation at the base of all trees over 0.3 m in diameter measured at 1.5m above average ground level.
- Existing drainage patterns and direction of flow.

- Limits of disturbed areas.
- Areas not to be disturbed and off-limits to construction activity.
- Location of proposed vegetative erosion control measures (e.g., seeding, landscaping), including type, quantity, planting schedule, and irrigation.
- Location and details of all proposed drainage systems, walls, cribbing or other erosion protection devices to be constructed in connection with, or as a part of, the project.

10.8.8 Traffic and Vehicle Management Plan

Managing traffic at a construction workplace is an important part of ensuring the workplace is without risks to health and safety. Vehicles including powered mobile plant moving in and around a workplace, reversing, loading and unloading are often linked with death and injuries to workers and members of the public. Traffic includes cars, trucks and powered mobile plant like excavators or graders, and pedestrians like workers and visitors. The most effective way to protect pedestrians is to eliminate traffic hazards.

Selected Contractor shall be required to prepare and submit for approval of SPMU and FPMU, a comprehensive Traffic and Vehicle Management Plan (TVMP). Together with this ESMP, the TVMP will provide the specific and general guide to vehicular movements throughout the project area in order to protect the community and workforce from accident and safety hazards during construction.

Key issues to consider for managing traffic at the construction workplace include:

- Keeping pedestrians and vehicles apart including on site and when vehicles enter and exit the workplace;
- Minimizing vehicle movements;
- Eliminating reversing vehicles or minimizing the related risks;
- Ensuring vehicles and pedestrians are visible to each other;
- Using traffic signs, and,
- Developing and implementing a traffic management plan.

Selected Contractor shall be required to provide appropriate information, training, instruction or supervision necessary to protect all persons from risks to their health and safety. The Contractor must also ensure construction induction training is provided to workers who carry out construction work.

- The Sokoto State NEWMAP will place speed limits and appropriate road signage along all Project roads;
- The Sokoto State NEWMAP will enforce speed limits for safety, air quality, and noise purposes both on the Project site and beyond;
- All Sokoto State NEWMAP drivers should be trained by a road safety specialist; and,
- All vehicles should be properly maintained and undergo periodic safety inspections.
- Observance of speed limits by contractor's vehicles / drivers should be part of the contractual agreements

10.8.9 Waste Management Plan

A waste management plan (WMP) is required to achieve the goals set for managing construction waste. The construction Contractor shall prepare and submit for approval of SPMU and FPMU, a comprehensive Waste Management Plan (WMP). The WMP will provide the specific and general guide to the management of solid and liquid wastes

throughout the project area and for the duration of the project. The Contractor shall have responsibility for the implementation of the Plan which will include procedures for salvage, reuse and recycling of materials. The implementation of the WMP will protect the community and workforce from the health hazards of indiscriminate waste disposal during construction.

The waste management plan should cover the following:

i. Specify who is responsible for managing waste on site.
ii. Establish goals and objectives.
iii. Estimate the waste types and amounts involved.
iv. Set targets for reducing the amount of each waste sent to the waste disposal site;
v. Describe recycling/reuse methods for each material.
vi. Identify the waste destinations and transport modes, including what materials are being segregated on site for reuse or recycling.
vii. Track progress.
viii. Describe special measures for material use and handling.
ix. Describe communication and training to support and encourage participation from everyone on site.

10.8.10 Chemical Management Plan

Selected Contractor shall prepare and submit for approval of SPMU and FPMU, Chemical Management Plan (CMP) for the ACRESAL subproject. The CMP will provide specific and general guidance in the storage, use and disposal of any chemicals or chemical products associated with activities to be carried out as part of the project. Chemicals are an integral part of everyday life, essential to our economy, our communities and our homes. While chemical substances provide benefits, they may also have harmful effects on human health and the environment if not properly managed.

The CMP is aimed at protecting human health and the environment by assessing chemicals used in the project and by taking action on the chemicals found to be harmful. The CMP helps protect the project community and their environment from the harmful effects of chemical substances. The CMP will assess the environmental and human health risks posed by the chemical substances to be used in the project, and also develop measures to be implemented to prevent or manage those risks.

10.9 Environmental and Social Auditing

Auditing refers to the examination and assessment of a certain type of performance. In the case of the ACRESAL, an audit will assess the actual environmental and social impacts of subprojects, their accuracy of prediction, the effectiveness of impact mitigation measures, and the functioning of monitoring mechanisms. The audit should be undertaken upon a project run in operation, for some time, and it must be performed once or twice in the entire project cycle.

Types of Audit

- Decision Point Audit - examines the effectiveness of ESIA as a decision-making tool.
- Implementation Audit - ensures that approved conditions have been met.
- Performance Audit - examines the responses of stakeholders/agencies concerned with project management.
- Project Impact Audit - examines environmental changes arising from project implementation.
- Predictive Technique Audit - examines the accuracy and utility of predictive techniques by comparing actual against predicted environmental effects

- EIA Procedures Audit - critically examines the methods and approach adopted during the EIA study.

Not all the audit types mentioned above are required to be implemented in the ACRESAL implementation process. However, at the subproject approval stage, both subproject proponent and authorizing agency should consider whether an application of a particular audit technique is likely to result in new information or an improvement in management practices. Particular attention should be given to the project cost-effectiveness of any proposed audit and to technical difficulties likely to be encountered.

It is envisaged that the use of environmental audits will play a significant role in the success of the ACRESAL. In addition, environmental and social auditing should compare monitoring results with information generated during the pre-project period. Comparisons can be made with similar projects or against standard norms.

Relating actual impacts with predicted impacts will help in evaluating the accuracy and adequacy of ESIA predictions.

Environmental Auditing Plan

Environmental Audit should be carried out upon the completion of project construction and after 3 years of project operation in order to obtain information on:

- The condition of natural/social/economical resources prior to project implementation and after the project construction is completed,
- Whether or not, all the mitigation measures implemented are effective to control adverse impact, or enhance beneficial impacts,
- Whether or not all degraded landscape due to project implementation have been restored into original condition,
- What are the impacts of boom-bust scenario among the workforce involved in the subproject implementation and the local economy, and
- The effect on the local economy of project implementation.

In Summary, Information from monitoring output should also be utilized for carrying out environmental audit.

10.10 Health Impact Assessment (HIA)

Purpose

This document is intended to provide good practice guidance for conducting a Health Impact Assessment (HIA) to determine potential impacts on community health as a result of project development. This document has three objectives:

- To present methodological approaches to assess and address potential community health impacts that might typically be encountered in the development or review of future projects.
- To assist in the development of the terms of reference (TOR) that may be needed to conduct the HIA
- To help ensure inclusion of health impact aspects in the social and environmental impact assessment process or in the conduct of independent HIAs for projects.

Key Characteristics

Consultants should possess the experience and expertise in the identification of major characteristics, which define HIAs. These will include, to a minimum, the following:

- Predicting the consequences of project-related actions
- Providing information that can help decision makers prioritizes prevention and control strategies throughout the project lifecycle.

Major Processes in Identifying the Need for HIA

Screening - Preliminary evaluation to determine whether a proposed project is likely to pose any significant health questions. Specialists should generally assume that projects requiring environmental or social impact assessments are also likely to have potential health impacts. During the screening step, the need for an HIA can be determined. The ACRESAL-PMU and relevant stakeholders should handle this.

Scoping – This is a process for outlining the range and types of hazards and beneficial impacts. The overall types and categories of questions that should be addressed are defined at this stage of the HIA. The input of key stakeholders and the relevant host- country health authorities is critical, so that the HIA adequately addresses a realistic range of health concerns. This stage also is the time to develop the TOR for the scoping. The HIA effort should be "fit to purpose," and it should adequately and realistically match the complexity of the project. The ACRESAL PMU and relevant stakeholders should handle this.

Risk Assessment- This should address activities to investigate, appraise, and qualitatively or quantitatively rank the impacts the project is likely to have, on the health of the defined communities. The spectrum of potential impacts—their relative importance and at what level they are expected to occur is determined in this step.

Health Action Plan (HAP) - Considers the rankings developed in the risk assessment and develops a written health action plan (HAP). The HAP, also known as a health management plan, it should establish the proposed actions needed to mitigate identified impacts and promote health opportunities in the project. HIA consultants should include information on mitigation.

Mitigation is a systematic process by which to avoid, reduce, remedy, or even compensate for potentially negative impacts. Review and analysis by key stakeholders, including host-country health authorities, is should be a critical aspect of HIAs to be conducted under the ACRESAL projects.

Implementation and Monitoring – This should occur after the Health Action Plan(s) for subprojects have been developed. At this point it is necessary to decide how the mitigation actions will be implemented and monitored, and to establish the roles and responsibilities of the ACRESAL-PMU and key stakeholders. During this process, the project should establish action frameworks and allocation of resources, and it should design monitoring systems to ensure that mitigation progress is satisfactory. In addition, the monitoring system should be designed to capture unanticipated effects or provide an early-warning system to alert that problems are occurring at the community level. The monitoring plan should define appropriate key performance indicators.

Evaluation and Verification of Performance and Effectiveness- HIA documents for the project should include a system for determining that implementation has been accomplished and is achieving the intended results.

Types of HIAs
When gathering new field data for the HIA, the project will encounter different levels of effort and needs. The key descriptive terms for these cases *"comprehensive"* and *"rapid appraisal"* indicate the different depths of analysis and consultation required, and whether the performance of the HIA involves collecting new field data. In many situations, a rapid appraisal HIA will be sufficient; however, this assessment may uncover significant data gaps and trigger the need for a more comprehensive HIA, that is, new data collection.

Comprehensive HIA
A comprehensive HIA includes screening, scoping, stakeholder consultation, risk assessment, appraisal, implementation and monitoring, and verification. Stakeholder communication and consultation should take place at all stages—from screening through implementation and monitoring. During the project concept and feasibility studies and project planning phases, the project also will perform a limited level of local community stakeholder consultation. A comprehensive HIA is more likely to be considered for large, complex projects, particularly if resettlement or relocation of existing communities is involved or if a significant influx of persons is expected, regardless of whether it is a new-project or new-location situation or a significant expansion of an existing facility. An essential element of the comprehensive HIA is the need for some type of new data collection in potentially affected communities, and for helping to predict changes in health determinants, the associated risks, and health outcomes. This data collection typically consists of health-questionnaire surveys.

Rapid Appraisal HIA
These assessments require less-intensive efforts; however, in-country investigation may be triggered. Typically, rapid appraisal HIAs are subdivided into desktop HIAs and limited incountry HIAs.

Desktop HIA
It is a qualitative review of potential health impacts and is used to internally inform and comment on the proposed design of the project. It is also useful for determining whether a more detailed review is needed.

Limited in-Country HIA
This uses information that is already available or easily accessible. Thus, no specific new data collection is required. Data sources may include peer-reviewed scientific literature and 'grey literature," that is, health department data. Workshops or discussions with key internal and external stakeholders, which are usually planned in the context of other social and environmental assessment efforts, also can provide useful health-related information. The overall results are typically incorporated into the social and environmental impact assessment, although the limited in-country HIA may also be issued as a stand-alone report. Limited incountry HIAs are appropriate for many expansion scenarios where new data collection is not needed. In some situations, large health databases are available, sufficient for documenting current baseline community conditions, making new field collection efforts unnecessary.

10.11 Integrated Pest Management Plan (IPMP)

A detailed assessment and preparation of an Integrated Pest Management Plan is being carried out as a stand-alone document. Please see Annex for IPMP format

10.12 Forestry Development Plan

The anticipated impacts of ACRESAL on the forest resources of Nigeria would be positive. The project objectives include protection of the pristine forest and buffer zones in the project area, as well as on the ground investments in afforestation and re-grassing and strengthening of the institutions that protect forests in the project area. Furthermore, the preparation of the Forestry Development Plan will be a prerequisite for subprojects to be financed in the forest areas. The Plans will also be disclosed in specific locations at forest communities or at the Department of Forestry at Federal, state and local government levels. The Forestry commissions in some of the states have the capacity to monitor and follow up on the Plans. Small dams are normally less than 15 meters in height. This category includes, for example, farm ponds, local silt retention dams, and low embankment tanks. For small dams, generic dam safety measures designed by qualified engineers are prepared.

10.13 Chance Find Procedures

In the event of chance finds of items of cultural significance, all forms of excavation in and around the site will be stopped. Subsequently, experience archaeologists and anthropologist would be recruited to carry out an investigation and propose plans for the preservation of such cultural artifacts.

During the project site induction meeting, all contractors will be made aware of the presence of an on-site archaeologist who will monitor earthmoving and excavation activities. The following procedure is to be executed in the event that archaeological material is discovered:

- All construction activity in the vicinity of the find/feature/site will cease immediately.
- Delineate the discovered find/ feature/ site will be delineated.
- Record the find location, and all remains are to be left in place.
- Secure the area to prevent any damage or loss of removable objects.
- The on-site archaeologist will assess, record and photograph the find/feature/ site.
- The on-site archaeologist will undertake the inspection process in accordance with all project health and safety protocols under direction of the Health and Safety Officer.
- In consultation with the statutory authorities the on-site and Project Archaeologist will determine the appropriate course of action to take.

The Chance Find Procedure is required for all subprojects to address the specific impacts that may occur as a result of any "Archaeological Chance Finds" or existence of cultural resources during the planned construction works. It is anticipated that some of the construction activities associated with the ACRESAL project may impact cultural resources such as the grave yards.

The grave yards identified within the subproject areas shall be considered only of local significance and may not be affected by construction. However, if any grave yard needs to be relocated on account of the subproject, the local people, community leaders, NGOs and others should reach a consensus and the local

people should be involved in the process of relocation. Alternatively, if the graveyard is considered of archaeological and historical value, then the Contractor shall develop a strategy for restoration, conservation and management which shall be implemented.

10.14 Resettlement Action Plan

The WB requires the preparation, in advance of project implementation, of a Resettlement Action Plan/Abbreviated Resettlement Action Plan (RAP/ARAP) where project impacts are known to displace persons within the project community or affect their social and economic well-being. The RAP/ARAP seeks to specifically identify, evaluate and document the set of mitigation, monitoring and institutional actions to be undertaken for the project to eliminate identified adverse community or individual social and livelihood impacts before commencing the remedial construction and rehabilitation works.

The Resettlement Action Plans for the ACRESAL project shall be prepared as stand-alone documents and are to be incorporated accordingly into the Environmental and Social Management Plan by reference.

10.15 Disclosures of Safeguard Instruments

Copies of this ESMF, as well as other Safeguard Instruments (such as ESMP/RAP/ARAP) that would be prepared for ACRESAL shall be made available to the public by PMUs at their offices in the 19 States, and in the various relevant local government councils and project affected communities, State Ministries of Environment and other stakeholders and at the Federal Ministry of Environment.

All reasonable efforts must also be made to make the documents available at strategic points within the project's area of influence so as to allow all stakeholders to read and understand how they stand to be affected by the project. This will include necessary translations into the local language. The PMUs/State Agencies will also disclose this ESMF and other safeguards instruments electronically through the World Bank Website. Table 10.5 outlines information to be disclosed.

Table 10.5: Some information to be disclosed

Topic	Documents to be disclosed	Frequency	Media
Public Consultation	Minutes of Formal Public Consultation Meetings	Within two weeks of Meeting	Implementation agency's website. Ministry of Environment Project Management Unit & Project Implementation Units (PIU) Local government Secretariat
Environment Management	ESMF, Environment Assessment Report & Environment Management Plans	Prior to awarding works and to remain on website	World Bank's Infoshop. Implementation agency's website. Ministry of Environment Project Management Unit & Project Implementation Units (PIU) Local government Secretariat
Resettlement, Rehabilitation and Land Acquisition	RPF, Resettlement Action Plan (RAP)	Once in the entire project cycle. But to remain on the website and other disclosure locations throughout the project period.	World Bank's Infoshop. Implementation agency's website. Ministry of Environment Project Management Unit & Project Implementation Units (PIU) Local government Secretariat
	Information regarding impacts and their entitlements	Once at the start of the project and as and when demanded by the PAPs.	Through one-to-one contact with PAPs. Community consultation List of PAPs with impacts and entitlements to be

Topic	Documents to be disclosed	Frequency	Media
			pasted in the PMU offices
	R&R and LA monthly progress report.	10th day of every month	MDAs / Implementation agency's website. Project Management Unit & Project Implementation Units (PIU)
	RAP Impact Assessment Report	After substantial completion of each phase	Implementation agency's website.
	Land Acquisition Notifications	After substantial completion of each phase	Implementation agency's website.
	Grievance redressal process.	Continuous process throughout the project cycle.	Implementation agency's website. Ministry of Environment Project Management Unit & Project Implementation Units (PIU) Local government Secretariat Project Management Unit & Project Implementation Units (PIU) One to one contact with PAPs.

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ANNEXURES

ANNEX I - REQUIREMENTS ON DISCLOSURE AND TRANSLATION OF SAFEGUARDS DOCUMENTATION:

1. For information on disclosure requirements, please see the OPCS Instructions: Preparation of Investment Project Financing: http://intresources.worldbank.org/INTOPCS/Resources/380831-1360104418611/Instructions_Track_2.pdf

2. For information on translation requirements, please see the Translation Framework Guidance: http://siteresources.worldbank.org/EXTINFODISCLOSURE/Resources/Translationframework.pdf

ANNEX II: FEDERAL GUIDELINES FOR EIA PROCESS

The process for undertaking EIA and other forms of environmental assessment in Nigeria is presented in the EIA Decree No. 86 of 1992. The Federal Government of Nigeria enacted the Environmental Impact Assessment (EIA) No. 86 of 1992 as a demonstration of her commitment to Rio declaration. Prior to the enactment of EIA act in Nigeria, project appraisals were limited predominantly to feasibility studies and economic – cost – benefits analysis. Most of these appraisals did not account for environmental costs, public opinion, and social and environmental impacts of development projects.

EIA ACT No.86 of 1992

The EIA Act gave the Federal Ministry of Environment the implementing mandate and requires that the process of EIA be mandatory applied in all major development projects right from the planning stage to ensure that likely environmental problems, including appropriate mitigation measures to address the inevitable consequences of development are anticipated prior to project implementation and addressed throughout the project cycle.

The EIA Act stipulates that all Agencies, Institutions (whether public or private) except exempted by the Act, shall, before embarking on proposed projects, apply in writing to The Federal Ministry of Environment so that subject activities can be quickly identified and allow for the conduct of environmental assessment(s) as the activities are being planned. The Act made provision for all stakeholders (agencies, public, experts, NGOs, communities, etc) to be notified, consulted and or given the opportunity to make comments on the EIA of a project prior to approval or disapproval.

The objectives of the EIA Act of 1992 among others include:

- The establishment of the environmental effects of proposed activities before a decision is taken to embark upon them.
- Promotion of the implementation of appropriate policy in all Federal land, states, and Local Government Area consistent with all laws and decision making process through which these goals in (1) above may be reached.
- It encourages the development of procedures for information exchange, notification and constitution between organs and persons when proposed activities are likely to have significant effects on boundary or trans – state or on the environment bordering towns and villages.

Minimum content of an EIA study

Section 4 of the EIA Act specifies the minimum content of an EIA to include the following;

- A description of the proposed activities,
- A description of the potential affected environment, including detailed information necessary to identify and assess the environmental effects of the proposed activities,
- A description of the practical activities,
- An assessment of the likely or potential environmental impacts of the proposed activity and the alternatives, including the direct or indirect, cumulative, short-term and longterm effects,

- An identification and description of measures available to mitigate adverse environmental impacts of the proposed activity and assessment of those measures,
- An indication of gaps in knowledge and uncertainty, which may be encountered in computing the required information
- An indication of whether the environment of any state or local government areas outside Nigeria is likely to be affected by the proposed activity or its alternatives, and
- A brief and non-technical summary of the information provided under the above listed paragraphs.

EIA procedural guideline in Nigeria

After the dissemination of the EIA Act 86 in 1992, the Federal Ministry of Environment (formally called FEPA) came up with the ***EIA Procedural Guideline and Sectoral Guidelines*** for some Nigerian Economic sub-sectors. The EIA Procedural Guideline contains a list of steps which when carefully followed shall result in better project planning and a streamlined decision making process. These steps include, brief descriptions of the project environment and process, legal framework, identified impacts etc. These steps are;

- Project proposal
- Initial environmental examination (IEE) / preliminary assessment
- Screening
- Scoping
- EIA study
- Review
- Decision making
- Monitoring, and Auditing

EIA Sectoral guideline in Nigeria

The sectoral Guidelines provide sector-specific guide for preparation of EIA reports. Sectoral guidelines have been developed for the following sectors.

i) Oil and Gas, including petroleum refining, petrochemical industry pipelines, on-shore, offshore exploration and drilling etc.
ii) Infrastructures – including airports, construction, harbours, construction and expansion, railways highways, etc
iii) Industries – including all other manufacturing industries, besides those in the oil and gas sector.
iv) Agriculture - all agricultural practices including land clearing, afforestation projects, etc.
v) Mining – including solid minerals prospecting and exploration.

In practice, sectoral guidelines:

- Are most useful in the early stages of an environmental assessment when TOR for the EIA are unavailable or are being prepared;
- Help with impact identification and in the development of detailed TOR for conducting an EIA;
- Provide guidance on how to present information in the proper format to aid in review; and
- Provides useful information against which to evaluate the actual results of the EIA.

EIA Studies / Report Preparation
EIA studies and report preparation are the responsibilities of the Project Proponent. In the course of preparing an EIA Report of a proposed sub-project, all stakeholders should be consulted. The objective of such consultation is to identify early in the EIA process, the worries of stakeholders regarding the impacts of the proposed sub-project in order to address such issues during the actual study and to reflect such comments in the sub-project's EIA report.

EIA Review Process
To establish the type of review to be adopted, a draft EIA Report should be submitted to The Federal Ministry of Environment by a proponent for evaluation by the Ministry. There are different forms of reviews, depending on the nature, scope, anticipated impact, risks, etc that may arise in project planning and implementation, and an EIA report may be subject to any or a combination of these reviews. The various types of review are an in-house review, public review, panel review and mediation.

In – House Review
In order to assess how far issues raised in the Terms of Reference (TOR) have been addressed and to determine if the draft EIA reports are suitable for public review (if necessary), all draft EIA reports forwarded to the Ministry are reviewed in-house. If the in-house review finds that the issues in the report do not merit putting it on public display, the review process may be terminated at the in-house review stage. Some projects (e.g. those that fall under Category III of the EIA Act) may be recommended for approval by the Ministry's In-House Panel of Experts.

Public Review (Public Display)
The provisions of Section 25 of the EIA Act states that, 'interested members of the public are given the opportunity to participate in the EIA review process through comments on project reports that are put on display'. Displays are usually done for a 21 working day period at strategic locations. Notices of such venues of display are usually published in the National and relevant State daily newspapers and information about such display are complemented with further announcements on the relevant state electronic media. Often times, the venues of displays include the Local Government Headquarters, where a project is located, the State Ministry of Environment or Environmental Protection Agency(s), The Federal Ministry of Environment's zonal Offices. Comments received from the display venues are forwarded to the Federal Ministry of Environment Headquarters for collation and evaluation preparatory to the Review Panel meeting for the project.

Review Panel
After the public display exercise, The Federal Ministry of Environment may decide to set up a review panel to review the draft EIA report depending on the sensitivity or significance of the comments received. The review panel meetings are held in the public so that stakeholders can utilize this opportunity to put forward their views and concerns for consideration. The choice of members of the review panel depends on the type of project, its scope as well as the ecosystem to be affected. However, the Chairman of the affected Local Government(s) and the Commissioner of Environment of the project location are always included in the Panel.

Mediation

Projects that are likely to cause significant adverse effects that are immitigable, or of public concerns are referred to Federal Ministry of Environment Ministerial council for subsequent referral to mediation. For a mediation to be set up, Ministerial Council would have been convinced that the parties involved are willing to participate in the mediation and to abide by its decisions.

EIA Approval

After the submission of a satisfactory Final EIA report, the Federal Ministry of Environment could decide to set a number of conditions for the approval of the implementation of the project. Such conditions usually include a statement that mitigation measures highlighted in the projects EIA report shall be complied with.

Impact Mitigation Monitoring (IMM)

The following are the objectives of an EIA Impact mitigation monitoring:

- Check that mitigation measures are implemented as appropriate.
- Determine whether environmental changes are as a result of project developments and/or natural variation.
- Monitor emissions and discharges at all stages of project development for compliance with regulatory standards.
- Compare effluent quality/quantity with design specifications and statutory standards.
- Determine the effectiveness of Environmental Management Plans, Environmental Monitoring Plans and especially the mitigation measures to predicted impacts and to also act as a feedback mechanism towards the improvement of the EIA Evaluation and Approval process.
- Determine duration of identified impacts.
- Create a data bank for future development of predictive tools.

The Legal requirements for Impact Mitigation Monitoring in the EIA process are specified in Sections 16 (c), 17 (2) (c), 37 (c), (1), 40 (1) (a) (2), 41(1) and 41 (2) of the EIA Act as well as Section 11 of the EIA procedural guideline Environmental Impact Monitoring is designed to monitor the Environmental Management Plan (EMP), and concerns during project operations. It is also designed to ascertain the extent to which commitments contained in EIA reports are reflected during the various phases of project development and operations. Impact Mitigation Monitoring (IMM) exercises are conducted to assess the degree and effectiveness of the mitigation measures offered in an EIA report. Hence, relevant documents, in-house monitoring records as they affect the project, the project implementation schedule, as well as all other documents to support the environmental good housekeeping of the project are scrutinized and verified.

In a typical Impact Mitigation Monitoring exercise, the following statutory actions are carried out,

- Facility inspection
- Interactive session with project managers on the Mitigation Checklist for the EIA of that sub-project.
- Interview and interaction with the action party responsible for ensuring full implementation of a particular action
- Inspection and Verification of the parameters that shall be monitored to ensure effective implementation of that action

- Check the timing for the implementation of the action to ensure that the objectives of mitigation are fully met.
- Interact with project Engineers and Technicians on mitigation measures that are not applicable, or not enforceable or still not practicable in line with good environmental principles with a view to finding out practical alternatives.

At the conclusion of an IMM exercise, a report should be written for the Minister/Head of Department's approval, after which, necessary suggested corrective measures would be communicated to proponents.

ANNEX III: TERMS OF REFERENCE FOR THE ESIA

1.0 INTRODUCTION

1.1 The Purpose of the ESIA

There is need to carry out an Environmental and Social Impact Assessment (ESIA), which will have to comply with the environmental procedures of the Federal Republic of Nigeria and with the environmental guidelines of the financing institutions, World Bank.

2.0 Objectives of the ESIA

The objectives of the ESIA are to:

• Thoroughly document baseline conditions of the seven (7) study area and the socio-economic conditions of the affected communities.
• Place the ecological baseline conditions of the concession area in the context of the surrounding region.
• Inform, obtain and address contributions from stakeholders including relevant authorities and the public.
• Assess in detail, the environmental and social impact that would result from the project
• Identify mitigation measures that would reduce the significance of predicted negative impacts or enhanced predicted benefits of the proposed mining projects.
• Develop an appropriate Monitoring Plan for the proposed ACRESAL project
• Meet the requirements of the National environmental regulatory agencies in Nigeria as well as international best practice for project of this nature.

The ESIA will identify the potential impacts associated with the development and then provide the measures that will be required to manage those impacts, which will be in-corporated into an Environmental Management and Monitoring Plan. A multi-disciplinary team of experts will conduct the ESIA with the stages identified as follows:

3.0 Phase Description

Screening/Scoping- Identification of key issues and concern that are to be addressed by the specialist studies
Baseline -Characterize current broadly defined environmental conditions on and near the site to serve as a basis against which impacts can be measured and monitored.
Assessment and Mitigation - Identification of positive and adverse impacts. The potential spatial extent, severity, duration and probability of impacts are described along with mitigation actions.
Integration - Collation of specialist studies and assessments and the compilation of the ESIA Report.
Review - The ESIA Report is reviewed by EPA, EAB, sector agencies and stakeholders The ESIA process will be guided by the Federal Guidelines for EIA process as stipulated in Annex 1 and international best practice guidelines for projects of this nature such as the World Bank.

4.0 Tasks

In the conduct of the ESIA the consultant team will undertake the following tasks:
Assemble relevant baseline information on the project area including its geology, soils, hydrology, climate, surface water quality, noise, air quality and terrestrial and aquatic flora and fauna.

• Collect Information on the socio-economic background of the project areas
• Provide a detailed description of the projects
• Identify the relevant laws, guidelines, regulations and standards that would define the operating framework of the project.
• Identify, as far as is possible, and assess the physical, biological, socio-economic as well as cumulative impacts of the project which will include the transport and processing components of the project.
• Describe alternatives examined in developing the project, and identify other alternatives that would achieve the same objectives. This will include alternative methods for Erosion and Watershed management, and the rationale for the preferred choice.
• Prepare an Environmental Management Plan that recommends measures to address those adverse impacts that can be avoided, or reduced to acceptable levels including a plan for monitoring during project implementation. The Management Plan will include a Mitigation Plan, Emergency Response Plan, Monitoring Plan and provisions for Environmental Auditing.

5.0 Specific Issues to be addresses by the ESIA

The consultant team will address the full range of issues as it pertains to the proposed project.

Specific issues include:

- A detailed description of the project areas including maps showing the boundaries of the Project areas, layout of current land uses of the surrounding areas and network of drainage systems.
- Current water quality data from surrounding streams, rivers which include pH, TSS or turbidity, conductivity, TDS, ammonia and sulphates and the establishment of fixed stations for continuous monitoring.
- Dust and noise management in particular from haul roads, crushing plant and stockpiles
- Impacts to aquatic and terrestrial flora and fauna
- Water Use and effluent management
- Waste management
- Land use
- Cultural and archaeological resources
- Occupational Health and Safety
- Social and economic impacts to the local communities including direct benefits such as jobs.
- Cultural, gender, and social norms and practices, particularly those which are harmful to women and girls and that would be exacerbated as a result of project implementation. This includes power dynamics, division of labor and participation in decision-making processes in both professional and private spheres.
- Existing data regarding Gender-based Violence (GBV), including data on partner/non-partner sexual violence and physical violence, Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), intimate partner violence, family violence, early marriage, and harmful traditional practices, especially those particularly at risk of being exacerbated by project implementation. Availability and accessibility of safe and ethical GBV response services, including medical care, psychosocial services, legal aid, protection services and livelihood opportunities.[1]

- Data regarding access to employment, educational and economic opportunities for traditionally marginalized populations, especially women and girls.
- A summary of labour and working conditions, including the risk of SEA/SH and other forms of abuse.
- Cumulative Impacts of the project
- Presentation of the proposed ACRESAL plan with all relevant information concerning potential impacts on the environment and develop mitigation strategies to reduce the identified impacts.
- Presentation of a Sediment Control Plan as part of the ACRESAL Plan
- A Monitoring Plan with focus on reclamation efforts and on discharge and receiving water quality limits with provisions for effluent discharge monitoring. This will be base on the results of the ESIA and the management plan.
- A Detailed Emergency Response Plan to respond to environmental emergencies and issues with respect to worker's safety as well as residents. The Plan will consider identification of emergencies, response mechanisms, personnel responsibilities and equipment and training requirements.

6.0 Site Visit and Scoping

The ACRESAL will cover the cost of site visits associated with the conduct of the ESIA, public notices and other costs associated the ESIA.

7.0 ESIA Report

Outline for an Environmental and Social Impact Assessment Report

An Environmental and Social Impact Assessment process should not exclusively be perceived as a matter of preparing a report and obtaining approval only, instead the use of the ESIA should help ensure that the environmental and social concerns of local communities and other stakeholders are taken into account throughout the life of the ACRESAL. The ESIA should be tailored to the specific sub-project and to the legal requirements, environmental and social conditions where it is situated. The coverage of the ESIA report itself will therefore depend on local circumstances.

To describe and agree on the extent and boundaries of the proposed sub-projects, a system map may be useful. The Identification of relevant stakeholders would be part of this mapping exercise, and these stakeholders can then be involved in the mapping process, which can help everyone understand the complex flow of impacts and feedback loops more easily.

The following outline for a typical ESIA report is offered on the basis that identified issues will not necessarily have the same degree of relevance for all sub-projects in the ACRESAL.

I. **Executive summary / non-technical summary** - The summary should be written in nontechnical language and be accessible and understandable to the relevant stakeholders and/or affected communities.

II. **Methods and Key issues** – This provides the opportunity to clarify some basic information about the ESIA including what difficulties have been encountered and the limitation of the assessment.

III. **Legislative Framework** – The legislative framework should include the relevant legislation and requirements of the country and region where the project is situated. It is also important to include a statement that commits the project to compliance.

IV. **Consultation Process** – Should contain the step by step approach and views expressed. If clear recommendations resulting from the consultation process were not followed, the reasons for those decisions should be provided.

V. **Description of the existing Social and Environmental Baseline** – should describe information collected on the past, present and future context for the ACRESAL in order to provide a picture of existing trends resulting from natural events or human activities, the current state of the environment, the current socio-economic conditions in the region, and any potential future changes which may occur as a result of planned developments.

VI. **Consideration of Alternatives** – this section should present the results of a well thought-out process that has ensured that reasonable alternatives of different types have been considered.

VII. **Description of the proposed development** – this section should cover the objectives and scope of the sub-projects, an overview of the sub-project and its location, a detailed description and layout, the site preparation and construction, and the nature of the process, resources and technologies to be used.

VIII. **Prediction and Evaluation of significant social and environmental impacts** – this should emphasize the most important impacts, who or what these will affect, and how significant the effect will be.

IX. **Mitigation / offset measures** – this section should provide an assessment of the hierarchy of impacts and whether mitigation measures proposed to alleviate the impacts and residual and/or cumulative effects. Proposed methodology to reduce negative impacts should also be included.

X. **Environmental and Social management and monitoring plans** – This section should provide a framework for managing and monitoring impacts (implementation costs inclusive) for the duration of the sub-projects and also ascertain the necessity of introducing corrective measures. It should be designed to ensure that the commitments made in the ESIA, and in any subsequent assessment reports, together with any license approval or similar conditions are implemented.

XI.**Bibliography** – A list of all references cited should be included in the report.

Roles and Responsibilities

In undertaking an ESIA, it is important that the roles, responsibilities, rights and involvements of all stakeholders in the process are clearly defined and agreed before commencement.

The level of involvement of stakeholders in the ACRESAL ESIA will depend (not limited) on the following factors;

- Location of the sub-project
- Legislation

- Source for financing of the sub-project
- Public profile of the sub-project.

Stakeholders in the ESIA process may include, but are not limited to the following groups:

- The project proponent and / or developer
- Teams of specialists (possibly including independent consultants)
- External reviewers
- Relevant local public authorities, government departments and government agencies.
- Financial institutions
- Local residents and communities
- NGOs and community interest groups/project affected persons

Other institutional bodies, such as regional development forums and resource management
organizations.

8.0 The Technical team for the ESIA will be procured by the ACRESAL PMU.

9.0 Management of the ESIA process

The consultant will manage the overall ESIA process and will be responsible for the compilation and presentation of the ESIA Report. The consultant will plan, coordinate and execute all activities of the ESIA process and will assist ACRESAL PMU in the planning and execution of the public scoping meeting and public hearing if required. The consultant will provide updates to all relevant agencies on the ESIA process.

10.0 Duration

This will be discussed with the ACRESAL PMU

11.0 ESIA Submission

This will be discussed with the ACRESAL PMU

ANNEX IV: ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST

The Environmental and Social Screening Checklist (ESSC) has been designed using the World Bank Environmental and Social safeguards, and Nigerian EIA guidelines as checklist benchmarks to assist in the evaluation of proposed sub-projects under the ACRESAL. The checklist is designed to place information in the hands of reviewers so that mitigation measures, if any, can be identified and/or that requirements for further environmental analysis be determined. The ESSC also identifies potential socioeconomic impacts that will require mitigation measures.

Issues	Site Sensitivity			Responsibilities
	Low	Medium	High	
Natural Habitats	No natural habitats present of any kind	No critical natural habitats; other natural habitats occur	Critical natural habitats present	**FPMU, SPMU, Independent Consultants**
Water Quality and water resource availability and use	Water flows exceed any existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues	Medium intensity of water use; multiple water users; water quality issues are important	Intensive water use; multiple water users; potential for conflicts is high; water quality issues are important	**FPMU, SPMU, Independent Consultants**
Natural hazards vulnerability, floods, soil stability/ erosion	Flat terrain; no potential stability/erosion problems; no known volcanic/seismic/ flood risks	Medium slopes; some erosion potential; medium risks from volcanic/seismic/ flood/ hurricanes	Mountainous terrain; steep slopes; unstable soils; high erosion potential; volcanic, seismic, or flood risks	**FPMU, SPMU, Independent Consultants**
Cultural Property	No known or suspected cultural heritage sites	Suspected cultural heritage sites; known heritage sites in broader area of influence	Known heritage sites in project are	**FPMU, SPMU, Independent Consultants**
Involuntary resettlement	Low population density; dispersed population; legal tenure is elldefined; well-defined water rights	Medium population density; mixed ownership and land tenure; welldefined water rights	Land issues, High population density; major towns and villages; low-income families and/or illegal ownership of land; communal properties; unclear water rights	**FPMU, SPMU, Independent Consultants**

This report is to be kept short and concise.

1. Site Selection:

When considering the location of a sub-project, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They do indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate, or manage potential effects

2. Checklist questions:

Physical data:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*	
Site area in ha		
Extension of or changes to existing alignment		
Any existing property to transfer to sub-project		
Any plans for new construction		

Preliminary Environmental Information:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*	
State the source of information available at this stage (i.e., proponent's report, EIA, or other environmental study)		
Has there been litigation or complaints of any environmental nature directed against the proponent or sub-project?		

Identify type of activities and likely environmental impacts:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
After compiling the above, determine which category the subproject falls under based on the environmental categories High Risk, Substantial Risk, Moderate Risk, and Low Risk.	

Mitigation of Potential Pollution:	*YES*	*NO*
Does the sub-project have the potential to pollute the environment or contravene any environmental laws and regulations?		
Will the sub-project require pesticide use?		
If so, then the proposal must detail the methodology and equipment incorporated in the design to constrain pollution within the laws and regulations and address pesticide use, storage, and handling		
Does the design adequately detail mitigating measures?		

Environmental Assessment Report or environmental studies required:	*Yes/No answers and bullet lists preferred except where*

	descriptive detail is essential.
If screening identifies environmental issues that require an EIA or a study, does the proposal include the EIA or study?	
Indicate the scope and time frame of any outstanding environmental study.	
Required Environmental Monitoring Plan:	
If the screening identifies environmental issues that require long term or intermittent monitoring (e.g., effluent, gaseous discharges, water quality, soil quality, air quality, noise), does the proposal detail adequate monitoring requirements?	

Public participation/information requirements:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
Does the proposal require, under national or local laws, the public to be informed, consulted, or involved?	
Has consultation been completed?	
Indicate the time frame of any outstanding consultation process	

Land and resettlement:	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
What is the likelihood of land purchase for the sub-project?	
How will the proponent go about land purchase?	
What level or type of compensation is planned?	
Who will monitor actual payments?	
Actions:	
List outstanding actions to be cleared before sub-project appraisal	
Approval/rejection	*Yes/No answers and bullet lists preferred except where descriptive detail is essential.*
If proposal is rejected for environmental reasons, should the subproject be reconsidered? What additional data would be required for reconsideration?	

ANNEX V: GENERIC GUIDELINES FOR PREPARING AND IMPLEMENTING A PUBLIC INVOLVEMENT PLAN FOR AN ESIA OR ESMP

The idea of involving the community is not for the sole purpose of finding an answer to a problem, but to also engage the community in the sub-project so that they can share ownership and to give them the opportunity to be part of the design process. Furthermore, community involvement will also give the community the comfort of knowing early on in the process the mechanism through which affected individuals/households will be treated. In developing a strategy for public involvement there are a number of key issues that must be considered:

• Secure commitment to effective implementation
• Define goals clearly
• Plan consultation timing and phasing
• Provide adequate resources
• Be aware of the historical context
• Be aware of site specific sensitivities
• Recognize the interest of developers/operators
• Be prepared to hear different views, including gender related sensitivities.

When planning the process of a public involvement program, the following principles must be followed:

• Identify all stakeholder groups (typically integrated with social assessment)**.** Who will be affected directly and indirectly? Who else might have an interest or feel that they are affected?
• Identify the key issues around which public involvement will be required (scoping).

These key issues would include:

• Environmental and social issues or decisions at stake
• Key organizations and interested parties involved
• Local authorities and the agencies involved
• Size of the issue or importance of the decision
• Urgency and time frame
• Understand the decision making process
• Identification of parties making the decisions
• Where in the project cycle decisions are made

Determine the necessary level of involvement. Meaningful public involvement takes place at three levels:

▪ conveying information to the public
▪ listening to the opinions and preferences of the public
• Involving the public in making decisions

The nature and size of the project, combined with both the nature and number of stakeholders and the status of national legislation, will largely define when, where, and at what level public involvement is required for an EA and the Environmental Management Plan.

• Identify key points to be included in the public involvement process.
• Timely disclosure of information is important and it may be useful to develop systems to ensure that stakeholders receive information on time and in an accessible format. Whilst it is important that consultation take place before major decision points, the aim should be to facilitate consultation throughout the preparation and implementation phases. This implies that consultation will often be

necessary as part of the research effort of the EA and in the development of mitigation measures during the analysis phase of the study.

- Select most effective involvement techniques to be used
- Define a communication methodology
- Develop a budget

ANNEX VI: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN OUTLINE

This annex provides a framework for preparing an Environmental and Social Management plan (ESMP). Where applicable, the contractors for the sub-projects should adopt this ESMP in achieving and demonstrating sound environmental performance.

Benefits of Environmental Management Plan

Establishing an ESMP would be able to help the ACRESAL in ensuring legal compliance and effective implementation of control mechanisms and/or mitigation measures. In addition, the ESMP will also help improve environmental management efficiencies and performance.

ESMP Contents usually are:

1. ***Description of adverse impacts***: The anticipated impacts are identified and summarized.
2. ***Description of Mitigation Measure***: Each measure is described with reference to the effects it is intended to deal with. As needed, detailed plans, designs, equipment description, and operating procedures are described.
3. ***Description of monitoring program***: Monitoring provides information on the occurrence of impacts. It helps identify how well mitigation measures are working, and where better mitigation may be needed. The monitoring program should identify what information will be collected, how, where and how often. It should also indicate at what level of effect there will be a need for further mitigation. How environmental impacts are monitored is discussed below.
4. ***Responsibilities:*** The people, groups, or organizations that will carry out the mitigation and monitoring activities are defined, as well as to whom they report and are responsible. There may be a need to train people to carry out these responsibilities, and to provide them with equipment and supplies.
5. ***Cost Estimates and Source of Funds***: These are specified for the initial sub project investment and for the mitigation and monitoring activities as a sub project is implemented.

ANNEX VII: LIST OF CONTACTED STAKEHOLDERS FOR ESMF

LIST OF STAKEHOLDERS FOR ESMF STUDY IN THE REPRESENTATIVE STATES UNDER ACRESAL PROJECT

The stakeholders below are identified essentially for the purpose of information gathering, inputs and concerns. It's not the exclusive list of the steering committee nor those that have statutory influence on the project.

1 MINISTRY OF ENVIRONMENT
2 MINISTRY OF FINMANCE (STATE)
3 MINISTRY OF AGRICULTURE
4 MINISTRY OF WATER RESOURCES
5 MINISTRY OF WOMEN AFFAIRS AND SOCIAL DEVELOPMENT
6 LOCAL GOVERNMENT AUTHORITY
7 TRADITIONAL INSTITUTION
8 ASSOCIATION OF WOMEN FARMERS
9 WATER USERS ASSOCIATIONS
10 MEYATI ALLAH
11 HERDERS/HERDSMEN
12 LIVESTOCK FARMERS
13 CROP FARMERS
14 PESTICIDE/CHEMICAL/AGRO FEED SELLERS
15 DIARY PRODUCERS
16 ASSOCIATION OF FISHERS
17 RIVER BASIN DEVELOPMENT AUTHORITY
18 DEPARTMENT OF CLIMATE CHANGE

ANNEX VIII: TEMPLATE OF SOCIOECONOMIC/CENSUS DATA FORMS

ONE PASSPORT-SIZE PHOTO OF RESPONDENT REQUIRED

QUESTIONNAIRE NUMBER	

AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) DESERTIFICATION AND WATERSHED REHABILITATION PROJECT

NAME OF COMMUNITY: _____

DATA COLLECTION CONSENT & SURVEY FORM

CONSENT:

We are conducting/preparing an Environmental and Social Impact Assessment (ESIA) for the above project under the Agro-Climatic Resilience in Semi-Arid Landscapes (ACRESAL). The data collected will help to assess the environmental and social effects as well as identify any persons and assets that may be affected by the Desertification and Degraded Landscape rehabilitation project. To enable us achieve this objective, this socioeconomic survey and your voluntary consent for the survey are required.

Respondent Name:_____**Signature:**_____

Gender		**Phone Number(s)**					
Your Village/ Community			**No of years lived in area?:**		**Do you desire to see this project happen?**		
					YES	**NO**	
No. of Persons in Your Household:	**MALE**		**FEMALE**		**Highest Education**	**NS/F/S/UG/G/PG**	
What is your age range?		**0-21 yrs**	**22-45 yrs**	**46-60 yrs**	**61-70 yrs**	**Above 70 yrs**	
Are you married?	**YES**	**NO**	**Your Occupation**				
Household Age Distribution		**0-21 yrs**	**22-45 yrs**	**46-60 yrs**	**61-70 yrs**	**Above 70 yrs**	
Household Educational Distribution	**No School (NS)**	**FSLC (F)**	**SSCE (S)**	**Undergrad (UG)**	**Graduate (G)**	**Post Grad (PG)**	
Household Marital Status:	**Child**	**Single**	**Married**	**Widowed**	**Separated**	**Divorced**	
Household Occupational Distribution:	**Student**	**Farmers**	**Daily Labor**	**Civil Servant**	**Trader/ Business**	**Industrial Worker**	**Unemployed**
Monthly Household Income:	**Below N21,000**	**N21,000-30,000**	**N31,000-45,000**	**N46,000-60,000**	**N60,000-120,000**	**Above N120,000**	
How will this project affect you, your household or your community?		**Improve Movement**	**Increase Land Value**	**Improve Trading**	**Improve Communication**	**Others**	
What was the frequent illness(es) in your family in the past one year?							
Where does your family seek medical treatment from?			**Hospital**	**Pharmacy/ Chemist**	**Native Drugs**	**Self-Medication**	
How far is this facility from your place?			**Walking Distance**	**Upto 2.0km**	**Over 2.0km**	**Outside Community**	
INTERVIEWER: (Full Names)				**PHONE NO.**			

SIGNATURE		DATE:	D:	M:	2018

Household Composition and Personal Information

Household Members	Surname	Other Names	Relationship With H.H	Gender	Age	Disability	Educational Level	Occupation
Head of Household								
Spouse								
Member 1								
Member 2								
Member 3								
Member 4								
Member 5								
Member 6								
Member 7								

Disability = Blind-1; Crippled-2; Mentally Disabled-3; Physically Challenged-4, Other-5
Relationship = Self -1; Wife-2; Son/Daughter-3, Nephew/Niece-4, Son-in-law/Daughter-in-law-5, Grand Child-6, Parent-7, House Help-8, Others-9
Marital Status = Single-1, Married-2, Widow-3, Widower-4, Divorcee-5, Separated-6, Single Parent-7.
Literacy Level = Illiterate-1, Primary School-2, Secondary School-3, Undergraduate-4, Graduate-5, Post Graduate-6, Others-7.
Occupation = Crop Farming-1, Animal Husbandry-2, Service Provider-3, Civil Servant-4, Craftsmanship/Artisanship-5, Trade/Business-6, Industrial Worker-7, Daily Wage Labour-8, Other-9.

WHAT IS LIKELY TO BE AFFECTED BY THE PROJECT?
Structure-1; Land-2; Structure and Land-3; Cash Crop-4; Others-5 (specify)……..
Years of Occupation of Affected Property (if applicable):……Years

STATUS OF PROPERTY USER: A) Title holder; B) Tenant; C) Non-Title Holder; D) Govt; E) Squatter

Affected Structure Details:

Type of Use	Monthly Rent	Utility Connections	Distance to Dam Edge (m)	No of Rooms	Floor Level	Total Area (m2)	Type of Construction		
							Roof	Wall	Floor

Type of Use = Residence-1; Commercial-2; Residential-cum-Commercial-3; Animal Shed/Poultry-4; Other (specify)-5……
Type of Construction: Wall = Mud-1, Thatched-2, Brick-3, Plank-4, Zinc-5; **Roof** = Zinc/Asbestos-1; RCC-2; Thatched-3; Tiles-4
Floor = Cement-1; Mud-2; Tiles-3; **Floor Level** = Bungalow-1, Storey Building-2; **Utility Connection** = Electricity-1; Water-2; Phone-3

AFFECTED LAND DETAILS

SIZE OF AFFECTED LAND……..
TYPE OF LAND……. (Agriculture-1; Residential-2; Commercial-3; Barren-4; Grazing Land-5)
If Agriculture, is land …….. Wet-1; Dry-2; Other-3
Crops grown on land? .....
Immovable assets likely to be affected: Trees……..; Orange…….; Mango…….; Apple……..; Others……
In your view, what is the yearly monetary benefit you gain from the land? .N.....

Questionnaire for RPF and ESMF
Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL)

The ESMF and RPF are prepared before the proposed project is apprised setting out the resettlement and compensation priniciples, organizational arrangments and design criteria to be applied to meet the needs of the peo[le who maybe affected by the project, when project activities are identified. The Environmental and Social Management Plan (ESMP) and Resettlement Action Plan (RAP) are prepared consistent with the provision of the ESMF and RPF, respectively.

Please we humbly request that you respond to the following questions to facilitate the preparation of the ESMF and RPF for Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL).
Thanks for your coperation.

SURVEY INSTRUMENT/CHECKLIST FOR ACReSAL PROJECT

Questions/Probes	Screening Checklist	Sources
Section 1: Perception, Concerns and Understanding of Project		
After background introduction, probe for stakeholders understanding of the project	What is your perception about the project?	MDA, SPMU, Community, CSOs
	What are your expectations from this project?	Community, CSOs
	If this project will result in land acquisition, what will be your concerns?	Community, CSOs
	Do you have other concerns about this project?	Community, CSOs
Section2: Regulations and Policies		
Description of the Legal framework	What are the legislations, policies conventions regulating the operations of agricultural production, management and trade? Probe for/collect data for: • National legislations • State laws • WB/international legislations/treaties	CSOs, SPMU, MDA
Stakeholders, Institutions and capacities	• Probe for exhaustive list of stakeholders and their stakes in this projects • Who are the primary stakeholders (direct beneficiaries/actors) • Who are the secondary stakeholders (indirect beneficiaries and those who have some form of stakes, roles and/or interests) • Probe for the functions of each stakeholder agency • Is there any organogram that shows stakeholder relationship or reporting command within the FMARD? • To what level do these institutions have what they need to function? • What are the main constraints (probe for equipment and material deficiency, funding of research and operations, technical capacity, number of staff/shortage of skill staff, lack of training) • Identify Capacity Needs	CSOs, SPMU, MDA, other stakeholders
Section3: Roles/Functions of Institutions		
	Are Civil Society Groups prominent in this area/State?	Community, SPMU, MDA
	What are the known Civil Society Groups in this State?	Community, SPMU, MDA
	What are the roles Civil Society groups play in land acquisition and compensation matters in this area/state?	Community, SPMU, MDA

Questions/Probes	Screening Checklist	Sources
	Are there local mechanisms for settling land disputes?	Community, CSO
	What roles do the traditional institutions play in land dispute matters?	Community
Section 4: Stakeholder Institutional Roles and Capacity (probe for existence & capacity gap/need)		
State Ministry of Agriculture	probe for existence & capacity gap/need	FPMU, SPMU
Department of Climate Change	probe for existence & capacity gap/need	FPMU, SPMU
Department of Forestry	probe for existence & capacity gap/need	FPMU, SPMU
Ministry/Department of Land & Survey	probe for existence & capacity gap/need	FPMU, SPMU
River Basin Development Authority	probe for existence & capacity gap/need	FPMU, SPMU
Ministry of Environment	probe for existence & capacity gap/need	FPMU, SPMU
Local Government Authority	probe for existence & capacity gap/need	FPMU, SPMU
Department of Livestock	probe for existence & capacity gap/need	FPMU, SPMU
Meyetti-Allah	probe for existence & capacity gap/need	Community, SPMU, CSO
Ministry of Women Affairs and Social Devt.	probe for existence & capacity gap/need	FPMU, SPMU
Section 5: Social Assessment and Socioeconomics		
Categories of potential stakeholder groups identified (probe for others and how ACReSAL will affect each group)	• Herdsmen? • Crop farmers? • Livestock farmers? • Women in farming cooperative? • Association of Water Users? • Agricultural input sellers association? • Association of Physically challenged Farmers • Indicate the major environmental concerns/ problems in the semi-arid region of Nigeria especially in the rural areas • Give brief summary of the problem of desertification in the state and how it is been tacked? • Indicate ongoing projects/programs aimed at the aforementioned problems • Which locations in the state are susceptible to environmental problems (rural or urban locations)	CSO, Community, SPMU, MDA
Land	• Which institution/agency or department handles land acquisition and resettlement matters? • What are the types of livestock rearing/grazing in place? (open grazing, controlled/confined) • What are the types of crops grown? • What is the size of land available for livestock rearing/grazing? (Probe for available land for livestock in the state and in specific clusters) • Is there a need for additional land acquisition under this project (i.e in view of what is planned to achieve) • Will private land or community land be affected? • What is the nature of land ownership in this state/area (expected outcome: inheritance, family land, communal land, Government, leased land, Gift from community leader or right owners • In what ways are land owners legally or formally recognized (expected outcome: Statutory right of occupancy, customary right, community recognition by approval of community head, land documentation	CSOs, SPMU, MDA

Questions/Probes	Screening Checklist	Sources
	agreement, gentleman agreement) • What is the process for land acquisition for small land holding? • What is the process for land acquisition for commercial land holding?	
Major Challenges	• Probe for challenge to land acquisition, land conflicts, • Also probe for major pests and disease vectors, availability or none of veterinary services, early warning and response system to epidemics/disease vectors, etc.	Department of Land Management State Ministry of Land and Survey, Farmers
Right of Women	• Do women have right to land ownership? • Are there any cultural or religious restriction (s) to women ownership/use of land? • Is culture a barrier to women participation in agriculture? • Do women involve in livestock production? • How do women engage in livestock value chain transactions? (expect: as individual holders, as cooperatives) probe for the dominant practice in the project area/state • What is the percentage of women in agricultural production? • Any special preference for women backed up by a known policy? • Do women have equal access as the men in community decision making? • Are women at risk for violence if they attempt to own land or work to secure rights for other women to own land? What kind of violence? Where do women go when they face violence? • Do women have the right to the money they earn? If women start earming money can this cause violence in the home?	CSO, Community, Women group
Vulnerable Groups	• Who are the people/groups that may be worse affected (more than others) by the activities of this project? • Do you have physically disadvantage people as crops or livestock business owners? If yes, what are the major challenges of this group? • How will this project affect them differently?	Women group Physically challenged groups
Impacts of this intervention	• Try to mention the areas of targets of this intervention and probe for the envisaged impacts from the stakeholders. • As follow up question for example: <u>Positive Impacts:</u> o Are there positive impacts expected from the intervention? If yes, list them. <u>Negative Impacts:</u> o Will the project lead to land depletion? o Will it result to farmer-herder clash/conflict o Will it lead to loss of land and other productive assets? o How many people will be affected by physical displacement resulting from this project o How many businesses, shops and people will be affected by this project? o What will be the impacts on youths o What will be the impacts on widows and single parent mothers?	CSOs, Community Livestock farmers; Livestock Associations Crop farmers and Associations
Grievance Redress	• Probe for the structure of conflict resolution at the cluster level, community level and State Ministry of	CSO, Community, Livestock farmers; Crop farmers

Questions/Probes	Screening Checklist	Sources
	Agriculture level (if any) • Has the local Conflict Resolution Mechanism and the GBV GRM been effective in resolving land conflicts and GBV/SEA/SH matters? • Is the existing GRM optimal/efficient? • If sub-optimal, what is/are the challenges? • In what way do the herders rear their cattle to avoid destruction of public crops and assets? • How can the activities of cow encroachment on farms be avoided or controlled	Livestock Associations, Crop Farmers Associations Department of Land Management State Ministry of Land and Survey,
Compensation rate gazette	• Does this state have gazette for payment of compensation for crops, economic trees and land (request for the document) • When was the existing gazette prepared? (Are the rates obsolete or in terms with prevailing economic reality?) • How is land unit measured/recognized in this place (square meter, acre, or hectare? • How much does it cost to acquire a unit of land for lease? • How much does it cost to acquire a unit of land for outright purchase?	Department of Land Management; State Ministry of Agriculture

ANNEX IX: STAKEHOLDERS CONSULTATION MEETINGS IN THE FIVE STATES VISITED

Minutes, Attendance & Photos for Sokoto State

MEETING WITH SOKOTO NEWMAP SPMU
MINUTES OF MEETING HELD AT NEWMAP OFFICE CONFERENCE ROOM ON 25TH JANUARY 2021 AT 8:00 AM

1. **ATTENDANCE:**
   In attendance was Alh Ibrahim Umar the PC Sokoto NEWMAP, all officers of the SPMU and visiting consultants as indicated in the attendance sheet.

2. **AGENDA:**
   i. Current status with necessary NEWMAP officers
   ii. Concerns relating to effectiveness and adaptability from NEWMAP to ACReSAL
   iii. Questions and Answers session

3. **OPENING PRAYERS**
   The Christian and Muslim Prayers were recited by volunteers.

4. **WELCOME ADDRESS BY PC KANO NEWMAP SPMU**
   Ibrahim Umar NEWMAP Sokoto SPMU welcomed all the participants at the meeting; he also introduced all the consultants and their mission in Sokoto state.

5. **INTRODUCTION: ACReSAL –WHAT IS IT ABOUT**
   Dr. Odili Ojukwu gave a general overview of the ACReSAL Project that involves how to increase the adoption of climate resilient landscape management practices and livelihoods in targeted arid/semi-arid watersheds in Northern Nigeria. He mentioned how the project will give emphasis on desertification, drought, flood control and watershed management practice in Northern Nigeria. He gave a general description how some MDAs will be relevant to the project implementation and what are expected of them.

   Each of the visiting Consultants gave a brief on their specific assignments with respect to the project.
   Prof. Abdullahi Namakka spoke on his area of consultancy, which is Animal and Livestock waste Policy Framework; Dr. Usman Ibahim spoke on integrated pest management Policy, Dr. Damilola and Mrs. Mary Bishop on Labour policy issues and GBV, while Prof Agwu Ekwe spoke on the Resettlement Policy Framework, Barr, Ihuoma Igbanigbor spoke on the Stakeholders engagement Policy Framework and Dr. Abdulrahman Umar spoke on the Environmental and Social Management Framework on behalf of Dr, Odili Ojukwu the Lead consultant ESMF.

6. **QUESTIONS/ANSWERS/ COMMENTS/CONTRIBUTIONS**
   i. Ibrahim Umar PC NEWMAP Sokoto SPMU gave the general status of the SPMU with respect to the NEWMAP Project implementation, capacity of their staff and available resources on ground for the project.

He lamented on the delays in approvals from World Bank that hinders the speedy project implementation in NEWMAP and therefore strategies should be in place to resolves such scenarios in ACReSAL for the project to be implemented successfully without unnecessary delays. He ensures the consultants the readiness to support the incoming project in the state.

ii. Each Consultant asked specific questions to their areas of assignment and were adequately and sufficiently responded by the PC and his staff.

7. CLOSING/ADJOURNMENT

The meeting was adjourned by 10:12am
19 participants attended the meeting

MEETING WITH SOKOTO STATE ACRESAL STAKEHOLDERS
MINUTES OF MEETING HELD AT THE DEPUTY GOVERNOR'S CONFERENCE ROOM, CABINET OFFICE, SOKOTO ON 25TH JANUARY 2021 AT 11:00 AM

7. ATTENDANCE:

In attendance were Sagir Attahiru Bafarawa Hon. Commissioner for Environment Sokoto State, Permanent Secretaries, heads of departments, agencies, of all relevant ministries such as Water resources, Agriculture, Land and Housing, Animal Health, Works, Local government and rural development, Finance, CSOs/CBOs/NGOs etc.

8. AGENDA:

iv. Current Projects implementation structures (in contributing MDAs – Environment, Agriculture, Lands and housing, Works, Women Affairs, Water Resources, Animal Health and Livestock, Information, Local government and Rural Development)

v. Applicable Relevant and Appropriate Requirements (ARARs) (particularly for Environment, Agriculture, Land, Water resources and social Issues)

vi. Concerns relating to ACReSAL at two levels among contributing MDAs:
   a) Level I: MDAs Concerns on the project
   b) Level II: Concerns of Communities relating to State/FGN project implementation methods.

9. OPENING PRAYERS

The Christian and Muslim Prayers were recited by volunteers.

10. WELCOME ADDRESS BY HON COMMISSIONER, MIN. OF ENVIRONMENT

Alh. Sagir Attahiru Bafarawa The Hon. Commissioner for Environment Sokoto State welcomed all the participants at the meeting, he also introduced all the

consultants and their mission in Sokoto state. He then asked all the participants to introduce themselves starting with visiting consultants followed by other stakeholders at the meeting.

11. INTRODUCTION: ACReSAL –WHAT IS IT ABOUT

Dr. Odili Ojukwu gave a general overview of the ACReSAL Project that involves how to increase the adoption of climate resilient landscape management practices and livelihoods in targeted arid/semi-arid watersheds in Northern Nigeria. He mentioned how the project will give emphasis on desertification, drought, Flood control and watershed management practice in Northern Nigeria. He gave a general description how some MDAs will be relevant to the project implementation and what are expected of them.

Each of the visiting Consultants gave a brief on their specific assignments with respect to the project.
Prof. Abdullahi Namakka spoke on his area of consultancy, which is Animal and Livestoc Policy Framework; Dr. Usman Ibahim spoke on integrated pest management Policy, Dr. Damilola spoke on the Labour Policy Framework with Mrs. Mary Bishop on Gender issues, while Prof Agwu Ekwe spoke on the Resettlement Policy Framework, Barr, Ihuoma Igbanigbor spoke on the Stakeholders engagement Policy Framework and Dr. Abdulrahman Umar spoke on the Environmental and Social Management Framework on behalf of Dr, Odili Ojukwu the Lead consultant ESMF.

12. QUESTIONS/ANSWERS/ COMMENTS/CONTRIBUTIONS

Mallam Mu'azu Madawaki Permanent Secretary ministry for Environment requested for a guiding template from the Consultants that will guide the respective MDAs on the specific issues and areas of interest by the consultants to be given to the staff of those MDAs for detailed inputs. He also lamented on the delays with approval from World Bank that hinders speedy implementation during the NEWMAP project in the State. He therefore urged the consultants to pass this concern to the appropriate quarters and ensure that, this is not repeated during the ACReSAL project in order to have a successful and speedy project implementation.

Aliyu Tureta Director Animal services Ministry for Agric, Sooto State expressed happiness with the incoming ACReSAL Project as it came at the right time in the right direction considering drought and desertification issues facing the States in Northern Nigeria especially Sokoto State. He called on the consultants to help draw a policy that will curtail and minimize indiscriminate cutting down of trees for firewood purposes as it is the root cause for drought and desertification.
He mentioned some of the activities being currently undertaken under his Ministry like Fadama III Project, USAID projects, IFAD, OCP Africa in the areas of Agro-climatic resilience in the state such as using drought resistant seed varieties, agro support inputs, etc.

PC NEWMAP Sokoto suggested that the discussion should be segmented based on the areas to be covered by each consultant in order to make area-specific inputs. He also reiterated the need to speed up process of approval by the World Bank in order to fast-track project implementation in the State.

The Commissioner for Environment suggested that a template be sent to each of the respective MDAs to guide them to make informed and specific inputs.

Dr. Nasiru from department of Animal health suggested that waste from abattoirs should be captured under animal waste management policy discussion.

Malam Mu'azu from Ministry for Water Resources asked on the specific areas on how ACReSAL project is relevant to his ministry. In response to this question, Dr. Odili Ojukwu responded that all water resources such as Rivers, Dams, Lakes etc that are meant for agricultural purposes such as irrigation, fisheries, etc will be relevant in the project.

Musa Dikko Director Planning and Statistics Ministry for Environment expressed readiness to support the project and how a community sensitization is already ongoing to sensitize people on the use of alternative energy sources in place of firewood.

13. CLOSING:

The meeting was concluded at 1:47pm with closing prayers by volunteers

49 participants attended the meeting.

AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION (SPMU)

STATE: SOKOTO; DATE: JANUARY 25,2020; ASSIGNMENT: ESMF

S/No	NAME	ORGANIZATION	DESIGNATION	EMAIL	PHONE NUMBER	SIGNATURE
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3	Abdullahi Namakka	Consultant	IPMP Project Consultant	[illegible]@gmail.com	08023618304	[signature]
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5	Abubakar Nagwaggo	NEWMAP	ES O	nagwaggo@gmail.com	08086054076	[signature]
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11	Mary Bishop	Consultant	GBV / LMP	[illegible]@gmail.com	09033729543	[signature]
12	Dr. Ihuoma Igbinigbe	Consultant	SEP Consultant	igbanigbor@gmail.com	09071556609	[signature]
13	Prof Agwu E. Agwu	RPF Consultant	RPF Consultant	ekwe.agwu@unn.edu.ng	08034024251	[signature]
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: SOKOTO; DATE: JANUARY 25,2020; ASSIGNMENT: ESMF

ATTENDANCE SHEET

S/No	NAME	ORGANIZATION	DESIGNATION	EMAIL	PHONE NUMBER	SIGNATURE
17.	Umeokafor Chinelo	ESMF Consultant	ESMF Consultant	cutienelo[illegible]@gmail.com	08037739595	[signature]
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: SOKOTO **; DATE:** JANUARY 25,2021 **; ASSIGNMENT:** ESMF

ATTENDANCE SHEET

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1.	Sagir Bafarawa	M.	Min of Env	H/C.	DONBAFS@HOTMAIL.Com	07030000037	
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: Sokoto **; DATE:** JANUARY 25 2021 **; ASSIGNMENT:** ESMF

ATTENDANCE SHEET

S/No	NAME	GENDER	ORGANIZATION	DESIGNATION	EMAIL	PHONE NUMBER	SIGNATURE
15	Dr Damilola Adesina	M	ECOSPHERE Consulting LTD	LMP Consultant	dammyemmy2001@yahoo.com	08068974351	
16	Mary Bishop	F	✓	GBV/LMP	Jaamimary@yahoo.com	07033729543	
17	Dr Usman Ibrahim	M	Consultant	IPMP	ibrusman2007@yahoo.com	08034374967	
18	Prof. Abdullahi Mamasko	M	—	KWMP	nafisat111@gmail.com	08023618304	
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26	Ibrahim Adamu	M	Min. of Information	Permsec	iadamu312@gmail.com	08088042156	
27	Dr. Odu Ojukwu	M	ESMF Consultant	Lead Consultant	oduojukwu@gmail.com	08033386090	
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: SOKOTO ; DATE: JANUARY 25, 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

S/No	NAME	GENDER	ORGANIZATION	DESIGNATION	EMAIL	PHONE NUMBER	SIGNATURE
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30	Kabiru Hassan Wmk	Male	Min of Land & Hou	L/acquisition	[illegible]@gmail.com	08034907249	
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32	Hassan U Hassan	M	MOA	ZAO	hassan[illegible]@gmail	08069574454	
33	Bello A Hali	M	MOA	ABAS	haalibello@gmail	08064023080	
34	Jamilu Mani	M	MOA	[illegible]	jamilumani668@gmail	08066073068	
35	Muh'd Mustapha Bello	M	Livestock Dev.	Deputy Prog. Mng	mustaphabello[illegible]	08032193046	
36	SHEHU MOH'D	M	LIVESTOCK	HEAD EXT	shehum[illegible]	08032176444	
37	Nasiru Lawal M	M	CONNCS	EXC MEMBER	nasirlawal39@gmail.com	08039670580	
38	Bello shehu Gwadabawa	M	CONNS	EXC MEMBER	bsgwadabawa@gmail.com	08035918060	
39	[illegible]	[illegible]	[illegible]	DIR ADMIN	[illegible]	07034151394	
40	Engr. Atiku M. Shagari	M	[illegible]	D.C.E	[illegible]@gmail	08035073079	
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: SOKOTO ; DATE: JANUARY 25, 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

S/No	NAME	GENDER	ORGANIZATION	DESIGNATION	EMAIL	PHONE NUMBER	SIGNATURE
43	Abdullahi Musa Dikko	M	Min for Env.	Sokoto	amusadikko@gmail.com	08036179282	
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46	Mu'azu A Saka	M	AFF. PROG	PM	muazuahmadsaka	0803639508	
47	Abubakar M. Dandadi	M	NEWMAP	PM	abudandadi@gmail.	08030112654	
48	Dr. Shehu Umar	M	UKCW	P.O	nauimya2@gmail.com	08035474161	
49	Ghari Abdullahi	M	MIN. OF ENV	P.R.O	[illegible]	08061568390	

Minutes, Attendance & Photos for Niger State

MEETING WITH NIGER NEWMAP SPMU
MINUTES OF MEETING HELD AT NEWMAP OFFICE CONFERENCE ROOM ON 27TH JANUARY 2021 AT 8:20 AM

VENUE: NEWMAP Office Minna Niger State
DATE: 27TH January 2021
TIME: The meeting started around 8:20 am
ATTENDANCE
Safeguards Consultants and NEWMAP SPMU staff – see attendance for details
AGENDA:

i. Provide General Overview of ACRESAL Project
ii. Seek Challenges from SPMU with NEWMAP Implementation in Niger State
iii. Questions and Answers

OPENING PRAYER
Opening Prayer was said by Mallam Raji S. Adam
WELCOME ADDRESS BY PROJECT COORDINATOR NEWMAP NIGER STATE
The project coordinator (PC) Niger State NEWMAP, Alhaji Usman Garba Ibeto, welcomed the consultants to the meeting. This was followed by the introduction of the NEWMAP SPMU staff in attendance.
OPENING REMARKS/OVERVIEW OF ACRESAL PROJECT
Dr Odili Ojukwu gave a general overview of the ACRESAL project. According to him, NEWMAP is winding up in June and would be replaced by ACRESAL project. ACRESAL project is a way of increasing Agricultural and Climatic resilience in Northern Nigeria with the view of improving food production, reducing global warming, improve livelihood and reduce poverty. He mentioned that 19 States of the Northern Nigeria may benefit from the Project, 5 of these states were selected for initial stakeholders' consultations. The selection criteria were based on accessibility, security, agro cluster and climatic influence. The States selected were Sokoto, Niger, Nasarawa, Gombe and Kano.
He also introduced the Safeguards Consultants that are part of the visit and consultation efforts as follows:
Dr Odili Ojukwu- Environmental and Social Management Framework -
Prof Abdulahi Namakka - Animal Waste Management Plan
Dr Usman Ibrahim - Integrated Pest Management Plan
Prof Agwu Ekwe Agwu - Resettlement Policy Framework
Barr Ihuoma Igbanigbor – Stakeholders Management Plan
Mary Bishop - Gender and Sexual Based Violence
Dr Damilola Adeshina - Labour Management Plan

Dr Odili Ojukwu further encouraged NEWMAP SPMU to state the challenges they may have encountered with NEWMAP implementation in the state. These challenges will be taken into consideration and addressed in the development of the safeguards instruments associated with the ACRESAL project.
In his response Alhaji Usman Garba Ibeto, Niger State NEWMAP Project Coordinator stated challenges the State faced regarding their operations in the State as follows:

1. Delays in clearance and no objection from World Bank in the areas of designs

2. Need for support staff
3. Non provision and attendance of training of NEWMAP staff [capacity building/institutional training]. Training should be both general and based on area of specialization.
4. Review/performance allowance for NEWMAP staff
5. Interference from Government officials especially in the areas of staff recruitment

INPUTS FROM OTHER CONSULTANTS

Each of the other consultants mentioned what they would require to know from NEWMAP staff and other Stakeholders in the State as follows:

Prof Abdulahi Namakka - *Integrated Pest Management Plan,* requires information regarding trainings on IPMP Legislations and IPMP from Ministries of Agric and Health

Dr Usman Ibrahim - *Animal Waste Management Plan*. Needs information on General pests of livestocks, vet diseases prevalent in Niger state, management of pests and vet diseases, prevention/control, conventional control and local control methods, effects of control methods on the environment – air, land, water, capacity building.

Prof Agwu Ekwe Agwu- *Resettlement Policy Framework*: He wants information on laws, compensation, economic trees, land use, right to land, land acquisition, handling resettlement issues, land conflicts, rights of women, farmer-herder issues, vulnerable group, policies/legal frame work, security challenges and effects in the State

Barr Ihuoma Igbinigbor – *Stakeholders Management Plan*. She emphasized on consultation and engagement with stakeholders, and requires information on grievance redress mechanisms, challenges faced, resolved

Mary Bishop - *Gender and Sexual Based Violence*. She wants data on Law/ penalties for gender based violence

Dr Damilola Adeshina - *Labour Management Plan*. He wants information on Recruitment procedure and labour laws in the State.

RESPONSES

Dr Odili Ojukwu further solicited for the support of NEWMAP SPMU staff so as to get all the information required by the consultants for robust safeguards reports. He further stated that all the issues raised by the PC and other NEWMAP SMPU staff will be considered accordingly and appropriately to avoid a repeat on the ACRESAL Project.

Alhaji Usman Garba Ibeto also promised to support the consultants by ensuring the documents and information required for their complete reports from appropriate quarters are obtained within 24 hours

CLOSING:

The meeting ended at 9:45 am, with a closing prayer offered by Miss Chinelo Umeckafor

MEETING WITH MINNA STATE ACRESAL STAKEHOLDERS
MINUTES OF MEETING HELD AT THE LEGBO KUTIGI CONFERENCE ROOM, MINNA ON 27TH JANUARY 2021 AT 10:15 AM

DATE: 27TH January 2021
VENUE: LEGBO KUTIGI CONFERENCE ROOM
DATE: 27th January 2021
TIME: The meeting started at 10:15 am
ATTENDANCE
Please see attendance list for details
AGENDA:

i. Presentation of General Overview of ACRESAL Project
ii. Seek Information from Stakeholders on Possible Project Impacts, Challenges and Constraints with ACRESAL Project Implementation in Niger State
iii. Questions and Answers

OPENING PRAYER
Opening Prayer was said by Miss Chinelo Umeokafor
MODERATOR: Mallam Raji S. Adam
WELCOME ADDRESS
The Permanent Secretary of the Ministry of Environment and Forestry (Engineer Lucky Shekonago) representing the Commissioner of Environment welcomed the Safeguards Consultants and all the Stakeholders present.
CONSULTANT REMARKS
Dr Odili Ojukwu gave an overview of the ACRESAL project. He stated that ACRESAL is a new project being considered for Northern States and designed as an extension of NEWMAP. It is a community-based project that will change socioeconomic position of project States, standard of living and overall wellbeing of the project communities. He added that the Project will address desertification and remedying of the degraded landscapes in participating States, as well as improve the quality of lives and reduce poverty. It is a multi-sectorial projects and will ensure sustainability by engaging the community/grass root for ownership. He stated that safeguards clearance is essential by World Bank before a new project is approved. Thus, before engaging in any project, the issues affecting the environment and the people must be effectively.
Dr Odili Ojukwu therefore stated that the essence of the meeting was to explain the ACRESAL project to the stakeholders and solicit their feedback on how the project can affect them, ask questions concerning impacts, and any feedback is welcomed
INPUTS FROM ATTENDEES
Permanent Secretary Ministry of Finance (Alhaji Akilu) asked if the Proposed project is a Grant or Credit for the State and what is the expected counterpart contribution.
He also advised that the Project should involve Traditional Council and people living with disabilities
Andrew Jagaba: Promised to provide support in term of enactment of laws pertaining to the Environment
Alhassan Umar Ministry of Agriculture and Rural Development said Ministry of Livestock should be involved. He stated that there are laws addressing agrochemicals, policies, on water, land and air management and would be made available to the consultants.

Yahaya Suleiman: Head of Service said Erosion issues is widespread in the State especially in Zungeru as a result of Hydro Dam construction Project. He promised to provide support regarding data relating to Labour Procedure management plan and the supply of labour needed.

Aminu Liman of Civil Service Commission made a commitment to give information regarding Labour engagement in the State

Mrs Hasana Harba from ADP is concerned with deforestation. She stated that provision of alternative energy source in the State will address deforestation

Mr Oliver: Involvement of Department of Climate change as a distinct sector in ACRESAL Project and climate change person in SPMU

Mr Philemon Danladi from Ministry of Water Resources

Address unemployment to stop illegal mining, establishment of institution to educate farmers on waste disposal regulations, regulate the use of water and drilling of borehole

Perm Sec Ministry of Environment and Forestry (Engineer Lucky Shekonago):

The use of Domestic Renewable Energy Technology.

Adisa Musa Women leader

She said women and children need to be carried along in the project

Suleiman Yahaya from Head of Service:

Advised the Project Consultant to work with structure already in place for effectiveness. He added that the community should participate in the program actively both also in terms of man power and provision of technical assistance.

Alhaji Suleiman Garba Ibeto PC, NEWMAP

Avoid duplication of projects during implementation

Clearly spell our schedules of duty for climate change officer and national resources officer

Adamu Garba Ministry of Agriculture

He said there are existing structure in Ministry regarding farmers group and include REVAMP, SUFON, Women in Agriculture. He also stated that Project desk officer are already in place for high value commodity crops e.g. rice, cashew

Eng Adamu Athama State ministry of water resources

Corporate management, sewage management, provision of PPE, synergy between ministry and community, water sanitation and hygiene development new policies to check policies and leakages

Isa Mohammed HOD Environmental and climate change

He advised on the provision of rural electrification project to improve the livelihood of the community, development of renewable energy, afforestation programs, alternative source of energy to discourage deforestation. management of animal waste and emission of methane to reduce GHG.

Mohammed Abdulkabir Shaaba Niger State Planning Commission

Planning commission can mainstream the project by developing policy documents and make available to the consultants

Jubril – Land and Housing: Resettlement Policy Framework

Promised to offer support for information relating to land acquisition, and rates of compensation, and site selection

RESPONSES TO THE INPUTS:

In his response, Dr Odili Ojukwu said 700 million dollar funding is proposed for the project by the World Bank. Negotiations regarding costs are still expected between the World Bank, the Federal Government and the States. Additionally, States qualification for the project will include the following:

1. The State must set aside one million dollars for the project

2. The State must prepare a commitment plan in the things they need to do as the project proceeds
3. State must commit to a resettlement action plan – compensation and grievance redress mechanism

He also appreciated the suggestions from the stakeholders and also promised to include their suggestions in the report by the consultants.

CLOSING

The meeting closed at 1:15 pm with a closing prayer by a volunteer.

AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION (SPMU)

STATE: NIGER ; DATE: JANUARY 27, 2021; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: NIGER ; DATE: 27 JANUARY 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

S/No	NAME	GENDER	ORGANIZATION	DESIGNATION	EMAIL	PHONE NUMBER	SIGNATURE
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: NIGER ; DATE: JANUARY 27 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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1	Engr Lucky S. Barau	M	MoEnv & Forestry	Perm Sec	l.s.barau@yahoo.co.uk	08035870540	
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12	Dr. Oluwafemi Oyewole	M	ESMF FUT Minna	ESMF	oyewolefemi@gmail.com	08140031875	
13	Prof A.E. Agwu	M	UNN	RPF Consultant	ekene.agwu@unn.edu.ng	08034624251	
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: NIGER **; DATE:** JANUARY 27, 2021 **; ASSIGNMENT:** ESMF

ATTENDANCE SHEET

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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: NIGER **; DATE:** JANUARY 27, 2021 **; ASSIGNMENT:** ESMF

ATTENDANCE SHEET

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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: NIGER ; DATE: JANUARY 27, 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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47	Maimuna Adamu	F	A-YEAID	Volunteer		07036634913	[illegible]
48	Lucatu [illegible]	F	A-YEAID	Volunteer		08063544550	
49	Yahaya Ndayako M.	M	Ministry of Environment	Director	[illegible]	08038950082	[illegible]
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: NIGER ; DATE: JANUARY 27, 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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Minutes, Attendance & Photos for Nasarawa State

MEETING WITH NASARAWA NEWMAP SPMU
MINUTES OF MEETING HELD AT TA'AL CONFERENCE HOTEL, LAFIA
ON 29TH JANUARY 2021 AT 7:40 AM

VENUE: TA'AL Conference Hotel, Lafia, Nasarawa State
DATE: 29 January, 2021
TIME: The meeting started 7:40 am
ATTENDANCE
Safeguards Consultants and NEWMAP SPMU staff – see attendance for details
AGENDA:

iv. Provide General Overview of ACRESAL Project
v. Seek Challenges from SPMU with NEWMAP Implementation in Nasarawa State
vi. Questions and Answers

WELCOME ADDRESS BY PROJECT COORDINATOR NEWMAP NASARAWA STATE

The project coordinator (PC) Nasarawa State NEWMAP, Mr Kwakaha Johnathan, welcomed the consultants to the meeting. The NEWMAP SPMU staff and the consultants were given the opportunity to introduce themselves.
The following ACRESAL consultants were in attendance:

Dr Odili Ojukwu - Environmental and Social Management Framework
Prof Abdulahi Namakka- Animal Waste Management Plan
Dr Usman Ibrahim - Integrated Pest Management Plan
Prof Agwu - Resettlement Policy Framework
Barr Ihuoma Igbinigbor – Stakeholders Management Plan
Mary Bishop - Gender and Sexual Based Violence
Dr Damilola Adeshina - Labour Management Plan

OPENING REMARKS/OVERVIEW OF ACRESAL PROJECT

Dr Odili Ojukwu gave an overview of the ACRESAL project. In his remark, Dr Ojukwu stated that NEWMAP winds down in June and will be replaced by ACRESAL. The NEWMAP structure at both the federal and state levels (FPMU and SPMU) will be retained for ACRESAL project. Hopefully, Nasarawa and other 18 States will be a recipient of ACRESAL projects. The meetings with the SPMU and stakeholder's engagement are being held so as to have a solid framework for safeguards compilation. The target audience for the consultation engagement are the decision makers in the State. Dr Ojukwu also emphasized the need for SPMU staff to indicate areas of challenges with NEWMAP implementation so as to prevent a carry over to the ACRESAL Project.
Each of the consultant was given the opportunity to state what they require from NEWMAP SPMU staff in order to get an all-encompassing and robust report.

REMARKS BY PC NEWMAP NASARAWA STATE

In his response, the PC (Mr Kwakaha Johnathan) noted that Climatic change has affected the North generally. Therefore, the North will benefit immensely from ACRESAL project. Furthermore, he mentioned some hiccups they experienced with NEWMAP, which include:

1. Delay in Bank (No objections) approval of engineering designs.
2. Accommodation problem
3. Latent issues regarding political interference
4. No prompt response from Bank to mails, and recruitment advise,
5. Poor allowances
6. Understaffing
7. No time frame for work to be executed. Activities should be time based

Dr Damilola Adeshina asked the PC what projects they might consider if ACRESAL is approved for the state.
The PC stated that if ACRESAL is approved, they might consider the following projects:

1. Watershed management Project
2. Development of supplements for ruminant animal and other livestock
3. Development of organic fertilizers and crop resistant seeds
4. Provision of Transportation – tricycles for the community
5. Sensitization on trees planting

Dr Degree Umar noted that

1. The use of FONGO has helped in project management and improved management expectations
2. No case of GBV/GRM has been reported

Mrs Sa'adatu Akwe added that

1. M&E baseline survey consultant was engaged, draft report was submitted
2. Community members of the affected sites were well sensitized and cooperating

Jibrin Mairiga emphasized that

1. Leadership in the state should be trained on the workings of the project regarding principles of DUE PROCESS …While

Bartholomew B. Odeh (SLO) said

1. the social and livelihood activities is in progress and there are mutual undertakings between focal NGO and the affected communities through sensitization and mobilization for awareness on the project implementation.
2. On the case of GBV and GRM no such case for now because of the activities of FONGO in the communities
3. The focal NGO are performing their roles as expected by liaising and reporting to SLO by updating their activities to SPMU.

CLOSING REMARKS
In his response, Dr Odili Ojukwu noted that the issues raised will be properly addressed. He also thanked everyone for their contributions
The PC promised to support the consultant to get all the information and documents needed for their report
CLOSING:
The meeting ended around 8:45 am

AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION (SPMU)

STATE: NASARAWA ; DATE: JANUARY 29 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

S/No	NAME	GENDER	ORGANIZATION	DESIGNATION	EMAIL	PHONE NUMBER	SIGNATURE
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: NASARAWA ; DATE: JANUARY 29, 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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18	Dr Odili Ojukwu	M	ESMF Consultant	Principal Consultant	odili.ojukwu@gmail.com	08033380090	
19	Umeokafor Chinelo	F	ESMF Consultant	Project Scientist	cutienelo[illegible]@gmail.com	08037739595	
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: NASARAWA ; DATE: JANUARY 29, 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

S/No	NAME	GENDER	ORGANIZATION	DESIGNATION	EMAIL	PHONE NUMBER	SIGNATURE
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13	Salih Ahmad [illegible], PhD	M	[illegible]	NLYD	[illegible]	[illegible]	[signature]
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: NASARAWA ; DATE: JANUARY 29, 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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19	Prof. Abdullahi Namakka	M	VMWMP Cent	Consultant	nafisat111@gmail.com	08023618304	[signature]
20	Prof. M.A. Mahadi	M	PMP / VMWMP	Consultant	[illegible]@gmail.com	08037009728	[signature]
21	Jafan Y. Eko	M	NAS. NEWMAP	Proj Accountant	[illegible]@yahoo.com	08036553012	[signature]
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: NASARAWA ; DATE: JANUARY 29, 2021; ASSIGNMENT: ESMF

ATTENDANCE SHEET

S/No	NAME	GENDER	ORGANIZATION	DESIGNATION	EMAIL	PHONE NUMBER	SIGNATURE
29	Umar Bashir Moh'd	M	Fishermen Cooperative	State Chairman	bashirumar645@gmail.com	07061618055	[illegible]
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37	Musa Ibrahim A	M	ME&NR	HOC			[illegible]
38	Umeokafor Chinelo	F	ESMF Consultant	Senior Project Scientist	cutienelo4all@gmail.com	08037739595	[illegible]

Minutes, Attendance & Photos for Kano State

MEETING WITH KANO NEWMAP SPMU
MINUTES OF MEETING HELD AT NEWMAP OFFICE CONFERENCE ROOM
ON 1ST FEBRUARY 2021 AT 8:00 AM

14. ATTENDANCE:

In attendance was Alh Ahmad Shuaibu the PC Kano NEWMAP, all officers of the SPMU and visiting Consultants as indicated in the attendance of the meeting.

15. AGENDA:

vii. Current status with necessary NEWMAP officers
viii. Concerns relating to effectiveness and adaptability from NEWMAP to ACReSAL
ix. Questions and Answers session

16. OPENING PRAYERS

The Christian and Muslim Prayers were recited by volunteers.

17. WELCOME ADDRESS BY PC KANO NEWMAP SPMU

Alhaji Ahmad Shu'aibu NEWMAP Kano SPMU welcomed all the participants at the meeting; he also introduced all the consultants and their mission in Kano state. He then asked all the participants to introduce themselves starting with visiting consultants followed by other stakeholders at the meeting.

18. INTRODUCTION: ACReSAL –WHAT IS IT ABOUT

Dr. Odili Ojukwu gave a general overview of the ACReSAL Project that involves how to increase the adoption of climate resilient landscape management practices and livelihoods in targeted arid/semi-arid watersheds in Northern Nigeria. He mentioned how the project will give emphasis on desertification, drought, flood control and watershed management practice in Northern Nigeria. He gave a general description how some MDAs will be relevant to the project implementation and what are expected of them.

Each of the visiting Consultants gave a brief on their specific assignments with respect to the project.
Prof. Abdullahi Namakka spoke on his area of consultancy, which is Animal and Livestock waste Policy Framework; Dr. Usman Ibahim spoke on integrated pest management Policy, Mrs. Mary Bishop on Labour policy issues and GBV, while Prof Agwu Ekwe spoke on the Resettlement Policy Framework, Barr, Ihuoma Igbanigbor spoke on the Stakeholders engagement Policy Framework and Dr. Abdulrahman Umar spoke on the Environmental and Social Management Framework on behalf of Dr, Odili Ojukwu the Lead consultant ESMF.

19. QUESTIONS/ANSWERS/ COMMENTS/CONTRIBUTIONS

iii. Alh. Shuaibu PC NEWMAP Kano SPMU gave the general status of Kano SPMU with respect to the NEWMAP Project implementation, their staff and available resources on ground for the project. He lamented on the delays in approvals from World Bank that hinders the

speedy project implementation in NEWMAP and therefore strategies should be in place to resolves such scenarios in ACReSAL for the project to be implemented successfully without unnecessary delays.

iv. Malam Mukhtar the Environmental Safeguards officer reiterated the need to design mechanisms that will ensure speedy project implementation in ACReSAL to avoid the hiccups with approvals from WB that were experienced in NEWMAP.

v. Salisu Muhammad Procurement Officer also called on the consultant to ensure policy documents to be developed captured procurement issues that will speed up project implementation and addressed issues of funding in basket for all participating states to grab by WB instead in an envelope allocated exclusively for each participating state.

vi. Ms Zainab Ja'afar Baba Livelihood Officer of the SPMU called on the consultants to ensure they addressed challenges experienced in the implementation of NEWMAP project to avoid reoccurrence in ACReSAL project.

vii. Engr. Buhari the Project engineer for the Kano SPMU called on the consultants to address issues of unnecessary delays of approval from the World Bank.

20. CLOSING:

The meeting was concluded at 10:50am with closing prayers by volunteers
19 participants attended the meeting

MEETING WITH KANO STATE ACRESAL STAKEHOLDERS
MINUTES OF MEETING HELD AT TEN-BY-TEN RESTAURANT CONFERENCE ROOM, KANO ON 1ST FEBRUARY 2021 AT 11:00 AM

1. **ATTENDANCE:**

   In attendance were Dr. Kabiru Ibrahim Getso Hon. Commissioner for Environment Kano State, Malama Zahra'u Umar Hon Commissioner for Women Affairs, Permanent Secretaries, heads of departments, agencies, of all relevant ministries such as Water resources, Agriculture, Land and Housing, Animal Health, Works, Local government and rural development, Finance, CSOs/CBOs/NGOs, visiting consultants etc.

2. **AGENDA:**

   x. Current Projects implementation structures (in contributing MDAs – Environment, Agriculture, Lands and housing, Works, Women Affairs, Water Resources, Animal Health and Livestock, Information, Local government and Rural Development)

   xi. Applicable Relevant and Appropriate Requirements (ARARs) (particularly for Environment, Agriculture, Land, Water resources and social Issues)

   xii. Concerns relating to ACReSAL at two levels among contributing MDAs:

   c) Level I: MDAs Concerns on the project
   d) Level II: Concerns of Communities relating to State/FGN project implementation methods.

3. **OPENING PRAYERS**

   The Christian and Muslim Prayers were recited by volunteers.

4. **WELCOME ADDRESS BY HON COMMISSIONER, MIN. OF ENVIRONMENT**

   Dr. Kabiru Ibrahim Getso Hon. Commissioner for Environment Kano State welcomed all the participants at the meeting; he also introduced all the consultants and their mission in Kano state. He then asked all the participants to introduce themselves starting with visiting consultants followed by other stakeholders at the meeting.

5. **INTRODUCTION: ACReSAL –WHAT IS IT ABOUT**

   Dr. Odili Ojukwu gave a general overview of the ACReSAL Project that involves how to increase the adoption of climate resilient landscape management practices and livelihoods in targeted arid/semi-arid watersheds in Northern Nigeria. He mentioned how the project will give emphasis on desertification, drought, flood control and watershed management practice in Northern Nigeria. He gave a general description how some MDAs will be relevant to the project implementation and what are expected of them.

   Each of the visiting Consultants gave a brief on their specific assignments with respect to the project.

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6. QUESTIONS/ANSWERS/ COMMENTS/CONTRIBUTIONS

i. Permanent secretary Ministry of Agric kano state expressed his happiness on the incoming ACReSAL project especially to Kano State considering the desert encroachment faced by some parts of Kano State. He urged the consultants to do a thorough job that will ensure policy issues peculiar to Kano state are not left out in the draft of the ACReSAL project.

ii. Malam Sani Abdu Director Land matters enquired if the project will involve land acquisition? Prof. Agwu responded that it will that's why he was there to ensure Kano state extant laws and policies with respect to land acquisition are reviewed in order to come up with a holistic and most suitable draft document with respect resettlement issues in the project. He therefore assured the consulting team the readiness to support the exercise by making all relevant land acquisition laws and policies in the state available to the consultants.

iii. Abba Adamu Takai Director Pollution control, Kano state Ministry for Environment assured the consulting team their readiness to support the project by providing all relevant documents available in his ministry, like the draft Kano State Environmental Pollution and control Law, etc.

iv. Dr. Saleh Garba Ahmad Director Planning and Monitoring Ministry of Environment assured the consultants his department readiness to provide all necessary support for the success of the exercise.

v. Commissioner for Environment spoke on the need to addressed the challenges of delay with approvals with world Bank projects like NEWMAP that hinders speedy project implementation.

7. CLOSING:

The meeting was concluded at 1:50pm with closing prayers by volunteers

43 participants attended the meeting.

AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION (SPMU)

STATE: KANO ; DATE: FEBRUARY 01, 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION (SPMU)

STATE: KANO ; DATE: FEBRUARY 01, 2021; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: KANO ; DATE: FEBRUARY 01, 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: KANO ; DATE: FEBRUARY 01, 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: KANO **; DATE:** FEBRUARY 01,2021 **; ASSIGNMENT:** ESMF

ATTENDANCE SHEET

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33	Dr Zahrau Muhd	F	M of Wom Affairs	Commissioner	zahramuhammad umar @gmail	08060208190	[signature]
34	Umeokafor Chinelo	F	ESMF Consultant	Senior Project Scientist	cutrenelo4all @gmail.com	08037739595	[signature]
35	Adamu Chiroma	M	Min. of Water Res.	Director Irrigation	-	08084881798	[signature]
36	Ahmad A. Dorayi	M	KNARDA	D' D. HRD	ahmaddorayi@yahoo.com	08037875147	[signature]

Minutes, Attendance & Photos for Gombe State

MEETING WITH GOMBE NEWMAP SPMU
MINUTES OF MEETING HELD AT MAIDUGU PALACE BANQUET HALL, GOMBE ON 5TH FEBRUARY 2021 AT 8:30 AM

VENUE: MAIDUGU PALACE BANQUET HALL, Gombe State.
DATE: 5TH February 2021
TIME: The meeting started around 8:30 am
ATTENDANCE
Safeguards Consultants and NEWMAP SPMU staff – see attendance for details
AGENDA:

i. Provide General Overview of ACRESAL Project
ii. Seek Challenges from SPMU with NEWMAP Implementation in Gombe State
iii. Questions and Answers

OPENING PRAYER
Opening Prayer was said by Professor Mohammed Abdullahi
WELCOME ADDRESS BY PROJECT COORDINATOR NEWMAP IN GOMBE STATE
The Project Coordinator (PC) Gombe State NEWMAP, Engr. Mohammed Garba, welcomed the consultants to the meeting. This was followed by the introduction of the NEWMAP SPMU staff in attendance.
OPENING REMARKS/OVERVIEW OF ACRESAL PROJECT
Dr Odili Ojukwu gave a general overview of the ACRESAL project. According to him, NEWMAP is winding up in June and would be replaced by ACRESAL project. ACRESAL project is a way of increasing Agricultural and Climatic resilience in Northern Nigeria with the view of improving food production, reducing global warming, improve livelihood and reduce poverty. He mentioned that 19 States of the Northern Nigeria will benefit from the Project, 5 of these states were selected for initial stakeholders' consultations. The selection criteria were based on accessibility, security, agro cluster and climatic influence. The States selected were Sokoto, Niger, Nasarawa, Gombe and Kano.
He also introduced the Safeguards Consultants that are part of the visit and consultation efforts as follows:
Dr Odili Ojukwu- Environmental and Social Management Framework -
Prof Abdulahi Namakka - Animal Waste Management Plan
Dr Usman Ibrahim - Integrated Pest Management Plan
Prof Agwu Ekwe Agwu - Resettlement Policy Framework
Barr Ihuoma Igbanigbor – Stakeholders Management Plan
Mary Bishop - Gender and Sexual Based Violence
Sarah Aloma- Labour Management Plan

Dr Odili Ojukwu further encouraged NEWMAP SPMU to state the challenges they may have encountered with NEWMAP implementation in the state. These challenges will be taken into consideration and addressed in the development of the safeguards instruments associated with the ACRESAL project.
In his response Engr. Mohammed Garba, Gombe State NEWMAP Project Coordinator stated challenges the State faced regarding their operations in the State as follows:

1. Delays in clearance and no objection from World Bank in the areas of designs
2. Need for support staff
3. Non provision and attendance of training of NEWMAP staff [capacity building/institutional training]. Training should be both general and based on area of specialization.
4. Review/performance allowance for NEWMAP staff
5. Interference from Government officials especially in the areas of staff recruitment

INPUTS FROM OTHER CONSULTANTS
Each of the other consultants mentioned what they would require to know from NEWMAP staff and other Stakeholders in the State as follows:
Dr Usman Ibrahim - *Integrated Pest Management Plan,* requires information regarding trainings on IPMP Legislations and IPM Laws and Reguations from Ministries of Agric and Health
Prof Abdulahi Namakka - *Animal Waste Management Plan*. Needs information on General pests of livestocks, Pests and Diseases prevalent in Gombe state, management of pests and vet diseases,

prevention/control, conventional control and local control methods, effects of control methods on the environment – air, land, water, capacity building.

Prof Agwu Ekwe Agwu- *Resettlement Policy Framework*: He wants information on laws, compensation, economic trees, land use, right to land, land acquisition, handling resettlement issues, land conflicts, rights of women, farmer-herder issues, vulnerable group, policies/legal frame work, security challenges and effects in the State

Barr Ihuoma Igbinigbor – *Stakeholders Management Plan*. She emphasized on consultation and engagement with stakeholders, and requires information on Grievance Redress Mechanisms (GRM), challenges faced, resolved

Mary Bishop - *Gender and Sexual Based Violence*. She wants data on Law/ penalties for gender based violence

Sarah Aloma - *Labour Management Plan*. He wants information on Recruitment procedure and labour laws in the State.

RESPONSES

Dr Odili Ojukwu further solicited for the support of NEWMAP SPMU staff so as to get all the information required by the consultants for robust safeguards reports. He further stated that all the issues raised by the PC and other NEWMAP SMPU staff will be considered accordingly and appropriately to avoid a repeat on the ACRESAL Project.

Engr. Mohammed Garba also promised to support the consultants by ensuring the documents and information required for their complete reports from appropriate Ministries are obtained within 24 hours

CLOSING:

The meeting ended at 9:15 am.

MEETING WITH GOMBE STATE ACRESAL STAKEHOLDERS
MINUTES OF MEETING HELD AT THE MAIDUGU PALACE BANQUET HALL, GOMBE ON 5TH FEBRUARY 2021 AT 9.45 AM

DATE: 5TH January 2021
VENUE: MAIDUGU PALACE BANQUET HALL,Gombe State.
DATE: 5th February 2021
TIME: The meeting started at 9:45 am
ATTENDANCE
Please see attendance list for details
AGENDA:

i. Presentation of General Overview of ACRESAL Project
ii. Seek Information from Stakeholders on Possible Project Impacts, Challenges and Constraints with ACRESAL Project Implementation in Gombe State
iii. Questions and Answers

OPENING PRAYER
Opening Prayer was said by Alhaji Suleiman Abdullahi
MODERATOR: Mr Joseph
WELCOME ADDRESS
The Commissioner of Environment (Dr Hussaina Danjuma Goje) welcomed the Safeguards Consultants and all the Stakeholders present.
CONSULTANT REMARKS
Dr Odili Ojukwu gave an overview of the ACRESAL project. He stated that ACRESAL is a new project being considered for Northern States and designed as an extension of NEWMAP. It is a community-based project that will change socioeconomic position of project States, standard of living and overall wellbeing of the project communities. He added that the Project will address desertification and remedying of the degraded landscapes in participating States, as well as improve the quality of lives and reduce poverty. It is a multi-sectorial project and will ensure sustainability by engaging the community/grass root for ownership. He stated that safeguards clearance is essential by World Bank before a new project is approved. Thus, before engaging in any project, the issues affecting the environment and the people must be effectively considered.
Dr Odili Ojukwu therefore stated that the essence of the meeting was to explain the ACRESAL project to the stakeholders and solicit their feedback on how the project can affect them, ask questions concerning impacts, and any feedback is welcomed
INPUTS FROM ATTENDEES
Commissioner of Environment (Dr Hussaina Danjuma Goje) asked if the Proposed project is a Grant or Credit for the State and what is the expected counterpart contribution.
She also wants to know how the NEWMAP and ACRESAL project will be incorporated and the areas ACRESAL is looking at.
Barrister Obel Yaji: pleaded for more time in order to provide required information and documents that were required by the Consultants concerning the Agricultural Sector
Aminu Babayo: wants to know if there would be any documents distributed to the stakeholders to enable them go through them, so as to provide necessary information.

Jidda David: wants to know if the project will enhance the fish farmers being a sector in the Ministry of Agriculture, to aid the fish farmers in the labour market.
Bima S. Umar: asked if there's any component that has to do with alternative source of energy.
Mohammed Dantata: suggested if women groups and some corperatives can be empower with a skill, like the production of charcoal from the rural areas, so as to reduce forest desertification.

RESPONSES TO THE INPUTS:

In his response, Dr Odili Ojukwu said 700 million dollar funding is proposed for the project by the World Bank. Negotiations regarding costs are still expected between the World Bank, the Federal Government and the States. Additionally, States qualification for the project will include the following:

1. The State must set aside one Million dollars for the project
2. The State must prepare a commitment plan in the things they need to do as the project proceeds
3. State must commit to a resettlement action plan – compensation and grievance redress mechanism

He also appreciated the suggestions from the stakeholders and also promised to include their suggestions in the report by the consultants.

CLOSING

The meeting closed at 12:30 pm with a closing prayer.

AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: GOMBE ; DATE: FEBRUARY 05, 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: GOMBE ; DATE: FEBRUARY 05, 2021 ; ASSIGNMENT: ESMF

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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION (SPMU)

STATE: GOMBE ; DATE: FEBRUARY 05 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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AGRO-CLIMATIC RESILIENCE IN SEMI-ARID LANDSCAPES (ACRESAL) PROJECT
STATES STAKEHOLDERS' CONSULTATION

STATE: GOMBE ; DATE: FEBRUARY 05 2021 ; ASSIGNMENT: ESMF

ATTENDANCE SHEET

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ANNEX X: PLANT LISTING FROM VEGETATIVE STUDY

Typical Plant Species found within ACRESAL Project Area

S/N	Species	Family	Life Form	Common Name	Local Name	Distribution
1	Balanites aegyptiaca	Zygophyllalleae	Herb	Desert date	Ádúúwàà	Common
2	Celtis australis	Cannabaceae	Tree	Nettle tree	Cuwo	Common
3	Azadirachta indica	Meliaceae	Tree	Neem tree	Gadina/ dogo yaro	Most
4	Ziziphus mauritiana	Rhamnaceae	Tree	Gujube tree	Magarya/ Samo	Common
5	Ficus sur	Moraceae	Tree	Cape fig	Hagucuwa /Haguguwa	Rare
6	Lavandula spp	Convolvulaceae	Tree	Lavender flower plant	Yaryadii	Common
7	Acacia nilotica	Mimosaceae	Tree	Thorn Mimosa	Bagaruwa	Common
8	Aristolochia albida	Aristolochoidea	Herb	kurtu	Kadacin	Common
9	Senna occidentalis	Fabaceae	Shrub	Coffee senna	Sàngáásàngàà	Common
10	Maerua crassifolia	Capparaceae	Tree	Maerruwa plant	Jirga	Rare
11	Crotalaria sp	Fabaceae	Shrub	Pattlepods	Jar bii raana	Common
12	Alchornea cordifolia	Euphorbiaceae	Herb	Chrsitmas bush	Bambami	Common
13	Elatine spp	Elatinaceae	Herb	Waterwort plant	Jishiya	Rare
14	Mitracarpus hirtus	Rubiaceae	Grass	Button grass	Yar wati	Common
15	Mimosa pudica	Fabaceae	Herb	Sensitive plant	Dankunya	Common
16	Guiera senegalensis	Combretaceae	Herb	Moshi medicine	Sàábáràà	Common
17	Ceratotheca sesamoldes	Pedaliaceae	Herb	False sesame	Yando	Rare
18	Vachellia nilotica	Mimosciceae	Tree	Thorn mumosa	Bagaruwa	Common
19	Acacia spp	Tabaceae	Tree	Cacia	Gardaye	Common
20	Moringa oleitera	Moringaceae	Herb	Drumstick tree	Zoogale	Common
21	Feretia apopdanthera	Rubiaceae	Tree	Feretia	Kurukuru	Rare
22	Rogeria adenophylla	Pedaliaceae	Herb		Loodaa	Common
23	Ipomoea purpurea	Convolvulacaes	Tree	Morning glory	Doman kadda	Common
24	Adenium obesum	Apocynaceae	Tree	Desert rose	Gariya	Rare
25	Asparagus africana	Asparagaceae	Tree	Asparagus	Sarka	Rare

Source: OTG Field Survey, August, 2020.

Typical Major Cultivated/Agronomic Species

S/N	Species	Family	Life Form	Common Name	Local names (hausa)	Distribution
1	Anacardium occidentale	Anacardiaceae	Tree	Cashew	Yazawa	Rare
2	Citrus sinensis	Rutaceae	Tree	Orange	Lemo	Rare
3	Zea mays	Poaceae	Herb	Maize	Masara	Common
4	Gossypium hirsutum	Malvaceae	Herb	Cotton	Auduga	Rare
5	Oryza sativa	Gramineae	Herb	Rice	Shinkafa	Common
6	Sesamum indicum	Pedaliaceae	Herb	Benniseed	Ridi	Common
7	Solanum melongena	Solanaceae	Herb	Egg plant	Yalo	Rare
8.	Vigna unguiculata	Fabaceae	Herb	Cowpea	Wake	Common
9.	Mangifera indica	Anacardiaceae	Tree	Mango	Màngwàrò	Common
10	Allium cepa	Amaryllidaceae	Herb	Onion	Albasa	Common
11	Allium sativum	Amaryllidaceae	Herb	Garlic	Tafarnuwa	Common
12	Capsicum annuum	Solanaceae	Herb	Pepper	Tatase/shambo	Common
13	Ipomoea batatas	Convolvulaceae	Herb	Sweet potato	Dankali	Common
14	Pennisetum glaucum	Poaceae	Herb	Millet	Gero	Common
15	Zingiber officinale	Zingiberaceae	Herb	Ginger	Citta	Common
16	Arachis hypogaea	Fabaceae	Herb	Groundnut	Gyada	Common
17	Saccharum officinarum	Poaceae	Herb	Sugarcane	Rake	Common

Source: OTG Field Survey, August 2020.

Summary of Environmental, Social, Health and Safety (ESHS) Enhancements

Standard Procurement Documents (SPDs)

&

Standard Bidding Documents (SBDs)

Note: The following ESHS enhancements shall be applicable for all new works contracts for which the relevant SBD/SPD listed below are used. "New contracts" in this context means contracts for which the bidding documents/request for proposal documents have not yet been issued.

Summary of Environmental, Social, Health and Safety (ESHS) Enhancements

ESHS Enhancements have been made to the following procurement documents:

Standard Procurement Documents (SPD) Works

1. Prequalification Document - Works
2. Request for Bids - After Prequalification
3. Request for Bids - Without Prequalification
4. Request for Bids - Small Works One-Envelope Bidding Process
5. Request for Bids - Small Works Two-Envelope Bidding Process
6. Request for Bids - Output and Performance-Based Road Contracts

Standard Bidding Documents (SBD) Works

7. Prequalification Document - Works
8. SBD Small Works
9. SBD Works
10. SBD Output and Performance-Based Road Contracts

Consulting Services

11. Request for Proposals (RFP) Consulting Services 2015 (for supervising engineer)
12. RFP Consulting Services 2016 (for supervising engineer)

Summary of key enhancements

The following table summarizes the key enhancements that have been reflected in the SBDs and SPDs listed above.

#	Subject	Enhancement/s
1	**Declaration of contract suspension or termination**	• Applicants/Bidders/Proposers are now required to make a declaration listing any civil works contracts that have been suspended or terminated by an employer and/or performance security called by an employer, for ESHS reason/s. This information will be used to inform enhanced due diligence.
2	**Strengthened specifications/ employer's requirements**	• The Employer is required to set out clearly the minimum expectations of ESHS performance from the outset, to ensure that all Bidders/Proposers are aware of the ESHS requirements.
3	**Workers' ESHS Code of Conduct**	• Bidders/Proposers are now required to submit, as part of their Bid/Proposal, an ESHS Code of Conduct that will apply to their employees and contractors, and details of how it will be enforced. • The suitability of the Code of Conduct can be assessed and discussed as part of the Bid/Proposal evaluation and negotiations. • The successful Bidder/Proposer is required to implement the agreed Code of Conduct upon contract award.
4	**Contractor's ESHS Management Strategy and Implementation Plans**	• Bidders/Proposers are now required to submit, as part of their Bid/Proposal, ESHS Management Strategies and Implementation Plans required to manage the key ESHS risks of the project. • The suitability of these strategies and plans can be assessed as part of the Bid/Proposal evaluation, and discussed during pre-contract discussions, as appropriate. • These strategies and plans will become part of the Contractor's Environmental and Social Management Plan (C-ESMP). • Particular Conditions of Contract now include provisions relating to the

#	Subject	Enhancement/s
		(C-ESMP), e.g.: - a requirement that the Contractor shall not commence any Works unless the Engineer is satisfied that appropriate measures are in place to address ESHS risks and impacts; - at a minimum, the Contractor shall apply the plans and ESHS Code of Conduct, submitted as part of the Bid/Proposal, from contract award onwards.
5	**ESHS Performance Security**	• The successful Bidder/Proposer is now required to provide, in addition to the standard Performance Security, an ESHS Performance Security (the sum of the two "demand" bank guarantees, normally not to exceed 10% of the contract price). • The ESHS performance security is in the form of a "demand" bank guarantee." • The application of this provision is at the Borrower's discretion. It is recommended for contracts where there is significant ESHS risks as advised by Social/Environmental specialist/s.
6	**ESHS Provisional Sum**	• An additional provisional sum, specifically for ESHS outcomes, may be included in the Request for Bids/Proposals documents, and eventual contract. Normally, the payment for the delivery of ESHS requirements shall be a subsidiary obligation of the Contractor covered under the prices quoted for other Bill of Quantity/price items.
7	**Key ESHS Personnel**	• Bidders/Proposers are now required to demonstrate that they have suitably qualified ESHS specialists among their Key Personnel. • Key Personnel must be named in the Bid/Proposal, and in the contract. • The quality of the proposed Key Personnel (including ESHS specialists) will be assessed during the evaluation of Bids/Proposals. • The Contractor shall require the Employer's consent to substitute or replace any Key Personnel. • The Engineer may require the removal of Personnel if they undertake behaviour which breaches the ESHS Code of Conduct, e.g. spreading communicable diseases, sexual harassment, gender-based violence, illicit activity, or crime.
8	**ESHS Reporting**	• Contracts now contain specific ESHS reporting requirements. These relate to: - ESHS incidents requiring immediate notification - ESHS metrics in regular progress reports.
9	**ESHS considerations during contract variation**	• As part of variation procedures, the Contractor shall provide relevant ESHS information to enable the Engineer to evaluate the ESHS risks and impacts.
10	**Ability to withhold interim payment**	• Contracts now contain provisions allowing interim payments to be withheld where there is a failure to perform an ESHS obligation.
11	**ESHS considerations included in civil works Consulting Services**	• The standard Request for Proposals for consulting services now include ESHS considerations to apply to the supervision of civil works.

ANNEX XIII: QUICK BRIEF ON ESHS

Brief on ESHS

Code of Conduct (ESHS)

The Bidder shall submit its Code of Conduct that will apply to contractor's personnel to ensure compliance with its Environmental, Social, Health and Safety (ESHS) obligations under this contract to include the following;

a. Community and PAPs Issues Management
b. HIV/AIDS and Health Awareness Management
c. Public and Occupational Health and Safety Management
d. Sexual Harassment and Gender Based Violence
e. Illicit Drug and Alcohol Use and Behaviours
f. Crime and Criminal Activities
g. Grievance Redress Mechanisms (GRM)
h. Labour Relations, Fair Compensation and Child Labour

In addition, the Bidder shall detail how this Code of Conduct will be implemented. This will include: how it will be introduced into conditions of employment/engagement, what training will be provided, how it will be monitored and how the Contractor proposes to deal with any breaches.

The Contractor shall be required to implement the agreed Code of Conduct and which will be strictly supervised by the SPMU and/or its agent(s).

Management Strategies and Implementation Plans (MSIP) to manage the (ESHS) risks

The Bidder shall submit Management Strategies and Implementation Plans (MSIP) to manage the following key Environmental, Social, Health and Safety (ESHS) risks.

1. Community and PAPs Issues Management
2. Public and Occupational Health and Safety Management
3. Dust Control and Air Quality Management
4. Noise and Vibration Exposure Management
5. Waste Management and Debris from Construction Operations
6. Flora and Fauna Removal Management
7. Grievance Redress Mechanisms (GRM)

In addition to the Code of Conduct and MSIP outlined above, the contractor shall be required to address and implement the ESHS as identified in the Environmental and Social Management Plan (ESMP) and Resettlement Action Plan (RAP) provided by the SPMU/WB.

Environmental, Social, Health and Safety (ESHS)
Metrics for Progress Reports

The Construction Contractor shall maintain strict compliance with the following regular reporting:

a. environmental incidents or non-compliances with contract requirements, including contamination, pollution or damage to ground or water supplies;

b. health and safety incidents, accidents, injuries and all fatalities that require treatment;

c. interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);

d. status of all permits and agreements:

   i. work permits: number required, number received, actions taken for those not received;

   ii. status of permits and consents:

   - list areas with landowner agreements required (borrow and spoil areas, camp sites), dates of agreements, dates submitted to resident engineer (or equivalent);
   - identify major activities undertaken in each area for each month and highlights of environmental and social protection (land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation);

e. health and safety supervision:

   i) safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;

   ii) number of workers, work hours, use of PPE (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);

f. worker accommodations:

   i) number of expatriates housed in accommodations, number of locals;

   ii) date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;

   iii) actions taken to recommend/require improved conditions, or to improve conditions.

g. HIV/AIDS: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);

h. gender (for expatriates and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);

i. training:

   i) number of new workers, number receiving induction training, dates of induction training;

   ii) number and dates of toolbox talks, number of workers receiving Occupational Health and Safety (OHS), environmental and social training;

   iii) number and dates of HIV/AIDS sensitization training, no. workers receiving training (monthly); same questions for gender sensitization, flaglady/flagman training.

j. environmental and social supervision:

   i) environmentalist: days worked, areas inspected and numbers of inspections of each work sections, work camp, accommodations, borrow areas, spoil areas,

etc.; highlights of activities/findings (including violations of environmental and/or social best practices, actions taken), reports to SPMU/FPMU environmental and/or social safeguards officers and construction/site management;

ii) sociologist: days worked, number of partial and full site inspections (by area: work sections, work camp, accommodations, borrow areas, spoil areas, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social safeguards officers and construction/site management; and

iii) community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social safeguards officers and construction/site management.

k. Grievances: list for each month unresolved grievances by date received, complainant, how received, to whom referred for action, resolution and date (if completed), date resolution reported to complainant, any required follow-up (Cross-reference other sections as needed):

   i) Worker grievances;

   ii) Community grievances

l. Traffic and vehicles/equipment:

   i) traffic accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;

   ii) accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;

   iii) overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control emissions, etc.).

m. Environmental mitigations and issues (what has been done):

   i) dust: number of working bowsers, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of construction dust control (covers, sprays, operational status); % of soil/spoil/waste lorries with covers, actions taken for uncovered vehicles;

   ii) erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;

   iii) borrow areas, spoil areas: identify major activities undertaken each month, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;

   iv) spill cleanups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination;

   v) waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;

   vi) details of tree plantings and other mitigations required and undertaken each month;

vii) details of water protection mitigations required and undertaken each month.

n. compliance:

i) compliance status of ESMP/ESIP requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance

ii) other unresolved issues from month to month related to environmental and social: continued violations, continued failure of equipment, continued lack of vehicle covers, spills not dealt with, continued compensation or borrowing issues, etc. Cross-reference other sections as needed.

ANNEX XIV: DISCUSSION OF METHODS/TECHNIQUES USED IN ASSESSING IMPACTS

Impact Rating Methodology

The assessment of the potential impacts of the project was based on specialists' expertise, Consultant's professional judgment, field observations and desk-top analysis. The significance of potential impacts that may result from the proposed project was determined to assist decision making.

Generally, the envisaged areas of potential impacts which could result from the activities of the project are evaluated for impact significance based on the comparative consequential effects of the potential impact on the social and biophysical environments. The significance of an impact may be defined as a combination of the consequence of the impact occurring and the probability that it will occur. The criteria used to determine impact consequence are shown in the Table below.

Criteria for Determining Impact Consequence

RATING	DESCRIPTION OF RATING	SCORE
A. Extent – the area over which the impact will be experienced		
Localized	Confined to specific project activity area or part thereof	1
Entire Watershed	The entire watershed	2
Regional	Beyond the watershed	3
B. Intensity – the magnitude of the impact in relation to the sensitivity of the receiving environment, taking into account the degree to which the impact may cause irreplaceable loss of resources		
Low	Site-specific and wider natural and/or social functions and processes are negligibly altered	1
Medium	Site-specific and wider natural and/or social functions and processes continue albeit in a modified way	2
High	Site-specific and wider natural and/or social functions and processes are severely altered	3
C. Duration – the timeframe over which the impact will be experienced and its reversibility		
Short-term	Up to 6 months	1
Medium-term	6 months to 1 year	2
Long-term	More than 1 year	3

The numerical scores in Table 5-1 are positive or negative depending on whether the impact is adverse or beneficial. If impact is adverse, the numerical score is positive and if the impact is beneficial, the numerical score is negative. The combined score of the three criteria (extent, intensity and duration) corresponds to a Consequence Rating, as shown in the Table below:

Method used to determine Consequence Score

Combined Score (A+B+C)	3 – 4	5	6	7	8 – 9
Consequence Rating	Very low	Low	Medium	High	Very high

The probability of the impact occurring is determined using the probability classifications presented in the Table below:

Probability Classification

Probability – the likelihood of impact occurring	
Improbable	< 40% chance of occurring
Possible	40% – 70% chance of occurring
Probable	> 70% - 90% chance of occurring
Definite	> 90% chance of occurring

The overall significance of impacts was determined by considering consequence and probability using the rating system prescribed in the Table below:

Impact Significance Ratings

		Probability			
		Improbable	**Possible**	**Probable**	**Definite**
Consequence	**Very Low**	INSIGNIFICANT	INSIGNIFICANT	VERY LOW	VERY LOW
	Low	VERY LOW	VERY LOW	LOW	LOW
	Medium	LOW	LOW	MEDIUM	MEDIUM
	High	MEDIUM	MEDIUM	HIGH	HIGH
	Very High	HIGH	HIGH	VERY HIGH	VERY HIGH