2021

Improved Child Survival Program for Human Capital MPA

Updated Environmental and Social Management Framework (ESMF) – Draft Final

ACRONYMS

ANC	Ante Natal Care
CWM	Construction Waste Management
EA	Environmental Assessment
EAR	Environmental Audit Report
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FEPA	Federal Environmental Protection Agency
FGoN	Federal Government of Nigeria
FMEnv	Federal Ministry of Environment
GFF	Global Financing Facility
GoN	Government of Nigeria
GRS	Grievance Redress Service
GRM	Grievance Redress Mechanism
HAI	Hospital Acquired Infection
HCF	Healthcare Facility
HCW	Healthcare Waste Management
IDA	International Development Association
HWMP	Health Waste Management Plan
LFN	Laws of the Federation of Nigeria
LGA	Local Government Area
LLIN	Long Lasting Insecticide Nets
LERICC	Local Emergency Routine Immunization Coordinating Center
NBS	National Bureau of Statistics
NESREA	National Environmental Standards Regulatory Enforcement Agency
NMEP	National Malaria Elimination Program
NPHCDA	National Primary Healthcare Development Agency
MICS	Multiple Indicator Clustery Survey
MoU	Memorandum of Understanding
MPA	Multi-Phased Approach
PAD	Project Appraisal Document
PCN	Project Concept Notes
POPs	Persistent Organic Pollutants
PDO	Project Development Objectives
PP	Project Paper
PPE	Protective Personnel Equipment
SBCC	Social Behavior Change Communication
TOR	Terms of Reference
U5MR	Under 5 Mortality Rate
UN	United Nations
UNICEF	United Nations Childrens Fund
WB	World Bank
WM	Waste Management
WHO	World Health Organization

Table of Contents

List of Tables

Executive Summary

ES 1: Introduction and Background

The Federal Government of Nigeria (FGON) in collaboration with the World Bank has prepared a Program called Improved Child Survival Program for Human Capital MPA. The Program follows the multi-phased approach (MPA) with the aim of reducing under-five mortality in Nigeria from 132 to 79 per 1,000 births by 2030. The MPA has initially structured to entail minor civil works such as minor rehabilitation repairs such as painting, plastering, and replacing doors/windows and leaking roofs may occur in existing buildings and health facilities.

The Federal Government of Nigeria (FGON) also in collaboration with the World Bank, had earlier implemented the Nigerian Polio Eradication Support Project AF3 (NPESP AF3). This Project was structured to include the construction and expansion of the National Primary Health Care Development Agency (NPHCDA) South West Zonal Cold and Dry Stores (referred herein as Lagos Hub), located within the Federal Medical Stores (FMS) in Oshodi, Mushin Local Government of Lagos State. However, the construction and expansion subproject is yet to commence even as the NPESP AF3 comes to an end.

The FGON has requested the restructuring of the IMPACT MPA to uptake the construction and expansion of the Lagos Hub. This change has necessitated the restructuring of the MPA such that the planned activities under the Lagos Hub will take place under Phase I (Immunization plus and Malaria Component) of the MPA. An Environmental and Social Management Framework (ESMF) was prepared by Government to assess the potential environmental and social risks/impacts associated with the IMPACT MPA, and develop guidelines for assessing, monitoring, and mitigating such impacts. The ESMF is now updated to include the Lagos Hub activities, which is now a sub-project under the IMPACT MPA. The IMPACT MPA stakeholders have been duly consulted on the new additions to the program. The updated ESMF will be redisclosed in-country and the World Bank external website.

Background information

In addition to the macro-economic issues, Nigeria's U5MR has currently become one of the highest in the world. To tackle this, the Multi Programmatic Approach (MPA) Program is aimed at reducing the U5MR in Nigeria from 132 to 79 by 2030 in an attempt to achieve but not limited to the following co-benefits

(i) Human Capital Development/Formation

a. **Improved Cognitive Development:** Improved child health has an important influence on the optimal cognitive development of a child. Thus, preventing illnesses in young children and treating them effectively when sick is an important part of human capital development.

b. **Improved nutritional outcomes:** Children who are frequently sick are also at high risk of chronic malnutrition or stunting and children who are stunted are at high risk of falling frequently ill. Breaking this vicious cycle is an important aspect of human capital development.

(ii) **Reaping the demographic dividend:** There has never been a significant reduction in fertility in any country of the world that was not preceded by a steep reduction in U5MR. Reducing U5MR is critical to fertility reduction and an essential aspect of obtaining a demographic dividend.

(iii) **Economic take-off*:*** Improvements in child mortality rates have preceded the economic take-off in East Asian "tiger" economies. Hence, improvements in economic growth in Nigeria is also dependent on significantly reduced U5MR.

(iv) **Economic Growth:** Several papers (including those of Dean Jamison and Larry Summers) have argued that 24% of the growth observed between 2000 and 2011 in full income was due to mortality reduction. Thus, mortality rate is inversely related to growth.

Thus, reducing U5MR is not only about improving welfare of poor Nigerian children or women, it is also a crucial contributor to economic growth and an inherent part of a nation's human capital development.

ES 2: Brief Project Objectives, Goal and Description

The overall objective of the program is to reduce under-five mortality rate in program areas.

Ultimately, the Program will contribute towards significantly decreasing U5MR, reducing the burden of malaria particularly among the poor and vulnerable populations, reaping the benefits of routine vaccination, and improving neonatal health.

This would be achieved through three phases of the program with each having a phase objective. The proposed Development Objectives for the three Phases are

- **Phase I:** Improve utilization and quality of immunization plus and malaria services in selected states.
- **Phase II:** Scale up provision of essential health services through Basic Health Care Provision Fund in selected states.
- **Phase III:** Enhance utilization and quality of essential health services in lagging states.

In supporting the Nigeria Human Capital Vision 2030, the Program, with other complementary child health investments, is expected to reduce under-five mortality from 132 to 79 per 1,000 births by 2030. Cutting U5MR by 40 percent in 10 years is a stretch goal but is achievable.

A Multiphase Programmatic Approach (MPA) will be used for this Program. The use of an MPA enables a structured engagement through a set of linked operations. The MPA allows Bank clients to structure a long, large, or complex engagement as a set of smaller linked operations (or phases), under one Program. This MPA is not starting de novo but builds on an extensive series of previous, ongoing and planned operations that have focused on various aspects of maternal and child health.

ES 2.1: Participating States in the MPA

There are a total of 22 states participating in this program with only Ekiti State participating in both the immunization and malaria programs. The other states include:

- **Component 1 (Malaria states) (10):** Abia, Bayelsa, Borno, Edo, Ekiti, Abuja FCT, Imo, Kogi, Lagos, Rivers
- **Component 2 (Immunization states) (12):** Adamawa, Bauchi, Benue, Ebonyi, Kaduna, Kano, Kogi, Kwara, Nasarawa, Oyo, Plateau, Sokoto

Kogi State would be only state taking part in the two components - Component 1 (Malaria) and Component 2 (Immunization). All other states will participate in Component 3 (Knowledge for Change). See Table 2.1 below

ES 2.2: Project Phases Under This MPA

Phase I: High-impact interventions and innovations in service delivery:
Phase I of the MPA will focus on improving immunization, intrapartum care, perinatal care, and malaria control activities and use these platforms to strengthen systems. These high-impact interventions will take precedence because (a) they reflect the request of the Government; (b) there are large financing gaps in malaria and immunization that are preventing these programs from covering large parts of the country thereby depriving children access to these life-saving services; and (c) they could potentially have a large and swift impact on U5MR.

Phase II: Expanding PHC strengthening through the BHCPF.
The second phase of the MPA will support a large PHC—strengthening investment in the BHCPF in 15 states.

Phase III: Integration and scale-up in lagging states. The third phase of the MPA will be used to support the scale-up of the high-impact malaria and immunization plus interventions and PHC strengthening and help ensure that these complementary approaches work together coherently, with a focus on 10 lagging states.

ES 2.3: Project Components Under This MPA

COMPONENT 1: Malaria Control (US$188.0 million equivalent IDA credit):

- ***Subcomponent 1.1: Strengthening Service Delivery (US$170.9 million):*** This subcomponent will finance performance-based contracts with NGOs in participating states

- ***Subcomponent 1.2: Health Systems Strengthening and Technical Assistance (US$17.1 million):*** The Program will support the health system and provide TA at federal and state levels through:
  - Training and technical support to SMEPs
  - Training and technical support to the NMEP
  - Performance frameworks

COMPONENT 2: IMMUNIZTION PLUS: (US$409.3 million equivalent IDA credit)

- ***Subcomponent 2.1: Strengthening Service Delivery (US$150.2 million):*** This subcomponent will finance interventions that will strengthen routine immunization, maternal, child, and neonatal service delivery in the context of strengthening PHC in 12 states (Adamawa, Benue, Ebonyi, Kogi, Kwara, Nasarawa, Oyo, Plateau, Bauchi, Kaduna, Kano, and Sokoto).

- ***Subcomponent 2.2: Health Systems Strengthening and Technical Assistance (US$75.3 million)***
- This subcomponent will be implemented at the national and state levels.

- ***Subcomponent 2.3: Vaccines, Cold Chain and Logistics (US$183.8 million):*** This component will finance the procurement of vaccines.

COMPONENT 3: KNOWLEDGE FOR CHANGE (US$52.7 MILLION EQUIVALENT IDA CREDIT)

- ***Subcomponent 3.1: Strengthening Monitoring and Evaluation Systems (US$23.2 million):*** This sub-component will strengthen the M&E systems

- ***Subcomponent 3.2: Integrating Social Behavior Change Communications (SBCC) Activities (US$15.1 million):*** The goal of this subcomponent is to improve social acceptability of preventive behaviors such as LLIN use and vaccination and of curative behaviors.

- ***Subcomponent 3.3: Learning Agenda (US$14.4 million):*** This subcomponent will finance operations research, financing warehouse and cold store assessments, testing of innovations and also provide TA to support the design and learning for the Emergency Medical Services (EMS)

COMPONENT 4: CONTINGENT EMERGENCY RESPONSE COMPONENT (CERC) (US$0 MILLION IDA)

Unused IDA financing will be allocated to financing this component which will respond quickly to health emergency with the potential to cause major adverse economic and/or social impacts**.**

ES 3: Overview of Environmental and Social Risks Associated with MPA

Table E3: Overview of Environmental and Social Risks Associated with MPA

	POTENTIAL IMPACT	IMPACT SOURCE	RATING
ENVIRONMENTAL RISKS	Air Pollution	*Due to emissions and dust particles as a result of burning wastes (CW and HCW)*	Moderate
	Water Contamination (surface and ground)	*As a result of leachate formed from HCW sipping into groundwater and/or surface run-off; and*	Low
	Vegetation	*Significant Vegetation loss as a result of pre-construction and civil works*	Low
	Blocked drains, Soil Contamination and waterlogging	*Blockage of drainage with HCW and construction waste. Leachate percolation into soil*	Low
SOCIAL RISKS	Public Safety and Health Hazards	*As a result of over exposure of the public to open HCW sites. Also, over-accumulation of HCW could turn into a fertile breeding habitat for insects like mosquitoes particularly during the rainy season which can cause the spread of malaria. Also, inhalation of foul odors and fumes in cases of burning HCW. Also, there are also risks of Hospital Acquired Infections (HAI), nosocomial infections during their stay/visits;*	Moderate
	Public Safety	*Exposure of the public to HCW such as sharps, needles and other sharp objects some of which may be infected*	Moderate

		Exposure of the public to CW if not cordoned of properly	
	Occupational Health and Safety	*Exposed to Occupationally-Acquired Infections such as tuberculosis, bloodborne infections such as hepatitis B, C and HIV from needlesticks. Injuries could occur during minor renovation works*	**Moderate**
	Social & Commercial Activities	*Dumping and prolonged inappropriate storage of waste could lead to unpleasant odors and sights and this could hamper commercial activities around HCF*	**Moderate**
	Healthcare Waste Management	*Could be harmful to the public and in extreme cases hazardous HCW could lead to disease outbreak*	**Moderate**
	Construction Waste From Renovation Works	*Could be harmful to the workers and the public and in extreme cases. See Section 5.4*	**Low**

ES 4: Legal and Institutional Framework

The following Federal and State Ministries, institutions and agencies are responsible for regulating and monitoring environmental and social issues as well as waste management. See Chapter 3

ES 4.1: Relevant MDAs

- Federal Ministry of Health (FMoH)
  - National Primary Healthcare Development Agency (NPHCDA)
  - National Malaria Elimination Progam (NMEP)
  - National Health Insurance Scheme (NHIS)

- State Ministries of Health (SMoH) of the participating project states
  - State Primary Healthcare Development Agencies (SPHCDAs)
  - State Malaria Elimination Progam (SMEPs)
  - State Social Health Insurance Agency (SSHIAs)

- Federal Ministry of Environment (FMEnv)
- State Ministries of Environment (SMEnv) of the participating states

ES 4.2: Other Relevant State Agencies

These include State Environmental Protection Agencies (SEPAs) as well as various state waste management regulatory agencies from the participating states. See Table 3.5.

ES 4.3: Relevant World Bank Policy

The World Bank has 10+1 policies relating to environmental and social management/protection. With regards to the MPA one Safeguard Policy, OP 4.01 on Environmental Assessment is triggered. OP4.01 addresses the potential adverse environmental and social impacts associated with Bank's lending operations early- on in the project cycle and is triggered if a project is likely to have potential adverse environmental and social risks and impacts in its area of influence.

The MPA has been restructured to include the construction and expansion of the Lagos Cold and Dry Store in Lagos State under Phase I of the MPA. This would include demolition of warehouses and construction of new buildings. The MPA, there would be minor civil works, such as painting, plastering, replacing

doors/windows, leaking roofs, may occur in existing buildings and health facilities and these could have minor impacts.

There is also expected increase in the procurement and usage of vaccines, syringes, needles (sharps Class 3), blood clotted cotton wools (infectious wastes Class 2) and drugs (pharmaceutical waste Class 5) as well as cartons packages (Non-hazardous waste Class 1) which would result in an increase in waste generation. Most of the HCW that would be generated as a result of MPA operations would fall under Classes 1, 2, 3 and 5 according to the National Healthcare Waste Policy of 2013. See Chapter 6.

ES 4.4. Environmental, Health and Safety General Guidelines (EHSG)

The EHSG are technical reference documents with general and industry specific examples of Good International Industry Practice (GIIP) which are applied as required by their respective policies and standards in projects the World Bank is involved in.

These guidelines addresses environmental and social risks and impacts relevant to the possible minor renovation and rehabilitation that might occur as a result of the MPA. In addition, and specifically, the Environmental, Health, and Safety Guidelines for Health Care Facilities is particularly relevant in addressing concerns of increased HCW that would be generated at HCF during the MPA.

ES 5: Activities Associated with the MPA Program

The IMPACT Project (Phase I) under the MPA has been restructured to uptake outstanding activities under the Nigeria Polio Eradication Support Project – Additional Financing Three, specifically the construction and expansion of the National Primary Health Care Development Agency (NPHCDA) South West Zonal Cold and Dry Stores, located in Oshodi, Lagos State. This activity would be financed under Component 2 Subcomponent 2.3. Civil works associated with this are expected to include the following activities:

- Demolition of buildings located on the proposed project site
- Construction of new buildings to house the Cold store, the Dry store and Office accommodations
- Outfitting of the Cold store with 3 units of 500cm^3 walk in cold rooms with shelves for storage of vaccines and other temperature sensitive health commodities
- Outfitting of the dry store with shelves and climate control accessories – air conditioners, wall and ceiling lagging etc.
- Installation of security systems (CCTV cameras, etc.)
- Installation of smoke detectors and fire control systems
- Furnishing of the Office building
- Supply and installation of electricity generating sets (2 units 500KVA) and Solar Power system.
- Drainage and sewage system
- Landscaping of the entire compound

A separate stand-alone Environmental and Social Management Plan (ESMP) has already been prepared and disclosed in-country on October 7, 2019 and on the World Bank's External site on November 8, 2019 under the Nigeria Polio Eradication Support Project – Additional Financing Three Project.

Other activities that will be financed under this Program will include minor rehabilitation repairs such as painting, plastering, and replacing doors/windows and leaking roofs may occur in existing buildings and health facilities.

Activities under the project will also include vaccination/immunization and distribution of drugs, LLINs and increased generation of HCW. A separate Healthcare Waste Management Plan (HCWMP) has been prepared and disclosed in-country on October 7, 2019 and on the World Bank's External site on November 8, 2019.

ES 6: Healthcare Waste Management and Construction Waste

Generally, for the MPA, it is expected that most HCW would fall under Class 1 (Non Hazardous Waste) such as drugs and LLINs packages; Class 2 (Infectious waste) *such as swabs*, Class 3 (Sharps) *such as injections and syringes*, Class 5 (pharmaceutical wastes) *such as drugs SP*; See to Chapter 6 on Healthcare waste management and environmental risks. To address healthcare waste concerns, a separate stand-alone HCWMP has been prepared for this MPA.

ES 7: Potential Risks, Impacts and Mitigation Measures

Table ES7: Potential Risks, Impacts and Mitigation Measures

ENVIRONMENTAL PARAMETER	DESCRIPTIONS	PROPOSED MITIGATION MEASURES
AIR POLLUTION AND QUALITY	▪ Air pollution may arise from indiscriminate open air burning of HCW such as sharps, syringes, used and expired vaccines, general HCW generated during MPA operations. ▪ Also, waste stored for too long on site could release offensive smells into the atmosphere ▪ Air pollution may also occur from burning of construction waste during renovation. This is rated **Low** ▪ Ambient Air deterioration from release of dusts and gaseous emissions from construction and expansion of the Lagos Hub ▪ Increase in dust/PM levels as a result of demolition works	▪ Indiscriminate burning of wastes at site should be avoided to reduce air pollution. ▪ Waste should be evacuated at least once a week ▪ All HCW should be directed to approved storage and dumpsites. ▪ Vehicles used in vaccine transportations should be serviced frequently and have low carbon emissions. If vaccine transportation is outsourced, contract agreement should include provisions for evaluation including company experience, certifications, staff strength and expertise, training records etc ▪ Dust suppression such as water sprinkling during dry season ▪ Use of silt fences and other barriers, such as wattles ▪ For renovation works, except where activity and site screening results show that there might be negative impacts, no mitigation measures are so far required. Renovation works are expected to be of very low impact even in the absence any mitigation measure. ▪ Develop and implement a WMP that defines approved temporary storage points, storage containers, frequency of waste disposal etc
GROUNDWATER AND SURFACE WATER CONTAMINATION	▪ Improper waste management could lead to leachate produced flowing into surface waters and infiltrating into ground water leading to contamination ▪ Infiltration of wastes such as contaminated swabs, expired vaccines,	▪ Provision of appropriate bags/containers for storing HCW Waste must be stored in appropriate bags/containers ▪ Reduce HCW generation to barest minimum ▪ Waste must be collected and segregated at each point of generation ▪ Waste should be evacuated at least once a week

	can find their way into surface water bodies causing contamination. ▪ There is a possibility of construction wastes (such as paint buckets, creosote etc) being disposed of in water channels/bodies and drainages	▪ For renovation works, except where activity and site screening results show that there might be negative impacts, no mitigation measures are so far required. Renovation works are expected to be of very low impact even in the absence any mitigation measure. ▪ Develop and implement a WMP that defines approved temporary storage points, storage containers, frequency of waste disposal etc
NOISE	▪ Increase in noise levels as a result of demolition works	▪ All demolition works should be carried out during normal working hours ▪ Operations should be carried out with minimal noise and vibration disturbance. ▪ Several noisy activities should be carried out simultaneously to avoid continuous noise disturbance
SOIL CONTAMINATION & EROSION, BLOCKED DRAINS AND WATERLOGGING	▪ Disposal of HCW along surface water channels/drainages could impede water flow which over time can lead to small scale flooding or waterlogged roads/paths. Over time this can lead to small scale erosion particularly in the south eastern states (Abia, Anambra, Enugu & Imo etc) where water erosion is an environmental challenge. See Baseline ▪ When waste is stored for a long time, leachates may form, and this could in turn percolate into the soil beneath thereby contaminating it. The impact of this would be more in the more densely populated areas of Lagos, Anambra, Enugu and Imo. See Baseline ▪ Soil erosion due to over exposure of top soil particularly in regions with active erosion agents ▪ Loss of soil quality from de-vegetation ▪ Soil contamination from oil spillage particularly on the Lagos Hub sub project	▪ All HCW should be directed to approved storage and dumpsites. ▪ Waste must be stored in appropriate bags/containers ▪ Reduce HCW generation to barest minimum ▪ Waste should be evacuated at least once a week ▪ For Renovation works, Develop and implement a WMP that defines approved temporary storage points, storage containers, frequency of waste disposal etc ▪ Develop and implement a WMP that defines approved temporary storage points, storage containers, frequency of waste disposal etc ▪ Avoid removal of vegetation where possible ▪ Protect all vegetation not required to be removed
VEGETATION	▪ Vegetation loss from land clearing and preparation activities	▪ Avoid removal of vegetation where possible ▪ Protect all vegetation not required to be removed

PUBLIC HEALTH HAZARDS	▪ Increase in generation wastes such as expired vaccines and hazardous health waste generated by HCF if not managed properly could accumulate, produce foul smells, and attract insects and rodents which inevitably would have health implications on the general public. Particularly, this could also turn into a fertile breeding habitat for insects like mosquitoes particularly during the rainy season which can cause the spread of malaria which the MPA is trying to reduce ▪ HCW inappropriately managed and kept away from the public poses risks from inhalation of foul odors and fumes during burning ▪ Patients visiting medical facilities are at risk of gaining Hospital Acquired Infections (HAI), nosocomial infections during their stay/visits ▪ Risk of community spread of COVID-19	▪ Waste generated on-site should be evacuated at least once a week ▪ Waste should be stored inside appropriate impermeable bags/containers ▪ For Renovation works, develop and implement a WMP that defines approved temporary storage points, storage containers, frequency of waste disposal etc ▪ All workers must have and use adequate PPEs
PUBLIC SAFETY	▪ Indiscriminate dumping of HCW could hamper public safety as this exposes the public to HCW such as sharps, needles and other sharp objects some of which may be infected. ▪ Risk of debris falling off vehicles enroute disposal particularly on the Lagos Hub sup project ▪ Risk of community spread of COVID-19	▪ Prohibition of access to the wastes storage site by unauthorized persons. Proposed HCW storage and disposal sites should be clearly marked and cordoned off any access by the public ▪ For Renovation Works, areas where work is ongoing must be clearly marked and cordoned of
OCCUPATIONAL HEALTH & SAFETY	▪ Staff handling of HCW such as sharps and inhaling fumes will expose the workers to occupational health risks. ▪ Medical personnel and waste handlers are exposed to dangerous and infectious HCW (such as sharps) during collection and transportation of HCW ▪ Waste handlers and HCF staff are also exposed to Occupationally-Acquired Infections such as tuberculosis, blood-borne infections such as hepatitis B, C, tetanus and HIV from needle-sticks ▪ There are possibilities of injuries arising from construction wastes such as nails if left carelessly around	▪ Workers should be equipped with appropriate Protective Personal Equipment (PPE) such as latex gloves including sanitizers. ▪ All waste storage and disposal sites should be adequately condoned off from the public ▪ Indiscriminate burning of HCW should be prohibited ▪ For Renovation Works, workers should be equipped with appropriate Protective Personal Equipment (PPE) such as boots, nose masks

SOCIAL & COMMERCIAL ACTIVITIES	▪ There could be increase in the demand for basic services due to increase in HCF patronage ▪ There is a potential for petty crime to increase in proposed sub project areas as influx of people increases ▪ Indiscriminate dumping and prolonged inappropriate storage of waste could lead to unpleasant odors and sights and this could hamper commercial activities around HCF	▪ Such marked areas should have appropriate waste bags/containers ▪ Waste generated on-site should be evacuated at least once a week ▪ Waste should be stored inside appropriate impermeable bags/containers
	▪ Labor influx, GBV, SEA ▪ Conflicts and grievances among stakeholders	▪ Use of local labour; ▪ Introduction and enforcement of sanctions (e.g., dismissal) for workers involved in criminal activities; ▪ All gender-based violence should be reported; ▪ Ensure minors are not employed directly or indirectly on the project; *N.B See also Section 5.4*
HEALTHCARE WASTE MANAGEMENT	▪ There is an expected increase in HCW generated from both public and private health centres. If not managed properly, could be harmful to the public and in extreme cases hazardous HCW could lead to disease outbreak ▪ Waste generated on site if not managed properly could accumulate and become unpleasant sights to the area. ▪ Waste dumped besides roads may intrude onto the roads causing vehicular hold ups and accidents.	▪ Ensure proper handling, and disposal of HCW ▪ Waste must be stored temporarily in designated areas daily ▪ HCW should be evacuated at least once weekly ▪ On site waste collection and storage points should be located in areas easily accessible to approved waste collection personnel without hindrance to vehicle and human movement. ▪ A well detailed HCWMP should be put in place and should be prepared in accordance with the ○ National Healthcare Waste Management Policy 2013 ○ National Healthcare Waste Management Guidelines (NHCWMG) 2013 ○ National Healthcare Waste Management Plan (NHCWMP) 2013
CONSTRUCTION WASTE FROM RENOVATION WORKS	▪ Construction waste if not managed properly could accumulate and become unpleasant sights to the area. ▪ There are possibilities of injuries arising from construction wastes such as nails if left carelessly around. ▪ Waste dumped besides roads may intrude onto the roads causing vehicular hold ups and accidents. ▪	▪ Construction waste will be collected and disposed properly in accordance a detailed approved WMP ▪ Temporary onsite storage areas must be clearly marked and cordoned from unauthorized access ▪ The records of waste disposal will be maintained as proof for proper management as designed. ▪ Reuse and recycling of materials should be encouraged as a way of reducing waste ▪ Toxic and hazardous wastes including empty paint cans will be disposed of in accordance a detailed approved WMP ▪ Open burning of construction wastes will not be allowed ▪ Dumping of wastes in water courses and in other environmentally sensitive areas such as swamps/wetlands will not be allowed

ES 8: Framework Environmental and Social Management Plan (Framework)

Subprojects under the MPA in all phases of the MPA, shall be screened to determine the appropriate level of environmental and social impact assessment and management that would be needed for each subproject. This will be done to ascertain which subproject will have significant, moderate or low

environmental and/or social impacts as well as to categorize the subproject appropriately. Subprojects with significant potential impacts shall be subjected to another level of environmental assessment which will have to be reviewed and cleared by the Bank before commencement of the subproject.

ES 9: Gender and Vulnerability

The MPA targets vulnerable poor women and children particularly in the rural areas. Ultimately, the project will contribute towards significantly decreasing U5MR, reducing the burden of malaria and vaccine-preventable diseases such as pneumonia, pertussis, measles and diarrhea particularly among the poor and vulnerable populations including women and children. This MPA will finance procurement of vaccines and related commodities, and commodities for prevention, control and treatment of malaria as well as Sulphadoxine Pyrimethamine (SP) for intermittent preventive treatment of malaria amongst pregnant women. It will also support the provision of SMC to children under 5 in selected Sahelian States. See more in Section 2.4.

ES 10: Citizens Engagement

This will support the training and awareness under the project's key delivery areas particularly at the HCF level and subproject stages. In engaging the citizens further in the activities of the MPA, special attention should be placed on the environmental and social impacts the MPA would have on people and their environment. The capacity building activities should focus more on women, children and other vulnerable groups including those with disabilities as they are the major target of this MPA and thus should be the prime target audience.

The target audience of such training activities should include, but not limited to:

- Casual HCF workers (such as cleaners), patients and visitors;
- People who live in and around selected HCFs; and
- People who would benefit from the MPA particularly at the HCF level.

ES 11: Grievance Redress Mechanism (GRM)

The GRM should be structured to accommodate everyone from the public and private HCF to the general public. In addition, clear procedures must be established for complaints and made easily available to the public by way of public awareness, notices and signs posted in all participating PHCs.

The grievance mechanisms should be designed to

- Provide a way to reduce risk for projects;
- Provide an effective avenue for expressing concerns and achieving remedies for the grievant;
- Promote a mutually constructive relationship; and
- Prevent and address community concerns.

Considering the project is not envisaged to involve construction activities, all complaint should be addressed directly to the medical facility in the respective local area. Based on above objectives, grievance management process will involve the following 5 steps

- **Step 1:** Receipt of complaint
- **Step 2:** Determination of corrective action

- **Step 3:** Meeting with the complainant
- **Step 4:** Implementation of corrective action
- **Step 5:** Verification of corrective action

The responsibility and implementation of the GRM should ideally rest with the social safeguards specialists of the PIU's under the various phases.

ES 12: Safeguard Instruments and Public Disclosure

This updated ESMF was prepared in consultation with the relevant key stakeholders including the NPHCDA, NMEP, SPHCDA, SMEP etc. Upon clearance by the World Bank of this ESMF, the FMoH through the NPHCDA/NMEP will facilitate the disclosure of the ESMF as required by the Nigerian Federal Ministry of Environment (FMEnv) EIA public notice. The World Bank Disclosure Policy BP 17.50 also makes it mandatory that this ESMF be disclosed on the World Bank external website. The MPA is a Category B project and thus the period of Disclosure for the ESMF prepared for this MPA is 21 working days as stipulated by Nigerian EIA Public notice.

Once site specific subproject activities are determined, screening and other safeguards instruments such as ESIAs/ESMPs prepared to address these impacts shall also be disclosed by the FMoH in a similar manner as that of this ESMF.

ES 13: Institutional Arrangement for the Implementation of the ESMP-F

The following Ministry, Agencies and bodies shall play vital roles in implementing the ESMP-F

- Federal Ministry of Finance (FMoF)
- Federal Ministry of Health (FMoH) and State Ministries of Health (SMoH)
- Federal Ministry of Environment (FMEnv) and State Ministries of Environment (SMEnv)
- National Malaria Elimination Program (NMEP) and State Malaria Elimination Program (SMEP)
- National Primary Healthcare Development Agency (NPHCDA) and State Primary Healthcare Development Agencies (SPHCDAs)

ES 14: Roles and Responsibilities in Implementing the ESMP-F

Table ES14: Roles and Responsibilities for Implementing the ESMP-F

S/N	STEPS/ACTIVITIES	RESPONSIBLE	COLLABORATION	SERVICE PROVIDER
1.	Identification and/or siting of the sub-project	▪ NMEP and NPHCDA (IMPACT) ▪ The Secretariat NSC (BHCPF)	▪ Local authority ▪ FMoH, SMoH ▪ SMEPs ▪ SPHCDAs ▪ NHIS, SSHIAs	▪ The World Bank
2.	Screening, categorization, and identification of the required instrument (use the national EIA procedure)	▪ Environmental Safeguards Specialist (ESS-PIU)* ▪ Social Safeguards Specialist (SSS-PIU)*	▪ Beneficiary; ▪ Local authority ▪ FMEnv ▪ SMEnv	▪ The World Bank

3.	Approval of the classification and the selected instrument by the World Bank/FMEnv	▪ PM-NMEP IMPACT ▪ PM-NMEP NPHCDA ▪ PM-NSC (BHCPF)PM-NPHCDA (IMPACT)	▪ ESS-PIU ▪ SSS-PIU	▪ EA Department under the FMEnv ▪ The World Bank
4.	Preparation of the safeguard document/instrument (ESIA, EA, ESMP, etc.) in accordance with the national legislation/procedure (taking into account the Bank policies requirements)			
	Preparation and approval of the ToRs	▪ ESS-PIU ▪ ESS-PIU	▪ SSS-PIU ▪ ESS-PIU	▪ The World Bank
	Preparation of the report		▪ SSS-PIU ▪ ESS-PIU	▪ Consultant
	Report validation and issuance of the permit (when required)		▪ Local authority	▪EA Department under the FMEnv ▪The World Bank
	Public Disclosure of the document		▪PM-NMEP IMPACT ▪PM-NSC (BHCPF) ▪PM-NPHCDA (IMPACT)	▪ 2 (National Dailies), media ▪ The World Bank external website
5.	Implementation of safeguards measures including mitigation, environmental monitoring (when relevant) and sensitization activities	▪ ESS-PIU ▪ ESS-PIU	▪ PS- PIU ▪ TS- PIU ▪ FS- PIU ▪ Local authority	▪ Consultant ▪ National specialized laboratories ▪ NGOs
6.	Oversight of safeguards implementation (internal)	▪ ESS-PIU ▪ ESS-PIU	▪ M&E- PIU ▪ FS- PIU ▪Local authority	▪ EA Department under the FMEnv ▪ The World Bank
	Reporting on project safeguards performance and disclosure	▪ M&E- PIU ▪ ESS- PIU ▪ SSS- PIU	▪ PM-NMEP IMPACT ▪ PM-NSC (BHCPF) ▪ PM-NPHCDA (IMPACT)	▪ The World Bank
	External oversight of the project safeguards compliance/performance	▪ EA Department under the FMEnv ▪ The World Bank	▪ M&E- PIU ▪ ESS- PIU ▪ SSS- PIU ▪ PS- PIU	▪ The World Bank ▪ FMEnv ▪ SMEnv
7.	Building stakeholders' capacity in safeguards management	▪ ESS-PIU ▪ SSS- PIU	▪ PS- PIU ▪ M&E- PIU	▪ Consultant ▪ Other qualified public institutions
8.	Independent evaluation of the safeguards performance	▪ ESS-PIU	▪ SSS- PIU ▪ PS-PIU	▪ Consultant

**ESS-PIU, SSS-PIU, M&E PIU, FS-PIU, PS-PIU refers to all PIUs under the 2 different phases of the MPA*

ES 15: Capacity Building and Target Audience

During consultations and field visits at Federal and State level, gaps were identified showing a lack of training and adequate knowledge of Healthcare Waste management, Safeguard Policies, policy requirements, monitoring as well as screening, scoping procedures and impact identification. This necessitated the inclusion of capacity building programs into the MPA. Trainings under this MPA will be targeted mainly at relevant stakeholders of the selected project states. The indicative cost for capacity building is **Twenty Thousand Dollars (Seven Million Six Hundred Thousand Naira).** See Table below

Table ES15: Summary of indicative budget breakdown for Capacity Building

S/N	TRAINING PROGRAM	TIME OF TRAINING	TARGET AUDIENCE	TYPE OF TRAINING	DURATION	COST ($)	COST (Naira)
1	General training on Safeguard Policies, EAs, Scoping and Screening	Before program commencement	FMoH, SMoH, NMEP, SMEPs, NPHCDA, SPHCDA	Seminar	1 day	4,000	1,520,000
2	Legal and Institutional responsibilities under the MPA. Policy requirements, legal and compliance	Before program commencement	FMoH, SMoH, NMEP, SMEPs, NPHCDA/SPHCDAs/,	Seminar	1 day	4,000	1,520,000
	Project Management (scope, implementation, time, budget, costs, resource, quality, procurement, mitigation and monitoring, and evaluation).	▪ Before program commencement ▪ During program implementation	FMoH, SMoH, NMEP, SMEPs, NPHCDA and SPHCDAs	Workshop	1 day	4,000	1,520,000
	Identifying grievances and Grievance Redress	▪ Before program commencement ▪ During program implementation	FMoH, SMoH, NMEP, SMEPs, NPHCDA, SPHCDAs, LGHAs				
3	Occupational health and safety	▪ Before program commencement ▪ During program implementation	HCF staff, LGAs, Sub project contractors such as waste collecting companies	Workshop	1 day	4,000	1,520,000
4	Public health and safety	▪ Before program commencement ▪ During program implementation	HCF staff, FMoH/SMoH, NMEP, SMEPs, NPHCDA/NERICC, SPHCDAs/SERICC, NHIS/SSHIAs, MDAs, NSAs, LGAs, Sub contractors such as waste collecting companies	Workshop	1 day	4,000	1,520,000
5	Healthcare Waste Management (HCWM)	▪ Before program commencement ▪ During program implementation	HCF staff, SMoH, NMEP, SMEP, NPHCDA, SPHCDA, Local governments, Sub contractors such as waste collecting companies	See Separate HCWMP			
				TOTAL COST		**20,000**	**7,600,000**

**380 NGN to 1 USD*

ES 16: Indicative Cost Estimates for Implementing the ESMF

ESMF **is Twenty-Three Thousand Nine Hundred Twenty-Nine Dollars and Forty Cents** (Nine Million Ninety-Three Thousand One Hundred Seventy-Two Naira)**.** The breakdown is shown in Table 7.5.

Table ES16: Summary of indicative budget breakdown and responsibility of the cost for implementing the ESMF

S/N	ITEM	RESPONSIBILITY	COST BREAKDOWN	ESTIMATE (US$)	ESTIMATE (Naira)
1	Mitigation	HCF	See HCWMP prepared for the MPA	N/A	
2	Management	5% of Mitigation Cost		To be determined	
3	Capacity Building	FMoH, SMoH, NMEP, SMEPs, NPHCDA, SPHCDA	Workshops and Seminars	20,000	7,600,000
4	Public Disclosure of ESMF	FMoH, NPHCDA, NMEP, FMEnv	ESMF advertisement in 2 national dailies, physical copies to various project states	1,754	666,520
5	Preparation of required environmental instruments	Consultant, NMEP/SMEPs, NPHCDA/SPHCDAs	This estimation includes cost for reconnaissance survey, field studies, public consultation and report preparation etc	To be determined	
6			**Sub Total**	**21,754**	**8,266,520**
7			Contingency (10% of Sub Total)	**2,175.40**	**826,652**
			TOTAL	**23,929.40**	**9,093,172**

**380 NGN to 1 USD*

ES 17: Stakeholders Consultation

Following the restructuring of the MPA to include the construction and expansion of the Lagos Cold and Dry Store in Lagos, a stakeholders' consultation was carried out on the 28th of April 2021. Considering the COVID-19 guidelines on maximum persons allowed to attend a single event, this meeting was conducted through a virtual meeting via Zoom.

A stakeholders' consultation had earlier been held on 13 September 2018 in Newton Park Hotel, Wuse 2, Abuja. In attendance were representatives from the FMoH, SMoH, NMEP, SMEPs excluding Ondo State, AfDB and IsDB. Also in attendance was the NC of IMPACT-NMEP. See Annex 3 for the attendance sheet. Major concerns raised included healthcare waste management and Public Disclosure. Consultations were also held at the states while site visits to some HCFs in the states was carried out.

Management of HCW was top on the priority list of concerns of all stakeholders. There were also concerns about early disclosure of the instrument and the roles the SMEPs and NMEP would play in facilitating this process. Clearances were also sought on the process and duration of Disclosure which is 21 working days for a Category B project. There were also question bothering around the availability and accessibility of the earlier prepared and disclosed ESMF and HCWMP. More details of the stakeholders' consultation are presented in Chapter 8.

CHAPTER 1: Introduction

1.1 Introduction

The Nigeria has an estimated population of 193,392,517[1] making it the most populated country in Africa. Divided into 6 geo political zones, it consists of 36 states and Abuja, Federal Capital Territory. In 1980, 374 ethnic groups were identified by Onigu Otite while M. Onwuejeogwu listed over 480 ethnic groups in 1990s. These trends seems to depict a case of Nigeria being the most culturally diverse nation in the world. The country has seen robust economic growth and yet modest poverty reduction; dynamic urban growth centers and isolated rural areas; and widening social and income disparities despite an abundance of natural and human resources.

Nigeria is one of the largest economies in Africa but has in recent years faced a recession which saw the country's economy shrink by 1.5 percent in 2016 for the first time in two decades and recovered with a slight growth estimated at 0.8% in 2017. Unfortunately, the recent growth of Nigeria's economy is weakly associated with poverty reduction. The growth elasticity on poverty rates in Nigeria is estimated to be -0.6 -compared to -1.2 in sub-Saharan Africa (SSA) and -2.2 in lower-middle-income countries (LMIC) as a whole - which means that poverty rates have fallen by only a fraction of the amount that Nigeria's economy has grown thus poverty is rife in the country.

The socio-economic implication of these is that amongst others statistics, poor women and children lack access to basic social services especially healthcare. This has impacted on Nigeria's under 5 mortality rate (U5MR). The U5MR in Nigeria is the highest West Africa - more than twice the rates in Ghana and Senegal and it is also very inequitable. Nigeria will soon overtake India as the country with the highest absolute number of under-five deaths in the world due to a higher U5MR and a higher fertility rate. Nigeria now accounts for about one out of every seven under-5 deaths in the world. This turns out to be true for nutritional status as well. Within Nigeria, the poorest quintile has an U5MR that is 2.6 times higher than the richest quintile. A poor child in Nigeria faces the highest risk of dying before her/his fifth birthday in all West Africa. See Figure 1.1: Under-5 on Infant Mortality Rates Nigeria 2003-2016. Statistics also show that about 74% of U5MR in Nigeria (excluding neo-natal mortality, i.e. deaths within the first month of life) is due to three diseases (malaria, diarrhea and pneumonia). See Figure 1.2 on Causes of Under-Five Mortality (excluding neonatal mortality). Controlling these diseases requires both preventive and curative services, the coverage of which are variable.

[1] Source: National Population Commission and National Bureau of Statistics Estimate

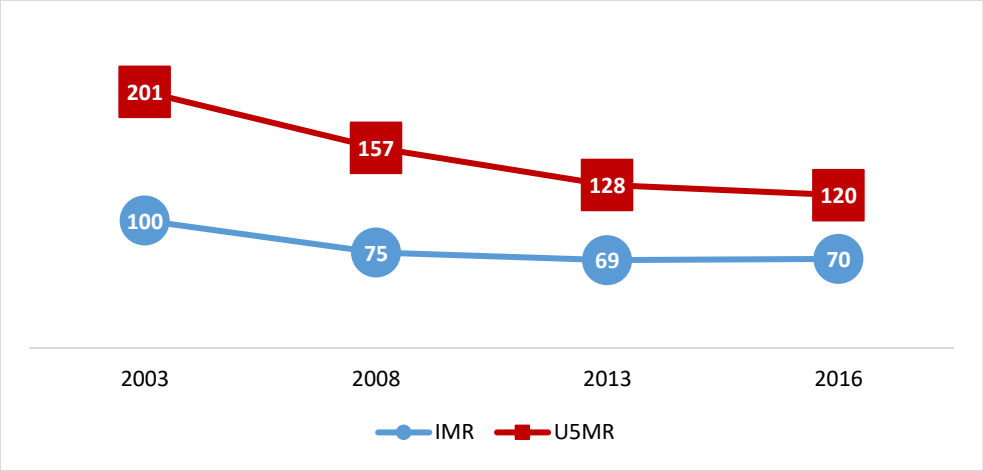

Figure 1.1: Under-5 and Infant Mortality Rates Nigeria 2003-2016
(Sources: Nigerian Demographic and Health Surveys – NPopC and MICS 2016-17 NBS)

More children die of malaria in Nigeria than any other country in the world—37% of all malaria deaths under-five in the world occur in Nigeria. Malaria constitutes of 26% of the entire mortality burden of children under-five in the country, and 84% of all malaria deaths occur in children under-five. In addition to the lives lost, the economic burden of malaria in the country, accounting for direct and indirect costs excluding mortality, is estimated to be 13.5% of GDP. Therefore, expanding preventative and curative services for malaria should reduce malaria cases and malaria mortality, and improve economic welfare.

Again, immunization coverage is the lowest in West Africa, especially for poor children. However, good progress has been made on polio eradication, malaria prevention, strengthening primary health care (PHC) system through performance-based financing (PBF), decentralized facility financing (DFF), and other innovations. The results achieved by PBF, DFF, and selected states with high levels of political commitment, are in stark contrast with the generally poor performance of the rest of the PHC system. Despite some of the successes, Nigerian government invest very little in health and is thus unable to take full advantage of the available techniques and technologies that will improve health outcomes. A robust response to these challenges is the Basic Health Care Provision Fund (BHCPF) envisaged in the National Health Act of 2014. The BHCPF promises significant additional domestic resources for PHC and employs results-based approaches to accomplish much better results.

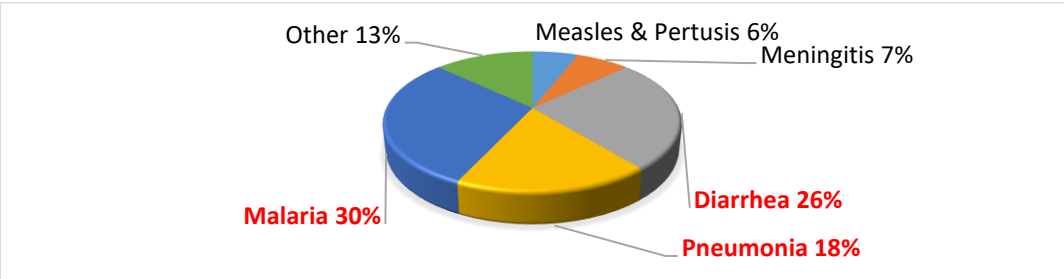

Figure 1.2 Causes of Under-Five Mortality (excluding neonatal mortality) Source: A Verbal/Social Autopsy Study to Improve Estimates of the Causes and Determinants of Neonatal and Child Mortality in Nigeria – 2016 Johns Hopkins University

Reducing U5MR is not just about improving welfare, it is also a crucial contributor to economic growth and an inherent part of its human capital development. Reducing U5MR will have important socio-economic benefits for Nigeria, would include the following:

i) **Cognitive Development:** Improved child health has an important influence on cognitive development. Children who are frequently sick experience significant psycho-motor development. Preventing illnesses in young children and treating them effectively when they are sick is an important part of human capital development.

ii) **Nutritional Effects:** Children who are frequently sick are also at high nutritional risk. Frequent illness and malnutrition combine in a vicious cycle. Children who are sick have increased metabolic needs and are also less able to consume and absorb nutrients, while children who are malnourished are have compromised immunity which renders them more prone to becoming sick. Breaking this vicious cycle is an important aspect of human capital formation.

iii) **Fertility reduction:** There has never been a significant reduction in fertility that wasn't preceded by a steep reduction in U5MR. Families the world over will continue to have high fertility if they fear that many of their children will die in childhood. Since reducing U5MR is critical to fertility reduction, it also an essential aspect of obtaining a demographic dividend.

iv) **Economic Growth:** A paper by Dean Jamison, Larry Summers and others has argued that reductions in mortality account for about 11% of recent economic growth in low and middle-income countries based on national income accounts. Using a more encompassing measure of growth based on "full income," they argue that 24% of the growth observed between 2000 and 2011 in full income was due to mortality reduction.

v) **Reductions in Child Mortality have preceded economic take-off:** Whether they are causal or not, improvements in child mortality preceded the economic take-off observed in East Asian "tiger" economies (see figure 5). Waiting for economic growth to improve child health has not worked in Africa and goes against the experience in East Asia.

1.2 Rationale for Updating the ESMF

The Federal Government of Nigeria (FGON) in collaboration with the World Bank has prepared a Program called Improved Child Survival Program for Human Capital MPA. The Program follows the multi-phased approach (MPA) with the aim of reducing under-five mortality in Nigeria from 132 to 79 per 1,000 births by 2030. The MPA was initially structured to implement minor civil works such as minor rehabilitation repairs such as painting, plastering, replacing doors/windows, and leaking roofs in existing buildings and health facilities. Therefore, the FGON prepared an Environmental and Social Management Framework (ESMF) to assess the potential environmental and social risks/impacts of the project and develop guidelines for assessing, monitoring, and mitigating such impacts. The ESMF was consulted upon and disclosed in-country and on the World Bank website in xx and xxx, respectively. However, the FGON has requested the restructuring of the IMPACT MPA to include some uncompleted activities from the Nigerian

Polio Eradication Support Project AF3 (P130865) specifically, the construction and expansion of the National Primary Health Care Development Agency (NPHCDA) South West Zonal Cold and Dry Stores, located within the Federal Medical Stores (FMS) in Oshodi, Mushin Local Government of Lagos State (referred to as the Lagos Hub). This change has ultimately necessitated the need to update the initial ESMF. The IMPACT MPA stakeholders have been duly consulted on the new additions to the program. The updated ESMF will be redisclosed in-country and the World Bank external website.

Activities under the MPA will now include: the construction and expansion of the Lagos Cold and Dry Store, vaccination/immunization programmes, distribution of drugs and long lasting insecticidal nets (LLINs) to target beneficiaries, and minor rehabilitation repairs (such as painting, plastering, replacing doors/windows, leaking roofs) in existing buildings and health facilities. These activities will pose environmental and social (E&S) risks and generate healthcare waste such as expired vaccines and sharps. Based on these anticipated E&S risks/impacts associated with HCW and the civil works, the IMPACT MPA will trigger the World Bank's operational policy - OP4.01 Environmental Assessment. The MPA has been classified as a Category B project under the World Bank's Operational Policy on Environmental Assessment OP/BP4.01 (Category II project under the Nigerian Environmental Act 86 of 1992).

. The Polio Support Eradication Project prepared a stand-alone Environmental and Social Management Plan (ESMP), which assessed the environmental and social risks/impacts and proffered mitigation measures for the Lagos Hub civil works. The ESMP was disclosed in-country and on the World Bank website in October 7, 2019 and November 9, 2019, respectively.

For other planned minor civil works under the IMPACT MPA, the ESMF is considered an adequate instrument since precise locations of potential subprojects are presently unknown. Should the precise location of these minor civil works be known the Borrower shall prepare a site specific Environmental and Social Management Plan (ESMP) which would be disclosed in accordance woth the Nigeria EIA Act and the World Bank Disclosure Policy (OP 17.50).

A separate Health Care Waste Management Plan (HCWMP) has also been prepared in line with the approved National Healthcare Waste Management Plan and Guidelines for Nigeria 2013.

1.3 Objectives of the Environmental and Social Management Framework (ESMF)

The objective of the Environmental and Social Management Framework (ESMF) is to improve key decision making as well as to encourage relevant stakeholders' participation and increase public awareness and understanding through continuous public engagement, discussions and public disclosure of the ESMF.

Specific objectives of the ESMF are to:

- Integrate environmental and social issues into project planning.
- Present the legal framework of social and environmental management in Nigeria.
- Identify the main state and non-state institutions involved.
- Establish a framework to identify, analyze and evaluate the potential environmental and social impacts of the activities planned under the project.

- Define the methodology for subproject screening and required social and environmental safeguards.
- Identify the main risk mitigation measures.
- Clarify the roles and responsibilities of the stakeholders and define the monitoring and surveillance framework for implementation of the ESMF
- Develop an outline review and approval process for the screening and for preparation of specific ESMPs/ ESIA

CHAPTER 2: Program Objectives, Description and Structure

2.1 Program Goal and Development Objectives

In supporting the Nigeria Human Capital Vision 2030, the Program, with other complementary child health investments, is expected to reduce under-five mortality from 132 to 79 per 1,000 births by 2030. Cutting U5MR by 40 percent in 10 years is a stretch goal but is achievable. Achieving a 40 percent decline in U5MR in 10 years would represent the achievement of the top 25 percent of LMCs over the last 25 years and would be much faster than the 16 percent decline observed in Nigeria during the last decade (2008–2018). Given global experience, it is not reasonable to expect Nigeria to achieve a faster rate of decline in U5MR.

The overall objective of the program is to reduce under-five mortality rate in program areas.

Ultimately, the Program will contribute towards significantly decreasing U5MR, reducing the burden of malaria particularly among the poor and vulnerable populations, reaping the benefits of routine vaccination, and improving neonatal health.

This would be achieved through three phases of the program with each having a phase objective. See Table 2.2.

2.2 Program Description/Design

A Multiphase Programmatic Approach (MPA) will be used for this Program. The use of an MPA enables a structured engagement through a set of linked operations. The MPA allows Bank clients to structure a long, large, or complex engagement as a set of smaller linked operations (or phases), under one Program. This MPA is not starting de novo but builds on an extensive series of previous, ongoing and planned operations that have focused on various aspects of maternal and child health.

2.2.1 Rationale for Using An MPA

There are strong reasons for using an MPA instead of a series of projects or stand-alone operations to reduce under-five mortality:

(a) **Need for continuity and persistence.** Accomplishing deep reductions in U5MR will require a continued focus over a long period on increasing the coverage of essential child health services and strengthening health systems. This cannot be achieved during the life of a single operation, which is why an MPA is a more appropriate instrument.

(b) **Long-term government and World Bank commitment have encouraged joint financing.** The MPA has already provided a framework for development partners to align to maximize impact. The U.K. Department for International Development (DFID) is about to commit about US$60 million of support for the MPA (particularly for the BHCPF) which will be channeled through a World Bank trust fund under the GFF umbrella. The Bill and Melinda Gates Foundation (BMGF) has also entered into an MoU with the FGoN for a grant of up to US$75 million over 2019–2023. The Islamic Development Bank has already approved US$100 million for the malaria component.

(c) **Flexibility to tailor/adapt.** An MPA allows for a programmatic engagement that can adapt readily to the context. For example, depending on the availability of public financing, support for the expansion of the BHCPF, envisioned as part of Phase II of the proposed MPA, could be speeded up to facilitate national rollout or slowed down if public funds were not yet available.

(d) **Learning.** An MPA would facilitate learning from multidimensional approaches and allow lessons to be more easily applied to subsequent activities. For example, the lessons from innovations in service delivery with NGOs could be more readily incorporated into other operations under the MPA. To ensure lessons are captured quickly, each of the operations will have robust M&E and an independent group to document learning from the stakeholders.

(e) **Tracking impact indicators.** Because individual operations have, rightly, shied away from making U5MR a Project Development Objective (PDO) indicator, there has been little attention focused on collecting and analyzing data on it. An MPA provides the structure and rationale for tracking and analyzing data on impact indicators (particularly U5MR) and ensuring it remains a regular aspect of the policy dialogue.

2.2.2 Program Framework

The use of an MPA enables a structured engagement to progressively target three outcomes.

(a) **Intermediate Program Outcome I (Phase I).** Improve utilization and quality of immunization plus and malaria services in selected states
(b) **Intermediate Program Outcome II (Phase II).** Scale-up provision of essential health services through the BHCPF
(c) **Intermediate Program Outcome III (Phase III).** Enhance delivery and uptake of essential health services in lagging states

This proposed MPA will be organized into three partly overlapping phases. This phased approach would allow the following:

- a rapid response to the Government's pressing request for support to malaria control and immunization;
- working out of operational challenges of the BHCPF as it is being phased in;
- assurance that facilities, LGAs, and states are ready for the BHCPF as Phase II rolls in;
- an opportunity to integrate high-impact interventions and PHC strengthening and scale both nationwide; and
- performance-based advancements that can ensure increased domestic financing over the period of the operation.

2.2.3 Participating States

There are a total of 22 states participating in this program with only Ekiti State participating in both the immunization and malaria programs. The other states include:

- **Component 1 (Malaria states) (10):** Abia, Bayelsa, Borno, Edo, Ekiti, Abuja FCT, Imo, Kogi, Lagos, Rivers

- **Component 2 (Immunization states) (12):** Adamawa, Bauchi, Benue, Ebonyi, Kaduna, Kano, Kogi, Kwara, Nasarawa, Oyo, Plateau, Sokoto

Kogi State would be only state taking part in the two components - Component 1 (Malaria) and Component 2 (Immunization). All other states will participate in Component 3 (Knowledge for Change). See Table 2.1 below

Table 2.1: List of States and Components in which they are Participating

		Component 1 (Malaria Control)		Component 2 (immunization Plus)		Component 3 (Knowledge for Change)
S/N	State	Parallel Financing with Partners	Fully Financed by World Bank Group	Complementary Financing with Partners	Fully Financed by World Bank Group	National in scope, with focus on following states
1	Abia		✓			✓
2	Adamawa				✓	✓
3	Bauchi			✓		✓
4	Bayelsa	✓				✓
5	Benue				✓	✓
6	Borno		✓			✓
7	Ebonyi				✓	✓
8	Edo	✓				✓
9	Ekiti		✓			✓
10	Enugu	✓				✓
11	FCT	✓				✓
12	Imo		✓			✓
13	Kaduna			✓		✓
14	Kano			✓		✓
15	Kogi	✓			✓	✓
16	Kwara				✓	✓
17	Lagos		✓			✓
18	Nasarawa				✓	✓
19	Oyo				✓	✓
20	Plateau				✓	✓
21	Rivers		✓			✓
22	Sokoto			✓		✓

2.3 Phases of the MPA

2.3.1 Phase I: High-impact interventions and innovations in service delivery:

Phase I of the MPA will focus on improving immunization, intrapartum care, perinatal care, and malaria control activities and use these platforms to strengthen systems. These high-impact interventions will take precedence because (a) they reflect the request of the Government; (b) there are large financing gaps in

malaria and immunization that are preventing these programs from covering large parts of the country thereby depriving children access to these life-saving services; and (c) they could potentially have a large and swift impact on U5MR. The World Bank has substantial experience in both malaria control and immunization but the MPA will also include important innovations in system strengthening which reflect success stories within World Bank-supported projects in Nigeria and globally, including decentralized financing for facilities, performance-based contracts with NGOs, performance frameworks for key national and state staff, and robust and timely data collection. This 'diagonal' approach to strengthening health systems while ensuring rapid delivery of priority interventions ensure rapid results in the short term while ensuring sustained systems strengthening in the medium and long term. The approach is also aligned with the World Bank's Health, Nutrition, and Population (HNP) Global Practice priorities identified under the World Bank Group's Gender Strategy. A deeper analysis of factors that interact with social and gender norms, which contribute to barriers to womens's access to and use of health services will be employed in designing high-impact interventions that aim to close the gaps in accessing immunization, intrapartum, and perinatal care as well as malaria control.

2.3.2 Phase II: Expanding PHC strengthening through the BHCPF.

The second phase of the MPA will support a large PHC—strengthening investment in the BHCPF in 15 states. Having a well-functioning PHC system is a necessary part of reducing U5MR because, despite effective preventive measures, children will get sick and require access to high-quality treatment (see table 1). High-quality PHC will also be needed to increase skilled birth attendance and postnatal care which will contribute to addressing neonatal mortality (that occurring within the first month of life), and improve reproductive health services which will contribute to improving under-five morbidity including malnutrition, and under-five mortality. More than 80 percent of the services provided through the BHCPF have direct implications for reducing under-five mortality. Phase II will be predicated on the successful implementation of the BHCPF in three states during Phase I (the pilot is being funded by a separate GFF grant).

2.3.3 Phase III: Integration and scale-up in lagging states.

The third phase of the MPA will be used to support the scale-up of the high-impact malaria and immunization plus interventions and PHC strengthening and help ensure that these complementary approaches work together coherently, with a focus on 10 lagging states. Lessons learned from Phases I and II on using NGOs to support service delivery, performance frameworks for federal and state actors to improve accountability, engaging the private sector in the BHCPF, and behavior change communication strategies will be transferred and applied to these states. Cross-sectoral collaborations with WASH, education, and social protection interventions will also be considered to mitigate environmental, social and demand-side barriers in improving child health.

The timing of the phases will enable enough time for learning, testing new innovations, and incorporating findings into subsequent phases. All three phases are expected to use IPF since this instrument will help (a) pioneer results-based contracts to enhance service delivery and strengthen PHC systems and (b) test innovations and quickly incorporate the lessons learned (figure 2.1).

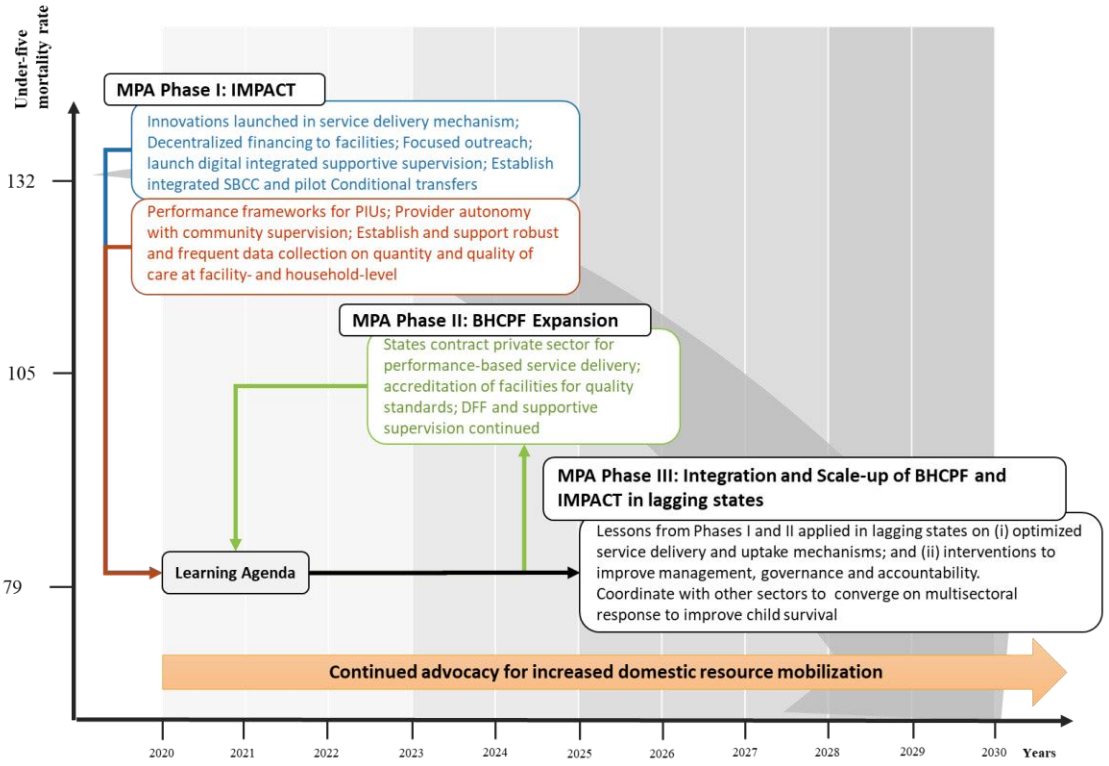

Fig 2.1: Phased Approach to Slashing U5MR in Nigeria

Table 2.2 MPA Program Framework

Phase	Sequential or Simultaneous	Phase's Proposed DO	IPF or PforR	Estimated IDA Amount (US$, million)	Estimated other Amount (US$, million)	Estimated Approval Date
I. IMPACT	—	Improve utilization and quality of immunization plus and malaria services in selected states	IPF	650.00	0.00	February 2020
II. BHCPF Expansion	Simultaneous	Scale up provision of essential health services through Basic Health Care Provision Fund in selected states	IPF	350.00	0.00	January 2022
III. Integration and Scale-up in Lagging States Phase	Simultaneous	Enhance utilization and quality of essential health services in lagging states	IPF	500.00	0.00	July 2025
			Total	**1,500.00**	**0.00**	

2.4 Components of the Program

PROJECT COMPONENTS	SUB COMPONENT DESCRIPTION
COMPONENT 1: Malaria Control (US$188.0 million equivalent IDA credit): This component seeks to improve utilization and quality of malaria prevention and treatment activities in Abia, Borno, Ekiti, Imo, Lagos, and Rivers states in addition to support at the federal level.	***Subcomponent 1.1: Strengthening Service Delivery (US$170.9 million):*** This subcomponent will finance performance-based contracts with NGOs in participating states and the interventions under this component would ▪ Strengthen the capacity of public and private sectors in management of sick children, including those with malaria; ▪ Provide LLINs to households and ensure nets are hung and used; ▪ Distribute SP to pregnant women (known as intermittent presumptive therapy [IPT]) during antenatal care through both the public and private providers; ▪ Provide SMC to under-five children in Borno (Sahelian State); ▪ Conduct interpersonal behavior change communication to improve behavior and knowledge in malaria prevention, care seeking, and treatment in communities; and ▪ Finance the procurement of commodities starting in the third year of the projects and manage the supply chain in collaborations with the State Ministry of Health (SMoH). ▪ Finance procurement of preventative and curative medicines and commodities for malaria including LLINs, ACTs, RDTs, SP, SPAQ- SMC for Borno (Sahelian state). ▪ Develop a policy for the Low Carbon Public Procurement of vehicles, bed nets, malaria chemoprophylaxis, and vaccines. ***Subcomponent 1.2: Health Systems Strengthening and Technical Assistance (US$17.1 million)*** The Program will support the health system and provide TA at federal and state levels through: ▪ **Training and technical support to SMEPs** on ▫ NGO contract management and supervision; ▫ (ii) data analysis and performance evaluation of the NGOs; ▫ organizing of annual or semiannual results conferences that bring together all states to learn from their implementation experience; and ▫ (iv) goods and operating costs to support day-to-day project management. ▪ **Training and technical support to the NMEP** on ▫ Contract management and supervision for national-level contracts (see Component 3); ▫ Large-scale procurement of LLINs and other antimalarial commodities; ▫ TA for private sector engagement to support local manufacturers toward attaining pre-qualification for malaria commodities; ▫ TA to support policy engagement and advocacy efforts to address identified policy constraints for local manufacturing, and ▫ goods and operating costs to support day-to-day project management. ▪ **Performance frameworks** to foster accountability of SMEPs and the NMEP for results and critical project activities with a view to improve project management practices within state and federal entities. Performance frameworks will be administered biannually and will provide performance bonuses to key members of the NMEP and SMEPs for completion of critical management processes such as proper FM, conducting of supportive supervision, mobilizing of domestic resources, data analysis and utilization, and effective contract management

COMPONENT 2: IMMUNIZTION PLUS: (US$409.3 million equivalent IDA credit) This component will support strengthening service delivery and health systems for immunization, maternal, child and neonatal services and will also finance vaccines and cold chain strengthening.	***Subcomponent 2.1: Strengthening Service Delivery (US$150.2 million)*** This subcomponent will finance interventions that will strengthen routine immunization, maternal, child, and neonatal service delivery in the context of strengthening PHC in 12 states (Adamawa, Benue, Ebonyi, Kogi, Kwara, Nasarawa, Oyo, Plateau, Bauchi, Kaduna, Kano, and Sokoto). This component will finance ▪ Initial investments to improve the facility quality standards and provide TA to the states to ensure that facilities, LGAs, and states themselves are trained in DFF implementation. ▪ Training on standard operating procedures for referral services to improve the link between primary health facilities and secondary hospitals. ***Subcomponent 2.2: Health Systems Strengthening and Technical Assistance (US$75.3 million)*** This subcomponent will be implemented at the national and state levels and will support the following activities: ▪ Provision of TA to national- and state-level PIUs and to LGA PHC Departments in the areas of management, supervision, and data analysis. ▪ Finance performance frameworks for key national, state, and LGA-level officials engaged in immunization plus activities. ***Subcomponent 2.3: Vaccines, Cold Chain and Logistics (US$183.8 million)*** ▪ Through this subcomponent, the project will support financing of the procurement of vaccines with an emphasis on new or recently introduced vaccines and strengthening of the cold chain and logistics. ▪ support the Government in financing vaccine procurement through United Nations Children's Fund (UNICEF) with an emphasis on PCV, rotavirus vaccine, and meningococcal vaccine. ▪ This Component will also finance the construction and expansion of the NPHCDA Cold and Dry Stores in Lagos State

COMPONENT 3: KNOWLEDGE FOR CHANGE (US$52.7 MILLION EQUIVALENT IDA CREDIT)	***Subcomponent 3.1: Strengthening Monitoring and Evaluation Systems (US$23.2 million)*** This sub-component will strengthen the M&E systems through ▪ Conducting of LQAS surveys to help assess performance at LGA and state levels for four years and also fund an external assessment of the LQAS methodology to draw lessons for implementation in other countries, especially in low coverage settings. ▪ Supporting the annual Household and Health Facility Surveys (SMART and NHFS) for the years that there is a funding gap. ▪ strengthening routine data used for planning and monitoring by supporting (a) DQA[2] on a sampling basis to improve routine District Health Information System-2 (DHIS-2) reporting accuracy and reliability of supervision scores, (b) resource mapping at the state level, and (c) microplanning activities to derive household-level population estimates of under-five children using GIS data and satellite imagery ▪ Financing a CHVA to identify the specific health threats faced by the Nigerian population and to ensure most efficient targeting of resources to deal with the risks faced now and into the future. ***Subcomponent 3.2: Integrating Social Behavior Change Communications (SBCC) Activities (US$15.1 million)*** The goal of this subcomponent is to improve social acceptability of preventive behaviors such as LLIN use and vaccination and of curative behaviors such as seeking care for sick children and seeking skilled providers for delivery and postnatal care. It will finance: ▪ Comprehensive SBCC Campaigns: The contracting of a firm to carry out formative research, development, and implementation of a comprehensive SBCC strategy for under-five health using mass media and social media. Another firm will be recruited to support SBCC provision through religious and traditional leaders. ▪ Beneficiary Feedback and GRM: Regular workshops and focus groups with beneficiaries to understand community perceptions about services. It will also strengthen the Government's GRM ('Servicom') ▪ Climate and Health Behavior: Develop and disseminate climate and health-related health promotion information. ***Subcomponent 3.3: Learning Agenda (US$14.4 million)*** This subcomponent will finance/provide, ▪ Operations research including process and IEs using both qualitative and quantitative methodologies to understand the impact of these innovations, and how they can be tailored to the country context and implemented in subsequent phases. ▪ It will also finance warehouses and cold-store capacity assessment at the state level, and based on findings from this assessment, Phase II may include provisions for any rehabilitation and construction of these buildings

	▪ Provide TA to support the design and learning for the Emergency Medical Services (EMS) as part of the implementation of the emergency gateway of the BHCPF ▪ finance testing of innovations in poorly performing LGAs as defined by both low Routine Immunization coverage and low levels of SBA.
COMPONENT 4: CONTINGENT EMERGENCY RESPONSE COMPONENT (CERC) (US$0 MILLION IDA)	Unused IDA financing will be allocated to financing this component which will respond quickly to health emergency with the potential to cause major adverse economic and/or social impacts. The CERC will serve as a first-line financing option for emergency response.

2.5 Description of Proposed Program and Sub Project Activities

The IMPACT Project (Phase I) under the MPA has been restructured to uptake outstanding activities under the Nigeria Polio Eradication Support Project – Additional Financing Three, specifically the construction and expansion of the National Primary Health Care Development Agency (NPHCDA) South West Zonal Cold and Dry Stores, located in Oshodi, Lagos State. This activity would be financed under Component 2 Subcomponent 2.3. Civil works associated with this are expected to include the following activities:

- Demolition of buildings located on the proposed project site
- Construction of new buildings to house the Cold store, the Dry store and Office accommodations
- Outfitting of the Cold store with 3 units of 500cm^3 walk in cold rooms with shelves for storage of vaccines and other temperature sensitive health commodities
- Outfitting of the dry store with shelves and climate control accessories – air conditioners, wall and ceiling lagging etc.
- Installation of security systems (CCTV cameras, etc.)
- Installation of smoke detectors and fire control systems
- Furnishing of the Office building
- Supply and installation of electricity generating sets (2 units 500KVA) and Solar Power system.
- Drainage and sewage system
- Landscaping of the entire compound

A separate stand-alone Environmental and Social Management Plan (ESMP) has already been prepared and disclosed in-country on October 7, 2019 and on the World Bank's External site on November 8, 2019 under the Nigeria Polio Eradication Support Project – Additional Financing Three Project.

[2] *Note:* IMPACT will support a robust DQA which would entail verification of a sample of the DHIS-2 entries through household visits, ideally conducted by an independent verifier.

This instrument addressed environmental and social risks and impacts associated with this sub project. The structural/architectural design, scope and project site of this sub project remains the same as under its original Project.

Other activities that will be financed under this Program will include minor rehabilitation repairs such as painting, plastering, and replacing doors/windows and leaking roofs may occur in existing buildings and health facilities.

Activities under the project will also include vaccination/immunization and distribution of drugs, LLINs and increased generation of HCW. A separate Healthcare Waste Management Plan (HCWMP) has been prepared and disclosed in-country on October 7, 2019 and on the World Bank's External site on November 8, 2019.

2.6 Challenges in the Nigerian Health Sector

Major health challenges in the country range from inadequate funding (less 5% of Nigeria's total annual budget or about $5 per person) to inaccessibility to HCF by communities and poor health infrastructure, fake drugs, insufficient financial investment, and lack of sufficient health personnel. These factors have culminated in low immunization rates, a high rate of U5MR which has necessitated the MPA program. In addition, the existing resources are grossly misallocated to secondary and tertiary health care resulting in dysfunctional or non-functional PHC facilities and high out-of-pocket expenditures by poor Nigerians.

Not only is funding insufficient, but accountability is weak and there has been little focus on tangible results. The potential of private sector, which accounts for about two-thirds (66%) of the spending in the health sector in the country, has also been ignored by the government.

There has been limited progress in delivery of basic health services in Nigeria in the last two decades—the coverage of key health interventions in the country has stagnated at low levels. The recently released UHC Service Coverage Index scores Nigeria at a low index of 39 with countries such as Yemen, Eritrea and Burkina Faso.

In response to these, the Government of Nigeria has enacted a potentially transformative National Health Act (NHA) of 2014.

2.7 Gender, Vulnerability and Disability

The MPA targets vulnerable poor women and children particularly in the rural areas. Ultimately, the project will contribute towards significantly decreasing U5MR, reducing the burden of malaria particularly among the poor and vulnerable populations including women and children.

The project promotes and mainstreams gender concerns in service delivery and capacity building in the health service delivery system. It will ensure that women's peculiar needs, especially during the antenatal, intrapartum, and postnatal periods, are considered, including the activities of NGOs. It will also support intervention and reforms that will benefit children, both girls and boys, through affordable access to health care services at the public and private sector facilities.

All social behavior change interventions will be carefully developed and implemented to reflect cultural peculiarity as it relates to women while at the same time seek to address underlying gender concerns and inequality that lead to restrictions of women's and children's access to health services delivery due to cultural constraints and lack of awareness.

The project promotes and mainstreams disability inclusion in service delivery and capacity building in the health service delivery systems. It will consider universal access to health care services and that health care personnel are aware of health-related challenges that persons with disabilities are facing, including pregnant women with disabilities. The project will focus on scaling up disability data collection and use, guided by global standards and best practices, such as using Washington Group's Short Set of Questions on Disability.

Phase 1 of this Program aims to significantly reduce the U5MR particularly among the poor and vulnerable population through strengthening intrapartum and perinatal care, improving vaccination rates, strengthening management of malaria in children and pregnant women, supporting the distribution of Sulphadoxine Pyrimethamine (SP) to pregnant women during antenatal care through both the public and rural private providers, providing seasonal malarial chemoprophylaxis (SMC) to under-five children, and distributing LLIN in selected participating states.

More specifically, subcomponent 1.1 will strengthen the management of sick children, including those with malaria, in both the public and rural private sectors. It will also make provision of SMC to children under 5 in selected Sahelian States. For women, subcomponent 1.1 of IMPACT will finance through NSAs the distribution of Sulfadoxine-Pyrimethamine (SP) to pregnant women during Antenatal Care (ANC) through both the public and rural private providers. Subcomponent 1.2 will strengthen routine immunization, maternal, child, and neonatal service delivery. Subcomponent 2.1 will strengthen routine immunization, maternal, child, and neonatal service delivery. Phase II of the Program will focus on maternal and child health interventions, including immunization, skilled birth attendance, and curative care for children.

CHAPTER 3: National Policies, Acts, Regulations, Administrative Framework and World Bank Safeguard Policies

3.1 Relevant Nigeria's National Policies

This Chapter examines the Policies, Acts and Regulations as they relate to MPA. It examines the Nigerian policies on environment and health and lastly, examines World Bank policies that are relevant to this project. It is expected that the World Bank policies shall supersede those of the country except when those of the country are adequate or more stringent.

Table 3.1 below shows Policies relevant to the MPA as well as their objectives.

Table 3.1: Nigerian Policies that are Relevant to the MPA

POLICY	OBJECTIVES
National Policy on the Environment (Revised 2016)	**Overall Policy Objective** To define a new holistic framework for guidance and management of the environment as well as natural resources of the country. **Objectives** ▪ Ensuring and securing the quality of Nigeria's environment to support good health and well-being; ▪ Promoting efficient and sustainable use of Nigeria's natural resources and the restoration and maintenance of the biological diversity of ecosystems; ▪ Promoting understanding of essential linkages between the environment, social and economic developmental issues; ▪ Encouraging individual and community participation in environmental improvement initiatives; ▪ Raising public awareness and engendering a national culture of environmental preservation; and ▪ Building partnership among all stakeholders, including government at all levels, international institutions and governments, non-governmental agencies and communities on environmental matters.
National Health Policy (Revised 2016)	**Overall Policy Objective** To strengthen the country's national health system such that it provides effective, efficient, equitable, quality, accessible, acceptable, affordable and comprehensive health services to all Nigerians. **Other Objectives** ▪ Securing a quality environment adequate for good health and well-being; ▪ Sustainable use environmental natural resources for the benefit of the country; ▪ Restore, maintain and enhance the ecosystems and ecological processes essential for the functioning of the biosphere to preserve biological diversity and the principle of optimum sustainable yield in the use of living natural resources and ecosystems; ▪ Raise public awareness and promote understanding of the essential linkages between the environment, resources and development, and encourage individuals and communities' participation in environmental improvement efforts; and ▪ Co-operate with other countries, international organizations and agencies to achieve optimal use of trans-boundary natural resources and effective prevention or abatement of trans-boundary environmental degradation.

National Gender Policy (2006)	It brings a gender perspective into all aspects of planning policy, developing legislation and transformation activities in Nigeria. It prioritizes the empowerment of women as a way of achieving gender equality and is based on the premise that gender inequality is about power relations between men and women, and that, any policy, plan or practice that seeks gender equality must balance these power relations for the optimum benefit of both parties.

3.2 Relevant National Acts

Table 3.2 below shows the Acts relevant to the MPA as well as their objectives.

Table 3.2: Nigerian Acts that are Relevant to the MPA

S/N	ACT	DESCRIPTION / SUMMARY OF OBJECTIVES
1	National Health Act, 2014	▪ Promote improvement and maintenance of the health of the citizens of Nigeria; ▪ Encompass public and private providers of health services; ▪ Promote a spirit of cooperation and shared responsibility among all providers of health services in the Federation and any part thereof; ▪ Provide for persons living in Nigeria the best possible health services within the limits of available resources; ▪ Set out the rights and obligations of health care providers health workers health establishments and users; ▪ Protect, promote and fulfil the rights of the people of Nigeria to have access to health care services; and ▪ Define and provide a framework for standards and regulation of health services.
2	EIA Act - CAP. E12 L.F.N. 2004	▪ To carry out an EIA on all projects likely to have significant impact on the environment; and ▪ Encourage information exchange and consultation between all stakeholders when proposed activities are likely to have significant impact on the environment.
3	National Environmental Standards and Regulations, Enforcement Agency Act, (NESREA) 2007	▪ Enforce compliance with national (and international) laws, legislations, guidelines, policies and standards on environmental matters; ▪ Coordinate and liaise with, stakeholders, within and outside Nigeria on matters of environmental standards, regulations and enforcement; ▪ Ensure that environmental projects funded by donor organizations and external support agencies adhere to regulations in environmental safety and protection; ▪ Enforce environmental control measures through registration, licensing and permitting Systems other than in the oil and gas sector; and ▪ Conduct environmental audit and establish data bank on regulatory and enforcement mechanisms of environmental standards other than in the oil and gas sector. Some relevant sections include *Section 7:* Authority to ensure compliance with all of Nigeria's environmental laws and treaty obligations; and *Section 8 (1) K and Section 27:* Authority to make and review regulations on air and water quality, discharge of effluents and other harmful substances as well as control of other forms of environmental pollution.
4	Factories Act, Cap F1, LFN 2004	▪ Provide a legal framework for the regulation of safety standards for the operation of factories in Nigeria; ▪ Set out minimum standards for clean and conducive working environments; ▪ Protect of workers exposed to occupational hazards; ▪ To provide for factory workers and a wider spectrum of workers and other professionals exposed to occupational hazards, but for whom no adequate provision had been formerly made; ▪ To make adequate provision regarding the safety of workers to which the Act implies; and

		▪ To impose penalties for any breach of its provision.
5	Nigerian Urban and Regional Planning Act CAP. N138 L.F.N. 2004	Facilitates the preparation and implementation of development plans and planning schemes and creating a better environment for living, working and recreation **Relevant Sections are:** ▪ *Section 30*: Requirement for a building plan by a registered architect before commencement of any building project; ▪ *Section 39:* Making the acceptance of a land development plan contingent on proof it would not harm the environment or constitute nuisance to the community; and ▪ *Section 74*: Ensures effective control in special cases like wasteland
6	Harmful Waste (Special Criminal Provisions, etc.) Act 1988	▪ Criminalizes all activities relating to the purchase, sale, importation, transit, transportation, deposit, storage of harmful wastes; and ▪ By this Act it is unlawful to dump harmful waste in the air, land or waters of Nigeria
7	Employee's Compensation Act 2010	▪ Makes provision for compensation for any death, injury, disease or disability arising out of or in the course of employment; and for related matters
8	Child Rights Act (2003)	▪ The Act was "the child shall be protected against all forms of neglect, cruelty and exploitation. He/she shall not be admitted to employment before an appropriate minimum age 18 in Nigeria); he/she shall in no case be caused or permitted to engage in any occupation or employment which would prejudice his/her health or education, or interfere with his/her physical, mental or moral development."

3.3 Relevant National Regulations

Table 3.3 below shows Regulations relevant to the MPA as well as their objectives/description.

Table 3.3: Environmental Regulations Relevant to the MPA

S/N	REGULATION	OBJECTIVE(S) AND RELEVANCE
1	National Environmental (Permitting and Licensing System) Regulations, 2009. S. I. No. 29.	The provisions of this Regulation enable consistent application of environmental laws, regulations and standards in all sectors of the economy and geographical regions.
2	National Environmental (Sanitation and Wastes Control) Regulations, 2009. S.I. No. 28	To provide the legal framework for the adoption of sustainable and environment friendly practices in environmental sanitation and waste management to minimize pollution. *Particularly relevant in the case of CWM and HCWM and all other waste.*
3	National Environmental (Noise Standards and Control) Regulations, 2009. S.I. No 35	To ensure tranquility of the human environment or surrounding and their psychological well-being by regulating noise levels. *Particularly relevant in the case of operation of generator sets and civil works*
4	National Environmental (Surface and Groundwater Quality Control) Regulations, 2010. S.I. No. 22	To restore, enhance and preserve the physical, chemical and biological integrity of the nation's surface waters, and to maintain existing water uses. *Particularly relevant in the case of CWM and HCWM*
5	National Environmental (Soil Erosion and Flood Control) Regulations, 2011. S. I. No. 12.	To check all earth-disturbing activities, practices or developments for non-agricultural, commercial, industrial and residential purposes. *Particularly relevant in the case of civil works and WM. Also, important particularly to south western south eastern states like Abia, Enugu, Imo, Anambra and Bayelsa states where erosion is an environmental issue. See Table 4.3*
6	National Environmental (Watershed, Mountainous, Hilly and Catchments Areas) Regulations, 2009. S. I. No. 27.	To protect of water catchment areas. All land users must observe and respect the carrying capacity of the land; carry out measures for soil conservation and for the protection of water catchment areas using the best available environmentally friendly technologies to minimize significant risks/damage to ecological and landscape aspects. *Particularly relevant in the case of civil works and WM*

7	National Environmental (Desertification Control and Drought Mitigation) Regulations, 2011. S. I. No. 13.	To provide an effective and pragmatic regulatory framework for the sustainable use of all areas already affected by desertification and the protection of vulnerable lands. *Specifically relevant in Borno State where about 50% to 75% of land is lost due to desertification. See Table 4.3*
8	National Environmental (Control of Bush/Forest Fire and Open Burning) Regulations, 2011, S.I. No. 15	To prevent and minimize the destruction of ecosystem through fire outbreak and burning of any material that may affect the health of the ecosystem through the emission of hazardous air pollutants. *Particularly relevant but not limited to burning of HCW and construction waste.*
9	National Environmental (Control of Vehicular Emissions from Petrol and Diesel Engines) Regulations, 2011. S. I. No. 20.	The purpose of these regulations is to restore, preserve and improve the quality of air. The standards contained in this regulation provide for the protection of the air from pollutants from vehicular emission and ensuring regular emission testing and maintenance of automobiles operating the road way. *Relevant considering possible transportation and distributions of vaccines, wastes and the operations of generating sets.*
10	National Environmental (Surface and Groundwater Quality Control) Regulations, 2011. S. I. No. 22.	To restore, enhance and preserve the physical, chemical and biological integrity of the nation's surface waters, and to maintain existing water uses. *Particularly relevant but not limited to HCW*
11	National Environmental (Construction Sector) Regulations, 2011. S. I. No. 19.	To prevent and minimize pollution from construction, decommissioning and demolition activities to the Nigerian environment. *Particularly relevant should there be civil works.*
12	National Environmental (Air Quality Control) Regulations, S. I. No 64, 2014.	To provide for improved control of the nation's air quality to such an extent that would enhance the protection of flora and fauna, human health and other resources affected by air quality deteriorations. *Particularly relevant in the case of civil works and HCW treatment*
13	National Environmental (Hazardous Chemicals and Pesticides) Regulations, S. I. No 65, 2014.	To protect human health and the environment from the harmful effects of hazardous chemicals and pesticides, and other agro-chemicals. It also contributes to the sustainable development. *Particularly relevant due to LLINs*
14	National Environmental (Construction Sector) Regulations, S. I. No. 19, 2011.	The purpose of these Regulations is to prevent and minimize pollution from Construction, Decommissioning and Demolition Activities to the Nigerian Environment. *Particularly relevant due to civil works.*

3.4 Institutional Framework

3.4.1 Ministries Relevant to the MPA

Table 3.4 shows the relevant federal and state ministries and their functions as they relate to the MPA

Table 3.4 Relevant Ministries and their functions

S/N	MINISTRY	RELEVANT FUNCTIONS AND RESPONSIBILITIES
1	Federal Ministry of Environment (FMEnv)	▪ Advise the Federal Government on National Environmental Policies and priorities, the conservation of natural resources and sustainable development and scientific and technological activities affecting the environment and natural resources; ▪ Cooperate 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; ▪ Prescribe standards for and make regulations on water quality, effluent limitations, air quality, atmospheric protection, ozone protection, noise control as well as the removal and control of hazardous substances; ▪ Monitoring and enforcing environmental protection measures;

		▪ Enforcing international laws, conventions, protocols and treaties on the environment; ▪ Prescribing standards for and making regulations on air quality, water quality, pollution and effluent limitations, atmosphere and ozone protection, control of toxic and hazardous substances; and ▪ Promoting cooperation with similar bodies in other countries and international agencies connected with environmental protection.
2	State Ministries of Environment (SMEnv)	▪ Liaison with the FMEnv in securing a healthy environment adequate for good health and well-being; ▪ Liaison with government bodies, private and international organizations in the performance of environmental functions including environmental education/awareness to the citizenry; ▪ Ensuring and preserving bio-diversity, conservation and preservation of a sustainable ecosystem; ▪ Ensuring institutional reforms for effective environmental management; ▪ Initiating, formulation, execution and monitoring of all issues relating to climate change towards mitigating the negative impact of climate change; ▪ Conserving, protecting and enhancing the environment, the ecosystem and ecological processes; ▪ Reducing land degradation, and developing alternative and renewable energy; ▪ Raising of public awareness and promotion of understanding of linkages between environment and development; ▪ Co-ordination of environmental protection and natural resources conservation for sustainable development; ▪ Supervision of other relevant environmental agencies; ▪ Monitoring and evaluation of EIAs and other environmental studies for development projects within their various respective states; ▪ Supervising of projects on major channels being funded by World Bank; ▪ Initiation, formulation, execution and monitoring of all issues relating to climate change towards mitigating the negative impact of climate change; ▪ Supervision and management of donor agencies assisted projects; and ▪ Environmental monitoring related to flood, erosion control, pollution control and environmental health.
3	Federal Ministry of Health (FMoH)	▪ Providing a people-oriented and sustainable health care delivery system in the State; ▪ Introducing community operational Research for Health; ▪ Providing a people-oriented and sustainable health care delivery system in the State; ▪ focus on preventive health service with emphasis on the major elements of primary Health Care System; ▪ Focusing on Primary the health care system in order to improve management and ensure community participation in planning and administration of health activities; ▪ Improving human resource for health; and ▪ Focusing on preventive health service with emphasis on the major elements of primary Health Care System and targeted interventions to convert the spread of communicable and non-communicable diseases.
4	State Ministries of Health (SMoH)	▪ Improving the health status and socio-economic advancement of individuals in their respective states using preventive, promotive and curative approaches; ▪ Establishing health institutions in under-served areas and expand existing health centres across their respective states; ▪ Maintaining existing training Institutions for health workers in their respective states; ▪ Ensuring that satisfactory standards are maintained in both government and private health institutions throughout their respective states; ▪ Providing essential infrastructure in all public health institutions in the state for efficient, qualitative, affordable and effective health services; ▪ Ensuring adequate provision of essential drugs, equipment and other materials for health care delivery services in their respective states;

		▪ Ensuring good working environment and reduce occupational hazards in both public and private sectors; and ▪ Assisting in strengthening the capacity of local governments to manage health programs and plans monitoring and evaluation of health institutions and the control of eradication of specific preventable diseases, improvement of access to reproductive/sexual health services.

3.4.2 Relevant State Ministries and Environmental Protection Agencies (SEPAs)

The State Environmental Protection Edicts was enacted under the FMEnv Act of 1990. This edict empowers every state in Nigeria to set up its own environmental protection agency that will ensure they each protect their environment in the most sustainable manner using Best Practicable environmental Option (BPEO) and Best Available Techniques (BAT). These State Environmental Protection Agencies (SEPAs) are thus charged with establishing environmental criteria, guidelines/specifications or standards for protecting their respective state's air, lands and waters as well as the environmental health and welfare of the people. These relevant SEPAs are listed in Table 3.5 below

Table 3.5: Relevant SEPAs of Selected Project States

S/N	STATE	LEGISLATION(S)	REGULATORY AGENCIES
1	Abia	Abia State Environmental Protection Law	▪ Abia State Ministry of Environment ▪ Abia State Environmental Protection Agency (ASEPA)
2	Adamawa	Anambra State Environmental Protection Agency Law	▪ Adamawa State Ministry of Environment ▪ Adamawa State Rural Water Supply & Environmental Sanitation Agency
3	Abuja FCT	Federal Capital Territory, Abuja Environmental Protection Agency Law	▪ Abuja Environmental Protection Board
4	Bauchi	Bauchi State Environmental Protection Agency Law	▪ Bauchi State Environmental Protection Agency
5	Bayelsa	Bayelsa State Environmental Sanitation Authority Law	▪ Bayelsa State Ministry of Environment ▪ Bayelsa State Environmental Sanitation Authority
6	Benue	Benue State Environmental Sanitation Authority (BENSESA) Law	▪ Benue State Environmental Sanitation Authority (BENSESA) ▪ Benue State Rural Water Supply and Sanitation Agency
7	Borno	Borno State Rural Water & Sanitation Agency Law	▪ Borno State Ministry of Environment ▪ Borno State Rural Water & Sanitation Agency ▪ Borno State Environmental Protection Agency (BOSEPA)
8	Ebonyi	Ebonyi State Environmental Protection Agency, law	▪ Ebonyi State Ministry of Environment ▪ Ebonyi State Environmental Protection Agency
9	Edo	Edo State Environmental & Waste Management Board Law	▪ Edo State Environmental & Waste Management Board
10	Ekiti	Ekiti State Waste Management Law	▪ Ekiti State Waste Management Board
11	Enugu	▪ Enugu State Environmental Protection Agency Law ▪ Enugu State Waste Management Authority Law	▪ Enugu State Waste Management Authority, Enugu ▪ Enugu State Environmental Protection Agency
12	Imo	▪ Imo State Environmental Protection Agency Law ▪ Imo State Bureau For Sanitation & Transport Law	▪ Imo State Ministry of Petroleum & Environment ▪ Imo State Environmental Protection Agency ▪ Imo State Bureau for Sanitation & Transport
13	Kaduna	▪ Kaduna State Environmental Protection Agency	▪ Kaduna State Ministry of Environment & Natural Resources ▪ Kaduna State Environmental Protection Agency

		▪ Kaduna State Waste & Sanitation Law	▪ Kaduna State Waste & Sanitation Project
14	Kano	▪ Kano State Environmental Protection Agency Law ▪ Kano State Refuse Management & Sanitation (REMASA) Law ▪ Kano State Rural Water Supply & Sanitation Agency Law	▪ Kano State Environmental Protection Agency ▪ Kano State Refuse Management & Sanitation Board (REMASAB) ▪ Kano State Rural Water Supply & Sanitation Agency (RUWASA)
15	Kogi	▪ Kogi State Environmental Protection Law ▪ Kogi State Sanitation & Water Management Law	▪ Kogi State Ministry of Environment & Physical Planning Development ▪ Kogi State Environmental Protection Board ▪ Kogi State Sanitation & Water Management Board
16	Kwara	Kwara State Environmental Protection Agency Law	▪ Kwara State Ministry of Environment & Tourism ▪ Kwara State Environmental Protection Agency
17	Lagos	▪ Lagos State Waste Disposal Law ▪ Lagos State Environmental Protection Agency (LASEPA) Law ▪ Lagos State Waste Management Authority (LAWMA) Law ▪ Lagos State Environmental Sanitation Law ▪ Lagos State Environmental Pollution Control Law	▪ Lagos State Waste Disposal Board (LSWDB) ▪ Lagos State Environmental Protection Agency (LASEPA) ▪ Lagos State Waste Management Authority (LAWMA) ▪ Lagos State Waste Management Agency Operatives (PSP)
18	Nasarawa	Nasarawa State Environmental Law	▪ Nasarawa State Ministry of Environment and Natural Resources ▪ Nasarawa State Environmental Protection Agency
19	Oyo	▪ Oyo State Environmental Protection Agency Law ▪ Ibadan Waste Management Authority Law	▪ Oyo State Environmental Protection Commission ▪ Oyo State Ministry of Environment & Water Resources ▪ Ibadan Waste Management Authority
20	Plateau	▪ Plateau Rural Water Supply & Sanitation Agency Law ▪ Plateau State Environmental Protection & Sanitation Agency Law	▪ Plateau Rural Water Supply & Sanitation Agency ▪ Plateau State Environmental Protection & Sanitation Agency
21	Rivers	River State Environmental Protection Agency Law	▪ River State Environmental Protection Agency ▪ Urban Development Board ▪ River State Ministry of Environment ▪ Rivers State Waste Management Agency (RIWAMA)
22	Sokoto	Sokoto State Environmental Protection Agency Law	▪ Sokoto State Ministry of Environment ▪ Sokoto State Environmental Protection Agency (SEPA)

3.5 International Conventions and Treaties Relevant to the MPA

Table 3.6: Relevant International Conventions and Treaties

S/N	TREATIES	DESCRIPTIONS
1	Basel Convention on the Control of Trans-boundary Movements of	Nigeria ratified this treaty in March 1991 and it came into effect in 1992. It is a treaty designed to reduce the movements of hazardous waste between nations, and to prevent the illegal transfer of

	Hazardous Waste and their Disposal (1992).	hazardous waste between developed and under-developed countries. Annex 1 of this treaty lists hazardous wastes while the Annex 3 lists characteristics. For a substance to be a hazardous waste it must be listed on Annex 1 and possess the characteristics on Annex 3. Characteristics include being explosive, flammable, toxic and/or corrosive.
2	Rotterdam Convention on Prior Informed Consent (1998)	Nigeria ratified this treaty in October 2001 and it came into effect in February 2004. This treaty promotes shared responsibilities in relation to importation and international trade of hazardous chemicals (such as mercury compounds) and pesticides (such as 1, 2-Dibromoethane and Polychlorinated biphenyl).
3	Stockholm Convention on Persistent Organic Pollutants (2002)	Nigeria signed this treaty in 2001 and it became effective in May 2004. This treaty aims to eliminate or restrict the production and use of Persistent Organic Pollutants (POPs).
4	Minamata Convention on Mercury (2013)	Nigeria ratified this treaty in February 2018. The objective of the treaty is to protect the human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds. The treaty also addresses the direct mining of mercury, its export and import, its safe storage and its disposal once as waste.

3.6 Other Relevant Treaties and Conventions

Table 3.7 below shows other relevant Treaties and Conventions to which Nigeria is a signatory to.

Table 3.7: Other Relevant Treaties and Conventions Related to the MPA

S/N	TREATIES AND CONVENTIONS	YEAR
1	The African Convention on the Conservation of Nature and Natural Resources, the African Convention	1968
2	The Convention on the Prevention of Marine Pollution by Dumping of Waste, MARPOL	1972
3	The Convention Concerning the Protection of the World Cultural and Natural Heritage, the World Heritage Convention	1972
4	The convention on International Trade in Endangered Species of Wild Fauna and Flora, CITES	1973
5	The Convention on Biological Diversity	1992
6	The Framework Convention on Climate Change, Kyoto Protocol	1995

3.7 World Bank Safeguard Policies

3.7.1 Project Safeguards Instruments

The World Bank has 10 + 1 Safeguard Policies to reduce or eliminate the negative environmental and social impacts of potential projects, and improve decision making. World Bank safeguard policies are shown in Fig 3.1 below. See Annex 2 for more on Safeguard Policies.

Environmental Policies

- OP 4.01 Environmental Assessment
- OP 4.04 Natural Habitats
- OP 4.09 Pest Management
- OP 4.36 Forests
- OP 4.37 Safety of Dams

Social Policies

- OP 4.11 Physical Cultural Resources
- OP 4.12 Involuntary Resettlement
- OP 4.10 Indigenous Peoples

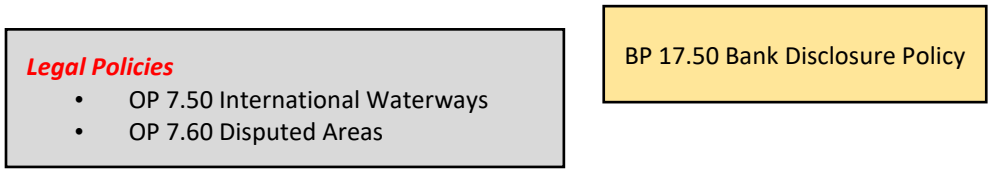

Fig 3.1 World Bank Safeguard Policies

* OP 4.01 Environmental Assessment is the only World Bank Policy triggered by the activities of the MPA

3.7.2 Activities and Component(s) of the MPA That Trigger Environmental Assessment OP 4.01

OP 4.01 on Environmental Assessment is triggered for this Program and it has been categorized under World Bank's Category B (Nigeria Category II equivalent) given the potential environmental and social concerns around with handling of health care waste and the civil works associated with the Program.

Most activities that would be financed under Program were initially indicated as minor rehabilitation repairs such as painting, plastering, and replacing doors/windows and leaking roofs may occur in existing buildings and health facilities. The potential risks and impact of these civil works are expected to be minor, site specific, and relatively easy to mitigate. However, under Phase I, the Program will now finance the construction and expansion of the National Primary Health Care Development Agency (NPHCDA) South West Zonal Cold and Dry Stores, located in Oshodi, Lagos State. This activity could not be completed under the Nigeria Polio Eradication Support Project – Additional Financing Three hence the restructuring of the IMPACT Program to accommodate this activity. The impacts associated with this construction and expansion have already been assessed and a stand-alone Environmental and Social Management Plan (ESMP) has been prepared and disclosed for this activity since the precise location of the civil works had earlier been identified. In addition, Phase II may include provisions for any rehabilitation and construction of buildings such as warehouses and cold store.

Other activities under the Program will include vaccination/immunization and distribution of drugs and LLINs that generate health care waste such as expired vaccines, sharps, used and expired LLINs which pose environmental and social risks. To address this concern, a Healthcare Waste Management Plan (HCWMP) has been prepared, aligned with the approved National Healthcare Waste Management Plan and Guidelines for Nigeria.

Under all phases of the MPA there would be an increase in the procurement and usage of vaccines, syringes, needles (sharps Class 3), blood clotted cotton wools (infectious wastes Class 2) and drugs (pharmaceutical waste Class 5) which would result in an increase in waste generation. Most of the HCW that would be generated because of MPA operations can be classified into Classes 1, 2, 3 and 5 in accordance with the National Healthcare Waste Policy of 2013. See Chapter 6.

This ESMF and other relevant instruments that may be required at different stages of this Program (and sub-project) will be disclosed in country and on the Bank's External Website before civil works commences in line with Nigerian EIA Law and the World Bank Disclosure Policy.

3.8 World Bank Environmental Health and Safety Guidelines (ESHG)

The Environmental, Health, and Safety Guidelines (EHSG) are technical reference documents with general and industry specific examples of Good International Industry Practice (GIIP). When one or more members of the World Bank Group are involved in a project, these EHS Guidelines are applied as required by their respective policies and standards. The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. Application of the EHS Guidelines to existing facilities may involve the establishment of site-specific targets, with an appropriate timetable for achieving them.

The EHSG has specific sector guidelines and good practice to address potential risks and impacts. For the MPA there are two sets of the EHSG that are pertinent.

- **Environmental, Health, and Safety General Guidelines:** This would address environmental and social risks and impacts relevant to the minor renovation and rehabilitation that might occur as a result of the MPA. A copy of this can be accessed via https://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/F+General+EHS+Guidelines.pdf?MOD=AJPERES
- **Environmental, Health, and Safety Guidelines for Health Care Facilities**: This is particularly relevant to address concerns of increased HCW that would be generated at HCF during the MPA. A copy can be accessed via https://www.ifc.org/wps/wcm/connect/bc554d80488658b6b6e6f66a6515bb18/F%2BHealth%2BCare%2BFacilities.pdf?MOD=AJPERES&id=1323161961169

3.9 Assessment of the Nigerian Environmental and Social Regulatory System

The Environmental Impact Assessment Act No. 86 of 1992 requires that development projects be screened for their potential environmental and social impacts. Based on this screening, a full, partial, or no EIA may be required. According to these guidelines the Nigeria EIA Categorizes projects into 3. See Table 3.8.

These categories are I, II and III and in principle correspond to the World Banks categories of A, B and C respectively. However, in actual practice categorization is done with regards to the level of impacts associated with a given project and or sub project. See Table 3.8

Table 3.8: Comparison of Project Categorization between Nigerian Laws and the World Banks Policies

S/N	NIGERIAN CATEGORIZATION	WORLD BANK CATEGORIZATION
1	**Category I:** Projects categorized as I include 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),	**Category A:** Projects are those whose impacts are sensitive, diverse, and unprecedented, felt beyond the immediate project environment and are potentially irreversible over the long term. Such projects require full EA

	forestry (50 hectares or more conversion, etc which will require a compulsory full EIA	
2	**Category II** Projects categorized as I 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 B** Projects involve site specific immediate project environment interactions. They do not significantly affect human populations, do not significantly alter natural systems and resources, do not consume much natural resources (e.g., ground water) and have negative impacts that are not sensitive, diverse, unprecedented and are mostly reversible. Category B projects will require partial EA, and environmental and social action plans
3	**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	**Category C** Projects are mostly benign and are likely to have minimal or no negative environmental impacts. Beyond screening, no further EA action is required for a Category C project, although some may require environmental and social action plans
4	**N/A**	**FI Category** A proposed project is classified as Category FI if it involves investment of Bank funds through a financial intermediary, in sub-projects that may result in negative environmental and social impacts

Amongst the existing pieces of legislations highlighted above, there are also a number of various state, environmental and social guidelines applicable to the Program and its sub projects. All these are sufficient in addressing safeguard concerns related to World Bank's Policy OP 4.01 on Environmental Assessment. Thus, in general, Nigeria has a satisfactory governance framework and laws to address and manage the environmental and social safeguard issues that have been identified under the IMPACT Program.

The main challenge would be the enforcement of these legislation/guidelines. Thus, as part of this ESMF, and in order to support the due diligence process, to avoid causing harm as well as to ensure consistent treatment of environmental and social issues across the sub-project intervention areas, institutional capacity strengthening, and funding have been recommended as part of this ESMF.

CHAPTER 4: Baseline Studies of Nigeria & Program States

4.1 General Overview of Nigeria

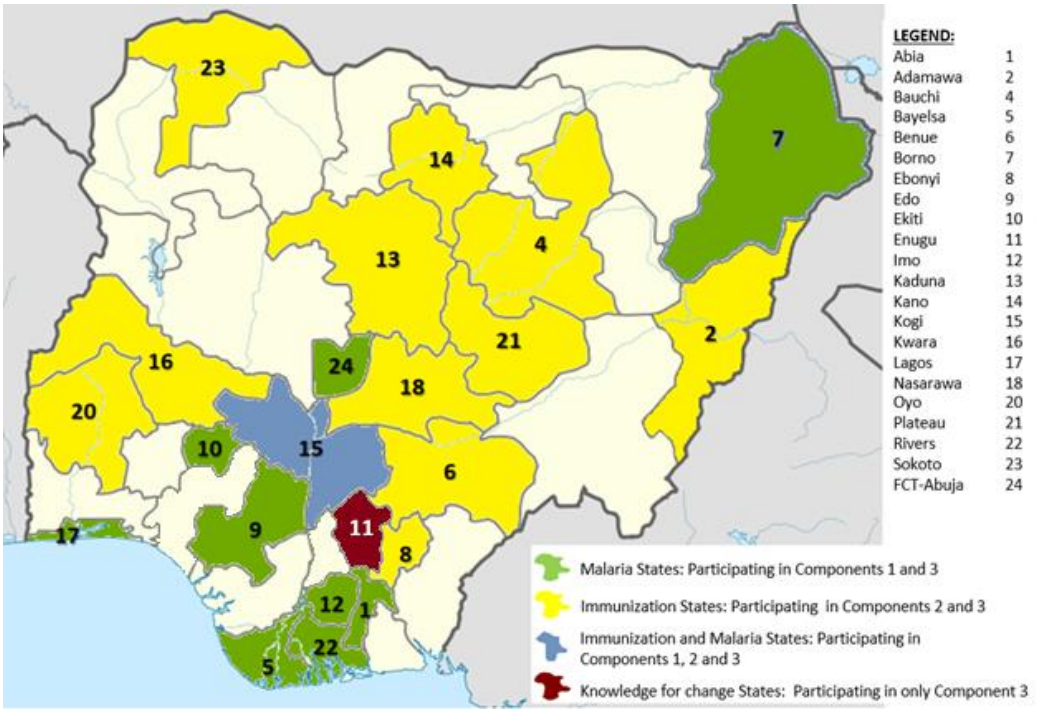

Figure 4.1 Map of Nigeria showing Participating states in the MPA

Nigeria is located between latitude 9°4'N and longitude 7°29'E. It shares a 773 km border with the Republic of Benin in the west, an 87 km border with Chad and a 1,690 km border with Cameroon in the east. It is also bordered by a 1,497 km border with the Republic of Niger in the north and finally it has a coastline with the Atlantic Ocean in the south which extends for about 853 km. Its entire geographic landmass covers an area of 923,768 square kilometers making it the 32 largest country in the world.

Its population is estimated to be 193,392,517 according to NBS which means it accounts for 2.57% of the total world population and about 47 percent of West Africa's population. It is also the seventh largest country by population in the world. Population density is estimated to be 215 per km^2. 51% of its population is distributed in urban centers and with a median age of 17.9 years, it has the third largest youth population in the world, after India and China, with more than 90 million of its population under age 18. By 2100 the UN estimates that the Nigerian population will be between 505 million and 1.03 billion people. Women constitute 49.2%and men 50.8% Population growth rate is estimated at 3.2%.

Nigeria's health sector is functions on the three levels of government (federal, state and local).

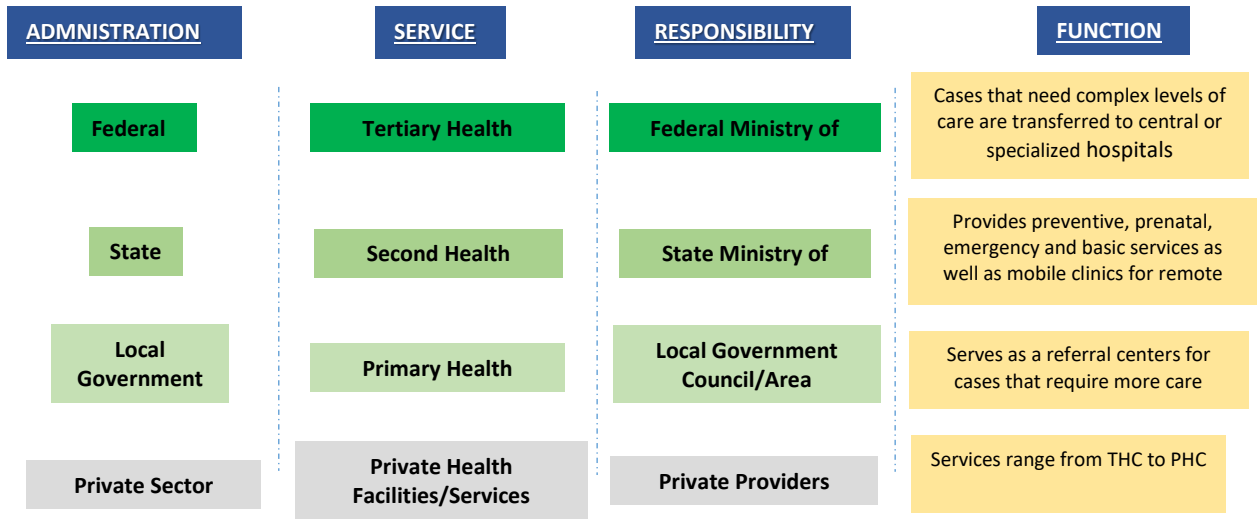

Fig 4.2 Structure of the Nigeria Health Sector

Major health challenges in the country range from inadequate funding (less 5% of Nigeria's total annual budget or about $5 per person) to inaccessibility to HCF by communities and poor health infrastructure, fake drugs, insufficient financial investment, and lack of sufficient health personnel. These factors have culminated in low immunization rates, a high rate of U5MR which has necessitated the IMPACT program. In addition, the existing resources are grossly misallocated to secondary and tertiary health care resulting in dysfunctional or non-functional PHC facilities and high out-of-pocket expenditures by poor Nigerians.

Importantly, a very low percentage of HCF practice suitable or safe HCWM. In addition, only about 20 % of the 30,000 PHC are functional.

Tables 4.1, 4.2 and 4.3 below show the relevant baseline for the selected participating states.

4.2 General Baseline of Participating States

Table 4.1 General baseline for the Participating States

PARAMETER	ABIA	ADAMAWA	BAUCHI
LOCATION	Latitudes 04^{O} 40' and 6^{O} 14' north, and longitudes 7° 10' and 8° east | South eastern Nigeria in the core Niger Delta region	Latitude 9^{O}20^{I} north and Longitude 12^{O} 30^{I} east | Northeastern Nigeria	Latitudes 9^{O}30^{I} and 12^{O}30^{I} North and longitudes 8^{O}45^{I} and 11^{O}00^{I} East | North-Eastern Nigeria
BOUNDARIES	Bounded on the north and northeast by the states of Anambra, Enugu, and Ebonyi. To the west of Abia is Imo State, to the east and southeast are Cross River State and Akwa Ibom State, and to the south is Rivers State. The southern part of the State lies within the riverine part of Nigeria.	Bordered in the North by Borno State, to the west by Gombe State, to the south by Taraba State and to the east by the Republic of Cameroon.	Bordered by Jigawa in the north, Gombe in the east, Plateau in the south and Kaduna and Kano to the west
AREA	6,320 km^2	36,917 km^2	45,837 km^2
POPULATION	**2006 Census Population:** 2,845,380 **Projected Population 2016:** 3,727,300	**2006 Census Population:** 3,178,950 **Projected Population 2016:** 4,248,400	**2006 Census Population:** 4,653,066 **Projected Population 2016:** 6,537,300
DENSITY	589 persons/ km^2	115.1 persons/ km^2	142.6 persons/ km^2
LGA	(17) - Aba North, Aba South, Arochukwu, Bende, Ikwuano, Isiala Ngwa North, Isiala Ngwa South, Isiukwuato, Obi Ngwa, Ohafia, Osisioma Ngwa, Ugwunagbo, Ukwa East, Ukwa West, Umuahia North, Umuahia South, Umunneochi	(21) Demsa, Fufore, Ganye, Girei, Gombi, Guyuk, Hong, Jada, Lamurde, Madagali, Maiha, Mayo-Belwa, Michika, Mubi North, Mubi South, Numan, Shelleng, Song, Toungo, Yola North (State capital), Yola South	(20) Bauchi, Tafawa Balewa, Dass, Toro, Bogoro, Ningi, Warji, Ganjuwa, Kirfi, Alkaleri, Darazo, Misau, Giade, Shira, Jama'are, Katagum, Itas/Gadau, Zaki, Gamawa, Damban
MAJOR ETHNIC GROUPS	Ibo	Marghi, Higgi, kilba, Bura, Hausa, Fulani, Bwatiye, Chamba, Longuda, Yungur, Kanakuru, Gude, Fali, Lala	Hausa, Fulani, Sayawa, Bulewa, Karekare, Kanuri, Warjawa, Zulawa and Badawa
MAJOR RELIGION	Christianity	Islam, Christianity and Traditional Religion	Muslim
LANGUAGE	English, Igbo	Bacama/Bata (Bwatiye), Bura-Pabir, Fulfulde, Huba (Kilba), Longuda, Mumuye and Samba Daka	English, Hausa
OTHERS	Its capital city is Umuahia. Abia State is low-lying with a heavy rainfall of about 2400 mm/year especially intense between the months of April through October. The rest of the State is moderately high plain. The most important rivers in Abia State are the Imo and Aba Rivers, which flow into the Atlantic Ocean through the Niger Delta.	Capital city is Yola. The state has been affected by the Islamist insurgency in Nigeria. As of November 30, 2014, an estimated 400,000 internally displaced persons was recorded in the state	Its capital city is Bauchi and it is the fourth largest states by area in Nigeria. It is also the 7th largest by population in Nigeria

Table 4.1 General baseline for the Participating States (Continued)

PARAMETER	BAYELSA	BENUE	BORNO	EBONYI
LOCATION	Latitude 04^{O} 45' North and longitude 06^{O} 06' East | Southern Nigeria	Latitude 6^{O} 25' and 8^{O} 8' North and longitudes 7^{O} 47'E and 10^{O} East | North central	Latitude 11°30′ North and longitude 13°00′ East | North Eastern corner of Nigeria and occupies the greater part of the Chad Basin	Latitude 5^{O}40^{I} and 6^{O}45^{I} North and longitude 7^{O}30^{I} and 8^{O}40^{I} East | Southeastern Nigeria
BOUNDARIES	Bounded in the north by Delta State, Rivers State on the East and the Atlantic Ocean on the West and South.	Bounded by Nassarawa State to the north, Taraba to the northeast, Ebonyi and Cross River States to the south, Anambra to the southwest, Kogi State to the west and Republic of Cameroon along Nigeria's southeast border	It shares borders with the Republics of Niger to the North, Chad to the North-East and Cameroun to the East, Adamawa State to the South, Gombe State to the West and Yobe State to the North-West.	Bordered in the north by Benue State, to the west by Enugu State, to the east by Cross River State and to the south by Abia State.
AREA	10,773 km^2	34,059 km^2	70,898 km^2	5,670 km^2
POPULATION	**2006 Census Population:** 1,704,515 **Project Population 2016:** 2,278,000	**2006 Census Population:** 4,253,641 **Project Population 2016:** 5,741,800	**2006 Census Population:** 4,171,104 **Project Population 2016:** 5,860,200	**2006 Census Population:** 2,176,947 **Project Population 2016:** 2,880,400
DENSITY	211 persons/ km^2	168 persons/ km^2	101 persons/ km^2	508 persons/ km^2
LGA	(9) - Brass, Ekeremor, Kolok/Opokuma, Nembe, Ogbia, Sagbama,Southern Ijaw, Yenagoa, Membe	(23) - Ado, Agatu, Apa, Buruku, Gboko, Guma, Gwer East, Gwer West, Katsina-Ala, Konshisha, Kwande, Logo, Makurdi, Obi, Ogbadibo, Ohimini, Oju, Okpokwu, Otukpo, Tarka, Ukum, Ushongo, Vandeikya	(27) Abadam, Askira/Uba, Bama, Bayo, Biu, Chibok, Damboa, Dikwa, Gubio, Guzamala, Gwoza, Hawul, Jere, Kaga, Kala/Balge, Konduga, Kukawa, Kwaya Kusar, Mafa, Magumeri, Maiduguri, Marte, Mobbar, Monguno, Ngala, Nganzai, Shani	(13) Abakaliki, Afikpo North, Afikpo South (Edda), Ebonyi, Ezza North, Ezza South,Ikwo Ishielu, Ivo, Izzi, Ohaozara, Ohaukwu, Onicha
MAJOR ETHNICITY GROUPS	Ijaw, Kolokunu, Ekpetiama, Igbriran, Atissa and Biseni	Tiv, Idoma, Igede, Etulo, Abakpa, Jukun, Hausa, Igbo, Akweya and Nyifon	Kanuri, Lamang, Babur/Bura and Marghi	Ibo
MAJOR RELIGION	Christianity and traditional worship.	Christianity	Islam	Christianity
LANGUAGE	English, Izon, Nembe, Ogbia, English and Epie-Atissa.	English, Tiv, Idoma, and Igede	English, Kanuri, Hausa, Marghi and Mandara	English, Ibo
OTHERS	**Capital:** Yenegoa **By Area: 27**st largest in Nigeria **By Population:** 36th largest in Nigeria. It larger than only Abuja FCT	The state is named after the second longest River in the country – Benue. It is also famous for its agriculture and referred to as the food basket of Nigeria **Capital:** Makurdi **By Area:** 11st largest in Nigeria **By Population:** 9th largest in Nigeria	**Capital:** Maiduguri **By Area:** 2nd largest in Nigeria **By Population:** 11th largest in Nigeria	**Capital:** Abakaliki **By Area:** 33rd largest in Nigeria **By Population:** 34th largest in Nigeria

Table 4.1 General baseline for the Participating States (Continued)

PARAMETER	EDO	EKITI	ENUGU	IMO
LOCATION	Latitude 6°30' North and longitude 6°00'E | Southern Nigeria	Latitudes $7^{O}25^{I}$ and $8^{O}5^{I}$ N and between longitudes $4^{O}45^{I}$ E and $4^{O}46^{I}$ east | South west Nigeria	Latitude $6^{O}30^{I}$ North and longitude $7^{O}30^{I}$ East | Southeastern Nigeria	**4**$^{O}45^{I}$ N and $7^{O}15^{I}$ N and longitude $6^{O}50^{I}$ E and $7^{O}25^{I}$ E | Southeastern Nigeria
BOUNDARIES	Bounded in the north and the east by Kogi State, Ondo State on the west and Delta State on the south.	Bounded on the South by Ondo State, on the North by Kwara State, on the East by Kogi State and on the west by Osun State.	Bounded by Anambra on the West, Abia State on the South, Kogi on the North while Benue and Ebonyi on the East, and Imo State on the south.	Bordered by Abia State on the East, River Niger and Delta State to the West, Anambra State on the North and Rivers State to the South
AREA	17,802 km^2	6,353 km^2	7,161 km^2	5,530 km^2
POPULATION	**2006 Census Population:** 3,233,366 **Project Population 2016:** 4,235,600	**2006 Census Population:** 2,398,957 **Project Population 2016:** 3,270,800	**2006 Census Population:** 3,267,837 **Project Population 2016:** 4,411,100	**2006 Census Population:** 3,927,563 **Project Population 2016:** 5,408,800
DENSITY	237persons/ km^2	514 persons / km^2	610 persons/ km^2	978 persons/ km^2
LGA	(19) Akoko-Edo, Egor,Essann east, Esan south east, Esan central,Esan west, Etsako central, Etsako east, Etsako, Orhionwon,Ivia north,Ovia south west, Owan west, Owan south, Uhunwonde	(16) Ado Ekiti, Effon Alaiye, Ekiti south west, Ekiti west, Ekiti east, Emure/ise, Orun, Ido,Osi, Ijero, Ikere, Ikole, Ilejemeje,Irepodun, Ise/Orun,Moba, Oye, Aiyekire.	(17) Awgu, Aninri, Enugu east, Enugu south, Enugu north, Ezeagu, Igbo Eze north, Igbi etiti, Nsukka,Oji river, Undenu,Uzo Uwani, Udi	(27) Aboh-mbaise, Ahiazu-Mbaise, Ehime-Mbaino, Ezinhite, Ideato North, Ideato south, Ihitte/Uboma, Ikeduru, Isiala, Isu, Mbaitoli, Ngor Okpala, Njaba, Nwangele, Nkwere, Obowo, Aguta, Ohaji Egbema, Okigwe, Onuimo, Orlu, Orsu, Oru west, Oru, Owerri, Owerri North, Owerri south.
MAJOR ETHNICITY GROUPS	Edos (Binis), Esan, Etsako, Akoko Edo, and Afemai	Yoruba	Ibo	Ibo
MAJOR RELIGION	Christianity, Muslim and traditional worship	Christianity	Christianity	Christianity
LANGUAGE	English, Edo, Etsako, Esan and Owan, Akoko Edo,Okpameri, Ijaw and English.	Yoruba (Ekiti)	Ibo	Ibo
OTHERS	**Capital:** Benin City **By Area:** 24th largest in Nigeria **By Population:** 24th largest in Nigeria	**Capital:** Ado Ekiti **By Area:** 31st largest in Nigeria **By Population:** 29th largest in Nigeria	**Capital:** Enugu **By Area:** 29th largest in Nigeria **By Population:** 22th largest in Nigeria	**Capital:** Owerri **By Area:** 34st largest in Nigeria **By Population:** 14th largest in Nigeria

Table 4.1 General baseline for the Participating States (Continued)

PARAMETER	KADUNA	KANO	KOGI	KWARA
LOCATION	Latitudes 9°03' and 11°32' North and longitudes 6°05' and 8°48' East | Northwestern Nigeria	Latitude 12°00' North and longitude 8°31' East | Northwestern Nigeria	Latitude 7°30' North and longitude 6°42' East | North central Nigeria	Latitudes 8°00' and 10°00' North and longitudes 3°00' and 6°00' East | North central Nigeria
BOUNDARIES	Bordered Zamfara, Katsina, Niger, Kano, Bauchi, Nasarawa, Plateau States, and the Federal Capital Territory to the South - West	Bordered in the north-west by Katsina State, Jigawa State to the north-east, Bauchi State to the south-east and Kaduna State to the south-west	Bordered in the north by Abuja FCT, Nasarawa State to the north east, Benue State to the east, Enugu State to the south east, Anambra State to the south, Edo State to the south west, Ondo State to the west, Ekiti State to the west, Kwara State to the west, and Niger State to the north. It is the only state in Nigeria which shares a boundary with ten other states.	Bordered in the north by Niger State, Kogi State in the east, Oyo, Ekiti and Osun States in the south and an international boundary with the Republic of Benin in the west
AREA	46,053 km^2 (5% of the total land area of Nigeria)	20,131 km^2	29,833 km^2	36,825 km^2
POPULATION	**2006 Census Population:** 6,113,503 **Project Population 2016:** 8,252,400	**2006 Census Population:** 9,401,288 **Project Population 2016:** 13,076,900	**2006 Census Population:** 3,314,043 **Project Population 2016:** 4,473,500	**2006 Census Population:** 2,365,353 **Project Population 2016:** 3,192,900
DENSITY	179.2 persons/ km^2	649.6 persons/ km^2	150 persons/ km^2	86.70 persons/ km^2
LOCAL GOVERNMENT AREA (LGA)	(22) Birnin Gwari, Chikun, Giwa, Igabi, Ikara, Jaba, Jema'a, Kachia, Kaduna North, Kaduna South, Kagarko, Kaura, Kauru, Kubau, Kudan, Lere, Makarfi, Sabon Gari, Sanga, Soba, Zangon Kataf, Zaria.	(44) Ajingi, Albasu, Bagwai, Bebeji, Bichi, Bunkure, Dala, Dambatta, Dawakin Kudu, Dawakin Tofa, Doguwa, Gabasawa, Garko, Garun Malam, Gaya, Gezawa, Gwale, Gwarzo, Kabo, Karaye, Kibiya, Kiru, Kumbotso, Kura, Kunchi, Madobi, Makoda, Minjibir, Kano Municipal, Nassarawa, Rimini Gado, Rogo, Shanono, Sumaila, Takai, Tarauni, Tsanyawa, Tudun Wada, Tofa, Warawa and Wudil.	(21) Adavi, Ajaokuta, Ankpa, Bassa, Dekina, Yagba east, Koton Karfe, Ibaji, Idah, Igalamela-Odolu, Ijumu, Kabba bunu, Lokoja, Mopa muro, Ofu, Ogori magongo, Okehi, Okene, Olamaboro, Omala, Yagba west.	(16) Asa, Baruten, Edu, Ekiti, Ifelodun, Ilorin East, Ilorin West, Ilorin South, Irepodun, Kaiama, Moro, Offa, Oyun, Isin, Oke-Ero and Patigi.
MAJOR ETHNICITY GROUPS	Hausa, Fulani, Gbagyi, Adara, Ham, Gong, Atyap, Bajjuu, Ninkyob, Kurama, Koro, zango kataf, mada and Agworok	Hausa, Fulani, Kanuri, Maguzawa, Kurama	Igala, Ebira, Okun.	Yoruba, Nupe, Bariba and Fulani
MAJOR RELIGION	Christianity and Islam	Islam	Christianity and Islam	Islam and Christianity
LANGUAGE	English, Hausa	Hausa, Fulani	English, Igala, Ebira, Okun (similar to Yoruba).	Yoruba, English

OTHERS	**Capital:** Kaduna **By Area:** 4th largest in Nigeria **By Population:** 3rd largest in Nigeria	**Capital:** Kano **By Area:** 20th largest in Nigeria **By Population:** Largest in Nigeria	Its capital is Lokoja. The confluence of Rivers Niger and Benue is located here hence it is popular referred to as the Confluence state. It was the first administrative capital of modern-day Nigeria **Capital:** Lokoja **By Area:** 20th largest in Nigeria **By Population:** Largest in Nigeria	**Capital:** Illorin **By Area:** 9th largest in Nigeria **By Population:** 30th largest in Nigeria

Table 4.1 General baseline for the Participating States (Continued)

PARAMETER	LAGOS	NASARAWA	OYO
LOCATION	Latitude 6°35' North and longitude 3°45' East | South western Nigeria	Latitude 7°45' and 9°25' North and longitude 7°00' and 9°37' East | North central Nigeria	Latitude 8°00' North and longitude 4°00' East | Southwestern Nigeria
BOUNDARIES	Bordered in the north and east by Ogun State, in the west by the Republic of Benin and the Atlantic ocean in the south and is the smallest State in Nigeria	Bordered in the north by Kaduna State, in the west by the Abuja Federal Capital Territory, in the south by Kogi and Benue States and in the east by Taraba and Plateau States	Bordered in the south by Ogun State, in the north by Kwara State, in the west, it is partly bounded by Ogun State, while in the East by Osun State
AREA	3,577 km^2	27,117 km^2	28,454 km^2
POPULATION	**2006 Census Population:** 9,113,605 **Project Population 2016:** 12,550,600	**2006 Census Population:** 1,869,377 **Project Population 2016:** 2,523,400	**2006 Census Population:** 5,580,894 **Project Population 2016:** 7,840,900
DENSITY	3,509 persons/ km^2	93.06 persons/ km^2	275.6 persons/ km^2
LGA	(20) Agege, Alimosho Ifelodun, Alimosho, Amuwo-Odofin, Apapa, Badagry, Epe, Eti-Osa, Ibeju- Lekki, Ifako/Ijaye, Ikeja, Ikorodu, Kosofe, Lagos Island, Lagos Mainland, Mushin, Ojo, Oshodi-Isolo, Shomolu, Surulere	(13) Akwanga, Awe, Doma, Karu, Keena, Keffi, Kokona, Lafia, Nasarawa, Nasarawa Egon, Obi, Toto, Wamba.	(33) Afijio, Akinyele, Atiba, Atisbo, Egbeda, Ibadan North, Ibadan North-East, Ibadan North-West, Ibadan South East, Ibadan South West, Ibarapa Central, Ibarapa East, Ibarapa North, Iddo, Irepo, Iseyin, Itesiwaju, Iwajowa, Kajola, Lagelu, Ogbomoso, Ogo Oluwa, Oluyole, Ona Ara, Oorelope, Orire, Olorunsogo, Oyo East, Oyo West, Saki East, Saki West and Surulere.

MAJOR ETHNICITY GROUPS	Yoruba	Eggon, Alago, Kanuri, Jukun, Rindre, Eloyi	Yoruba
MAJOR RELIGION	Christianity	Islam and Christianity	Christianity
LANGUAGE	Yoruba, English	Agatu, Basa, Eggon, Gbagyi, Gade, Goemai, Gwandara, Ham, Kofyar	English, Yoruba
OTHERS	**Capital:** Ikeja **By Area:** Smallest in Nigeria **By Population:** 2nd **l**argest in Nigeria	**Capital:** Lafia **By Area:** 15th largest in Nigeria **By Population:** 35th largest in Nigeria	**Capital:** Ibadan **By Area:** 14th largest in Nigeria **By Population:** 5th **l**argest in Nigeria

Table 4.1 General baseline for the Participating States (Continued)

PARAMETER	PLATEAU	RIVERS	SOKOTO	ABUJA FCT
LOCATION	Latitude 8^{O} 24^{I} North and Longitude 8^{O} 32^{I} and 10^{O} 38^{I} East | Middle Belt of Nigeria (Centre of Nigeria)	Latitude $4^{O}45^{I}$ North and longitude $6^{O}50^{I}$ East | Southern Nigeria	**L**atitude $12^{O}00^{I}$ N and $13^{O}58^{I}$ N and longitude $4^{O}80^{I}$ E and $6^{O}54^{I}$ E | Northwestern Nigeria	Latitude $9^{O}35^{I}$ North and longitude $7^{O}29^{I}$ East | Middle Belt of Nigeria (Centre of Nigeria)
BOUNDARIES	Bordered by Bauchi State in the northeast, Kaduna State – to the north west, Nasarawa State to the south west and Taraba State to the south east	Bordered on the south by the Atlantic Ocean, to the north by Imo, Abia and Anambra States, to the east by Akwa Ibom State, and to the west by Bayelsa and Delta states.	Bordered in the north by Niger Republic, Kebbi State to the southwest and Zarnfara State to the east	Bordered in the northeast by Kaduna State, Plateau State to the east and south, Kogi State to the southwest, and Niger State to the west and northwest
AREA	26,899 km^2	11,077 km^2	25,973 km^2	7,315 km^2
POPULATION	**2006 Census Population:** 3,206,531 **Project Population 2016:** 4,200,400	**2006 Census Population:** 5,198,716 **Project Population 2016:** 7,303,900	**2006 Census Population:** 3,702,676 **Project Population 2016:** 4,998,100	**2006 Census Population:** 1,406,239 **Project Population 2016:** 3,564,100
DENSITY	135.9 person/ km^2	659 persons/ km^2	192.4 persons/ km^2	487 persons/ km^2
LGA	(17) Barkin Ladi Bassa, Bokkos, Jos East, Jos North, Jos South Kanam, Kanke, Langtang North, Langtang South, Mangu, Mikang, Pankshin, Qua'an Pan Riyom, Shendam, Wase	(23) Abua/Odual LGA, Emohua, Ogu/Bolo, Ahoada East, Eleme, Okrika, Ahoada West, Etche, Omumma, Akuku Toru, Gokana, Opobo/Nkoro, Andoni, Ikwerre, Oyigbo, Asari-Toru, Khana, Port-Harcourt, Bonny, Obia/Akpor, Tai, Degema, Ogba/Egbema/Ndoni	(23) Binji, Bodinga, Dange Shuni, Gada, Goronyo, Gudu, Gwadabawa, Illela, Isa, Kebbe, Kware, Rabah, Sabon Birni, Shagari, Silame, Sokoto North, Sokoto South, Tambuwal, Tangaza, Tureta, Wamako, Wurno,Yabo.	(6) Abaji, Abuja Municipal, Bwari, Gwagwalada, Kuje, Kwali
MAJOR ETHNICITY GROUPS	English, Barkin Ladi, Bassa, Bokkos, Jos East, Jos South, Kanam, Kanke, Langtang North, Langtang South,	Ijaw, Ikwere, Etche, Ogoni, and Ogba/Egbema.	Hausa	English, Gwari, Koro, Ganagana, Gwandara, Afo, and Bassa, Hausa and Fulani

	Mangu, Mikang, Pankshin, Qua'an, Riyom, Shendam, Wase			
MAJOR RELIGION	Christianity, Islam and Traditional African religions	Christianity	Islam	Muslim and Christianity
LANGUAGE	English, Angas, Berom, Goemai, Kofyar, Mwaghavul, Ron, and Tarok	English , Ijaw and Ikwerre	Hausa	English, Ibo, Fulani, Hausa and Yoruba
OTHERS	**Capital:** Jos **By Area:** 12th largest in Nigeria **By Population:** 25th **l**argest in Nigeria	It is the 6th most populated state in Nigeria. The state capital is Port Harcourt. There are about 26 distinct ethnic groups recognized by the Rivers State government, each with its own language, lifestyle, and cultural heritage	**Capital:** Sokoto City **By Area:** 16th largest in Nigeria **By Population:** 17th **l**argest in Nigeria	It is the capital city of Nigeria and also houses the administrative capital of Nigeria. It is regarded as one of the fastest growing cities in the world with an estimated growth rate of about 35%. According to the United Nations, Abuja grew by 139.7% between 2000 and 2010.

**Population Source NBS and NPC*

4.3 Healthcare Baseline of Participating States

Table 4.2 General Healthcare Baseline of Participating States

S/N	STATE	HEALTHCARE INFORMATION
1	Abia	**HEALTHCARE:** Only 14.6% of PHC have basic medical equipment. Uneven distribution of HCF. Inadequate facilities to treat HCW. Only about 15% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 39% and 47% respectively. Total Fertility Rate is put at 5.1 births per woman. Immunization is low with only 34% of children between 12 – 23 months having full immunization* and 78.7%, 12.6% and 4.7% of this are carried out in Government Health centres, immunization campaigns and private/NGOs. Facilities respectively. Only 32.8% of HCF provide LLIN. In 2014, U5MR was estimated at 83 deaths per 1000** and HIV prevalence rate is estimated at 3.3%. HIV population is estimated at 81,583.
2	Adamawa	**HEALTHCARE:** Only 77.7% of PHC have basic medical equipment. Access to health services is less than 10 per cent. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 19.4% and 15.3% having injectables and pills respectively. Total Fertility Rate is put at 5.5 births per woman. Immunization is low with only 29% of children between 12 – 23 months having full immunization* and 63.1%, 5.8% and 1.9% of these are carried out in Government Health centres, immunization campaigns and private/NGOs facilities respectively. Only 33.3% of HCF provide LLIN. U5MR is 84 deaths per 1000** and HIV prevalence rate is estimated at 1.9%. HIV population was estimated at 75,285 in 2014
3	Bauchi	**HEALTHCARE:** Only 51.3% of PHC have basic medical equipment. Percentage of PHC with Oral Contraceptive Pills, injectables is estimated at with 26.4% and 25% respectively. Immunization is low with only 14% of children between 12 – 23 months having full immunization* and 46.4%, 35.5% and 0.7% of these are carried out in Government Health centres, immunization campaigns and private/NGOs facilities respectively. Total Fertility Rate is put at 4.3 births per woman. About 42.8% of HCF provide LLIN. U5MR is 161 deaths per 1000** and HIV prevalence rate is estimated at 1.2%. HIV population was estimated at 52,995 in 2014.
4	Bayelsa	**HEALTHCARE:** Only 22.5% of PHC have basic medical equipment. It has the poorest record of maternal mortality rate (1,870/100,000) among the states of the south-south region in particular and the country in general. It also has one of the highest child mortality rates in the country with 80 deaths per thousand. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at with 13% and 13% respectively. Immunization is low with only 28% of children between 12 – 23 months having full immunization* and 71.6%, 1.8% and 5.5% of these are carried out in Government Health centres, immunization campaigns and private/NGOs facilities respectively. Total Fertility Rate is put at 4.8 births per woman. About 5.6% of HCF provide LLIN. U5MR is 95 deaths per 1000**. HIV prevalence rate is estimated at 2.7% while the HIV population was estimated at 30,858 in 2014.
5	Benue	**HEALTHCARE:** Only 17.9% of PHC have basic medical equipment. Percentage of PHC with Oral Contraceptive Pills, injectables is estimated at with 11.0% and 25.4% respectively. Immunization is low with only 37% of children between 12 – 23 months having full immunization* and 60.0%, 10.9% and 4.5% of these are carried out in Government Health centres, immunization campaigns and private/NGOs facilities respectively. Total Fertility Rate is put at 4.8 births per woman. About 75.2% of HCF provide LLIN. U5MR is 82 deaths per 1000** and HIV prevalence rate is estimated at 5.62%. HIV population was estimated at 196,270 in 2014.
6	Borno	**HEALTHCARE:** Insurgency is a major factor affect the healthcare in the state. At least 248 PHC and 19 General hospitals have been destroyed by Boko Haram. An estimated total of 64% HCF are completely or partially destroyed, with only 288 fully functional. With this has come several health diseases including an increase in malaria-related deaths and over 860 new diarrhea and Cholera cases every single day. Also on the increase is hepatitis E (256 reported cases), measles (18 cases), acute diarrhea (1665 cases) and acute respiratory infection (1548 cases). Only 6.3% of PHC have basic medical equipment. Percentage of PHC with Oral Contraceptive Pills, injectables is estimated at with 28.0% and 28.0% respectively. Immunization is low with only 31% of children between 12 – 23 months having full immunization* and 32.3%, 22.6% and 46.8% of these are carried out in Government Health centres, immunization campaigns and Government hospitals respectively. Total Fertility Rate is put at 6.1 births per woman. About 6.7% of HCF provide LLIN. U5MR is 82 deaths per 1000** and HIV prevalence rate is estimated at 2.4%. HIV population was estimated at 75,388 in 2014.

7	Ebonyi	**HEALTHCARE:** Only 11.7% of PHC have basic medical equipment. Percentage of PHC with Oral Contraceptive Pills, injectables is estimated at with 56.2% and 55.0% respectively. Immunization is low with only 35% of children between 12 – 23 months having full immunization* and 79.5%, 8.0%, 13.6% and 10.2% of these are carried out in Government Health centres, immunization campaigns, Government hospitals and private/NGOs facilities respectively. Total Fertility Rate is put at 5.2 births per woman. 79.3.7% of HCF provide LLIN. U5MR is 62 deaths per 1000** and HIV prevalence rate is estimated at 0.9%. HIV population was estimated at 29,156 in 2014.
8	Edo	**HEALTHCARE:** Inaccessibility to HCF, lack of man power and have been the major problems. There is also a lack of equipment and basic tools. The birthrate and maternal mortality rate are high. Malaria and diarrheal dehydration are endemic. Only half the population is vaccinated. Over three-quarters of the population does not have access to primary health care. AIDS is straining the health care system. The rates of infection is three times higher in rural areas. People often employ more than one system of healing. Even those who have access to an infirmary or clinic may visit herbalists or other healers. 46.8% of PHC have basic medical equipment. Percentage of PHC with Oral Contraceptive Pills, injectables is estimated at with 49.3% and 51.9% respectively. 46% of children between 12 – 23 months have full immunization* and 47.8, 35.8%, 12.0% and 14.9% of these are carried out in Government hospitals, government Health centres and immunization campaigns and private/NGOs facilities respectively. Total Fertility Rate is put at 3.8 births per woman. 63.0% of HCF provide LLIN. U5MR is 83 deaths per 1000** and HIV prevalence rate is estimated at 0.8%. HIV population was estimated at 22,821 in 2014.
9	Ekiti	**HEALTHCARE:** HCF are unequally distributed in the state with rural dwellers having to travel longer distances than urban indigenes to assess a HCF. There is a high prevalence of teenage pregnancy and poor reproductive health knowledge among teenagers. There has been an increase in non-communicable diseases such as Stroke, diabetes mellitus, HIV/AIDS, pulmonary tuberculosis and heart failure accounted for most deaths. 20.4% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 8.4% and 9.7% respectively. 48% of children between 12 – 23 months have full immunization* and 89.9%, 13.9% of these are carried out in Government Health centres and immunization campaigns respectively. Total Fertility Rate is put at 4.4 births per woman. About 78.3% of HCF provide LLIN. U5MR is 86 deaths per 1000** and HIV prevalence rate is estimated at 0.2%. HIV population was estimated at 17,977 in 2014
10	Enugu	**HEALTHCARE:** Major challenges is centered on immunization with a coverage of 8.3% in the state. Oher challenges include unavailability of sufficient vaccines such as DPT1, 2 and 3 (DPT1-DPT2/DPT3). The dropout rate for immunization is very high (494%). Family planning activities, integrated management of childhood illnesses program is also very low in the state. As with all states, basic equipment and drugs are lacking. 8.6% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 28.9% and 23.2% respectively. 51% of children between 12 – 23 months have full immunization* and 79.5%, 10.2%, 13.6 and 8.0% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and immunization campaigns respectively. Total Fertility Rate is put at 3.8 births per woman. About 49.2% of HCF provide LLIN. U5MR is 86 deaths per 1000** and HIV prevalence rate is estimated at 1.3%. HIV population was estimated at 34,268 in 2014
11	Imo	**HEALTHCARE:** As with all states of Nigeria, PHC are in poor condition. 37.2% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 15.4% and 26.1% respectively. 51% of children between 12 – 23 months have full immunization and 87.1%, 8.9%, 8.1% and 12.1% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and immunization campaigns respectively. Total Fertility Rate is put at 5.1 births per woman. About 80.2% of HCF provide LLIN. U5MR is 96 deaths per 1000** and HIV prevalence rate is estimated at 3.4%. HIV population was estimated at 93,822 in 2014

12	Kaduna	**HEALTHCARE:** As with all states of Nigeria, PHC are in poor condition. 7.6% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 39.3% and 52.4% respectively. 25% of children between 12 – 23 months have full immunization* and 32.2%, 5.0%, 58.7% and 31.4% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and immunization campaigns respectively. Total Fertility Rate is put at 5.6 births per woman. About 22.2% of HCF provide LLIN. U5MR is 82 deaths per 1000** and HIV prevalence rate is estimated at 2.1%. HIV population was estimated at 334,445 in 2014
13	Kano	**HEALTHCARE:** 1.5% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 32.3% and 27.9% respectively. 10% of children between 12 – 23 months have full immunization* and 18.3%, 1.4%, 57.4% and 21.5% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and immunization campaigns respectively. Total Fertility Rate is put at 7.7 births per woman. 36.5% of HCF provide LLIN. U5MR is 203 deaths per 1000** and HIV prevalence rate is estimated at 1.4%. HIV population was estimated at 165,530 in 2014.
14	Kogi	**HEALTHCARE:** 14.9% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 3.2% and 3.2% respectively. 30% of children between 12 – 23 months have full immunization* and 32.6%, 13.3%, 56.3% and 7.4% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and immunization campaigns respectively. Total Fertility Rate is put at 7.7 births per woman. 25.0% of HCF provide LLIN. U5MR is 75 deaths per 1000** and HIV prevalence rate is estimated at 9.2%. HIV population was estimated at 64,609 in 2014.
15	Kwara	**HEALTHCARE:** 13.0% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 7.2% and 13.3% respectively. 34% of children between 12 – 23 months have full immunization* and 57.8%, 3.3%, 31.1% and 16.7% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and immunization campaigns respectively. Total Fertility Rate is put at 4.4 births per woman. 47.6% of HCF provide LLIN. U5MR is 45 deaths per 1000** and HIV prevalence rate is estimated at 1.4%. HIV population was estimated at 36,515 in 2014.
16	Lagos	**HEALTHCARE:** 40.2% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 12.0% and 13.4% respectively. 68% of children between 12 – 23 months have full immunization* and 74.4%, 13.9%, 12.2% and 2.8% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and immunization campaigns respectively. Total Fertility Rate is put at 5.0 births per woman. 81.5% of HCF provide LLIN. U5MR is 50 deaths per 1000** and HIV prevalence rate is estimated at 2.2%. HIV population was estimated at 196,839 in 2014.
17	Nasarawa	**HEALTHCARE:** 45.8% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 17.0% and 25.5% respectively. 21% of children between 12 – 23 months have full immunization* and 52.0%, 2.4%, 26.0% and 33.3% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and immunization campaigns respectively. Total Fertility Rate is put at 5.7 births per woman. 24.3% of HCF provide LLIN. U5MR is 121 deaths per 1000** and HIV prevalence rate is estimated at 8.1%. HIV population was estimated at 106,159 in 2014.
18	Oyo	**HEALTHCARE:** 21.9% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 19.0% and 19.6% respectively. 37% of children between 12 – 23 months have full immunization* and 65.1%, 7.3%, 20.2% and 14.7% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and immunization campaigns respectively. Total Fertility Rate is put at 4.9 births per woman. 56.5% of HCF provide LLIN. U5MR is 73 deaths per 1000** and HIV prevalence rate is estimated at 5.6%. HIV population was estimated at 172,980 in 2014.
19	Plateau	**HEALTHCARE:** 48.1% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 22.0% and 35.4% respectively. 31% of children between 12 – 23 months have full immunization* and 55.1%, 2.7%, 31.6% and 33.7% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and immunization campaigns respectively. Total Fertility Rate is put at 5.6 births per woman. 13.5% of HCF provide LLIN. U5MR is 81 deaths per 1000** and HIV prevalence rate is estimated at 2.3%. HIV population was estimated at 81,701 in 2014.
20	Rivers	**HEALTHCARE:** 35.7% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 19.2% and 19.2% respectively. 45% of children between 12 – 23 months have full immunization* and 75.0%, 5.7%, 19.3% and 18.2% of these are carried out in Government health

		centers, private/NGOs facilities, government hospitals and government mobile outreach clinics respectively. Total Fertility Rate is put at 3.3 births per woman. 37.6% of HCF provide LLIN. U5MR is 58 deaths per 1000** and HIV prevalence rate is estimated at 15.2%. HIV population was estimated at 121,351 in 2014.
21	Sokoto	**HEALTHCARE:** 43.5% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 26.1% and 30.4% respectively. 2.0% of children between 12 – 23 months have full immunization* and 12.1%, 1.5%, 42.2% and 45.5% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and government mobile outreach clinics respectively. Total Fertility Rate is put at 7.3 births per woman. 42.0% of HCF provide LLIN. U5MR is 119 deaths per 1000** and HIV prevalence rate is estimated at 6.4%. HIV population was estimated at 113,051 in 2014.
22	Abuja FCT	**HEALTHCARE:** 49.4% of PHC have basic medical equipment. Percentage of PHCs with Oral Contraceptive Pills, injectables is estimated at 18.6% and 38.5% respectively. 47.0% of children between 12 – 23 months have full immunization* and 62.3%, 5.7%, 46.5% and 34.6% of these are carried out in Government health centers, private/NGOs facilities, government hospitals and government mobile outreach clinics respectively. Total Fertility Rate is put at 4.6 births per woman. 1.4% of HCF provide LLIN. U5MR is 71 deaths per 1000** and HIV prevalence rate is estimated at 6.4%. HIV population was estimated at 113,051 in 2014.

** Full immunization means that the child had evidence of receiving: BCG, OPV1-3, Penta1-3, and Measles (Source: Nigeria NICS Report)*

4.4 Environmental and Social Baseline Participating States

Table 4.3 Environmental and Social Baseline of Participating States

S/N	STATE	ENVIRONMENTAL AND SOCIO ECONOMIC INFORMATION
1	Abia	**ENIRONMENT** **SOIL:** The soils of Abia State fall within the broad group of ferrallitic soils of the coastal plain sand and escarpment. Other soil types include alluvial soils found along the low terrace of the Cross River and other rivers. The soils are not particularly fertile and are prone to much "., leaching because of heavy rainfall **CLIMATE:** There are two seasons in the year, namely: the rainy season and the dry season. The rainy season begins in March and ends in October with a break in August usually referred to as the "little dry season." The dry season which lasts for four months begins in November. Heavy thunderstorm are characteristic of the onset of the rainy season **GEOLOGY:** There are nine main geological formations in the state. These include: The Benin formation (or Coastal Plain Sand), the Bende-Ameki Group, the Nkporo Shale Group, the Nsukka formation (Upper Coal Measures), the Igali sandstone (False- bedded Sandstone), the Eze-Azu Shale Group and the Asu River Grou **VEGETATION AND RELIEF:** Tropical rain forest which is the dominant natural vegetation in most parts of southern Nigeria. Average altitude I20m below sea level but central areas such as Nsukka may rise up to 180 meters. **DRAINAGE AND RAINFALL:** From 2200mm in the south to 1900mm in the north. **HUMIDITY:** The relative humidity is usually high throughout the year, reaching a maximum during the rainy season when values above 90% are recorded. **TEMPERATURE:** The hottest months as are January to March when the mean temperature is above 27^{O}C. **ENVIRONMENTAL ISSUES**: Ecological problems in the state are sheet and gully erosion. **SOCIAL** **ECONOMY:** Predominantly agrarian and employs about 70% of the population. The main food crops grown are yam, cassava, rice, cocoyam and maize while the cash crops include oil-palm, rubber, cocoa, banana and various types of fruits. It produces about 11,000 barrels a day and is thus the ninth largest producer of oil in Nigeria. **MALE TO FEMALE RATIO:** Male: 1,900,947 ; female: 1,826,400 **LITERACY LEVEL:** Male: 87.8% ; Female: 69.8%** **CRIME:** About 12,408 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 50.2% in 2010** **INOME SOURCES BASED ON NOMINAL GDP:** **UNEMPLOYMENT RATE:** 11.2% IN 2011**
2	Adamawa	**ENVIRONMENT** **SOIL:** Major soil types in the state are young, shallow, poorly drained soils (inceptisol aquepts) and acid sulphate soils (Sulphaquepts). There are variations in the soils of Adamawa State; some soil types occupy extensive areas whereas others are of limited extent. **CLIMATE:** Tropical Continental North characterized by the Sudan Savannah Zones and the Tropical Hinterland by the Northern and Southern Guinea Zones. There are two distinct seasons, the wet season, which starts from April to October and the dry season from November to April. **GEOLOGY:** There are three major geological zones corresponding to three structural types which in turn correspond to three associated rock types namely, the Basement complex rocks, the oldest known rock-types and are areas of uplift which consist of igneous and metamorphic rocks other than volcanic; sedimentary rocks, corresponding to areas of sedimentation, i.e the Benue trough lying wholly within the Basement complex rocks; and volcanic rocks which are isolated

		volcanic areas along the Benue trough and the Cameroun Volcanic line to the east and north- eastern parts of the State. The Quaternary to Recent deposits from the youngest lithostratigraphical units in the State and are confined to river valleys and flood plains. **VEGETATION AND RELIEF:** Two major vegetation zones exists and they correspond with the climatic types, - the Sudan and sub-Sudan vegetation zone in the North typified by short grasses, trees, shrubs, etc. and the Guinea zones to the south defined by thick vegetation cover, tall grasses and trees.. The northern part of the state has the sub-sudan vegetation zone marked by short grasses interspersed with short trees, while in its southern part, the northern Guinea Savannah vegetation exists. The Guinea Savannah vegetation is likely as a result of anthropogenic activities. The state is characterised by the Numan Plains, undulating hills and rolling landscapes in the south and west. There are several rocky highlands in the east. The rocky hills, for instance near Dernsa, Song and Numan, are normally strewn, with broken ng rocks and rock outcrops. **DRAINAGE AND RAINFALL:** The state is drained by many rivers, most of which are seasonal. River Benue the major river in the state and rises from the highlands of Cameroun and flows southwards to join the River Niger at Lokoja The Benue has several tributaries including the Gongola, Taraba and Donga rivers. These smaller rivers are normally flooded during the rainy season and oil become sandy flats during the dry season. Precipitation here averages 2193 mm. **HUMIDITY:** The relative humidity is usually high throughout the year, reaching a maximum during the rainy season when values above 90% are recorded. **TEMPERATURE:** The mean annual temperature is between 27°C - 28°C in the Savannah and 18°C -27°C for the Guinea Zones.. **SOCIAL** **ECONOMY:** It major economy is driven my agriculture which provides more than 60% of employment **MALE TO FEMALE RATIO:** Male: 2,166,702; Female: 2,081,734 **LITERACY LEVEL:** Male: 67.7% ; Female: 48.1%** **CRIME:** About 2,269 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 77.8% in 2010** **UNEMPLOYMENT RATE:** 18.4% IN 2011**
3	Bauchi	**ENVIRONMENT** **SOIL**: Soils are heavy dark clays soils and dominate the entire state. Regosols shallow with weakly developed profiles are also found. Loamy soils of the basement complex are found in the valley bottoms. **CLIMATE**: Prevailing climate is Steppe Climate. Three seasons have been identified: the cool dry (harmattan) season (October-March), hot dry season (April-June) and rainy season (July-September). **VEGETATION AND RELIEF**: Vegetation is classified into the Sudan savannah and southern Sahel. The semi-arid nature of the southern Sahel and northern Sudan savannah makes the vegetation consist mainly of open acacia tree savannah. Relief is divided into two broad relief regions, namely, the hilly/mountainous area of generally over 600m above sea-level; and the plains of less than 600 meters above sea-level. The highlands dominate the south and southeastern parts of the state, covering about one-third of the total land area. The remaining two-thirds of the land area is dominated by plains of generally less than 600m above sea-level. **DRAINAGE AND RAINFALL**: The state is generally drained by seasonally flowing rivers. Annual rainfall is 613mm. The driest month is January. There is 0 mm of precipitation in January. Most precipitation falls in August, with an average of 215 mm. **HUMIDITY**: The relative humidity is usually high, reaching a maximum during the rainy season of August when values above 80%. This falls to about 24% in March. **TEMPERATURE**: Annual average temperature is 26^{O}C. With an average of 35.0^{O}C, April is usually the hottest month. In January, the average temperature can fall to 30 °C. It is the lowest average temperature of the whole year.

		ENVIRONMENTAL ISSUES: Drought, desertification and wind erosion (wind speed gets above 3.7m/s), while those associated with the recession of Lake Chad are problems of large-scale agricultural development projects, and the decline in fishing. **SOCIAL** **ECONOMY:** Bauchi state is an agricultural state. Its vast fertile soil is an added advantage for agricultural products, which include maize, rice, millet, groundnut and guinea corn. Irrigation farming is practiced and supported by the use of dams like Balanga dam, etc. Cattle and other livestock are also reared in the state. The state also has manufacturing industries in the area of Iron and Steel, Water, Ceramics, Food and Beverages etc. **MALE TO FEMALE RATIO:** Male: 3,334,030; Female: 3,203,284 **LITERACY LEVEL:** Male: 35.3% ; Female: 71.1%** **CRIME:** About 386 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 84% in 2010** **UNEMPLOYMENT RATE:** 41.4% IN 2011**
4	Bayelsa	**ENVIRONMENT** **SOIL:** Major soil types in the state are young, shallow, poorly drained soils (inceptisol aquepts) and acid sulphate soils (Sulphaquepts). There are variations in the soils of Bayelsa State; some soil types occupy extensive areas whereas others are of limited extent. **CLIMATE:** The climate is homointic geneous. Rainfall in Bayelsa State varies in quantity from one area to another. The state experiences equatorial type of climate in the southern the most part and tropical rain towards the northern parts. **GEOLOGY:** Holocene of the quaternary period by the accumulation of sedimentary deposits. The major geological characteristic of the state is sedimentary alluvium. The entire state is formed of abandoned beach ridges and due to many tributaries of the River Niger in this plain, **VEGETATION AND RELIEF:** Vegetation types include coastal barrier island forests, mangrove forests, freshwater swamp e.g. forests and lowland rain forests. It is generally a lowland with an average altitude of less than 200m. Generally, it is a lowland state characterized by tidal flats and coastal beaches, beach ridge barriers and flood plains. **DRAINAGE AND RAINFALL:** Annual rainfall is about 3500mm. The region is a low-lying plain riddled with an intricate system of water channels through which the Niger finds its way into the sea. Bayelsa is a region which already has too much surface water with a high rainfall and long rainy days. Almost every part of the state is under water at one time of the year or another. The water table is high with access to underground water being at a depth of between 20m **HUMIDITY:** The relative humidity is usually high throughout the year, reaching a maximum during the rainy season when values above 90% are recorded. **TEMPERATURE:** Average temperature is 26^{O}C **SOCIAL** **ECONOMY:** It is a major oil and gas producing area contributing over 30% of Nigeria's oil production. Major occupations in the State are fishing, farming, palm oil milling, lumbering, palm wine tapping, and local gin making, trading, carving and weaving. Produces about 290,000 barrels a day (fourth largest producer in Nigeria) **MALE TO FEMALE RATIO:** Male: 1,161,760; Female: 1,116,201 **LITERACY LEVEL:** Male: 86.4% ; Female: 67.6%** **CRIME:** About 1,543 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 44% in 2010** **UNEMPLOYMENT RATE:** 23.9% IN 2011**
5	Benue	**ENVIRONMENT**

		SOIL: The flood plains of the Benue river valleys in have the hydromorphic soils which contain a mixture of coarse alluvial and colluvial deposits. The alluvial soils along the valleys of the rivers are sandy, while the adjoining laterite soils are deeply weathered and grey or reddish in color, sticky and permeable. Around Gbajimba in Guma LGA, Euthropic Brown Earths occur associated with the volcanic parent materials. **CLIMATE**: The state climate is characteristic of the tropical savanna climate. The state experiences two distinct seasons, the Wet season and the Dry season. The rainy season lasts from April to October with annual rainfall in the range of 100-200mm while the dry season begins in November and ends in March. **GEOLOGY**: The State has two main rock types, namely, basement complex rocks of the Precambrian age in the western half of the state and extending slightly eastwards beyond the lower Niger valley and the older sedimentary rocks in the eastern half. **VEGETATION AND RELIEF:** Benue State lies in the southern Guinea Savannah. grass here grow high and the scattered trees are mainly those of economic value and include locust bean, shear butter, mango, silk cotton, African iron, Isoberlinia, cashew, oil palm which produce economic fruits. The land is generally low lying (averaging 100m-250m) and gently undulating with occasional inselbergs, Knoll, Laterite. **DRAINAGE AND RAINFALL:** The major rivers are Niger and Benue. River Benue is the dominant geographical feature in the state. There are several other rivers which exist as tributaries to the Benue River and these include the Katsina-Ala is the largest tributary, while the smaller rivers include Mkomon, Amile, Duru, Loko Konshisha, Kpa, Okpokwu, Mu, Be, Aya, Apa Ogede and Ombi. **HUMIDITY**: Most months experience above 50% humidity. July usually has the highest humidity at about 80% while January experiences the lowest at about 16% **TEMPERATURE**: Generally, temperatures are very high during the day, particularly in March and April. Along the river valleys, these high temperatures plus high relative humidity produce inclement/debilitating weather conditions. Makurdi, the state capital, for example, records average maximum and minimum daily temperatures of 35C and 21C in summer and 37C and 16C in around November respectively. **ENVIRONMENTAL ISSUES:** These include leaching, erosion and general impoverishment of the soil. These problems are compounded by the annual bush burning of the savannah that further exposes the top soil to more erosion. Floods pose a problem on the flood plains during the rainy season, while aridity is a problem to several areas at short distances from the rivers during the dry season **SOCIAL** **ECONOMY:** Predominantly agricultural and employs up to 80% of the population. Notable crops include includes; sweet potatoes, cassava, soya bean, guinea corn, flax, yams, sesame, rice, and groundnuts, Palm Tree. Resources in the state include Limestone, Kaolinite, Baryte, Gypsum, Feldspar, Wolframite, Kaolinite, mineral salts and Gemstone etc. **MALE TO FEMALE RATIO**: Male: 2,928,326; Female: 2,813,489 **LITERACY LEVEL:** Male: 79.2% ; Female: 59.4%** **CRIME:** About 2,041 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 73.6% in 2010** **UNEMPLOYMENT RATE:** 14.2% IN 2011**
6	Borno	**ENVIRONMENT** **SOIL**: Vertisols which are heavy dark clays soils dominate the state. Regosols shallow with weakly developed profiles are also found. Loamy soils of the basement complex are found in the valley bottoms **CLIMATE**: Prevailing climate is Steppe Climate. Three seasons have been identified: the cool dry (harmattan) season (October-March), hot dry season (April-June) and rainy season (July-September). **VEGETATION AND RELIEF**: It has mainly two vegetation types; the Sudan savannah and southern Sahel. The semiarid nature of the Sahel and northern Sudan savannah makes the vegetation consist mainly of open acacia tree savannah. Relief is divided into two broad relief regions, namely, the hilly/mountainous area of

		generally over 600m above sea-level; and the plains of less than 600 meters above sea-level. The highlands dominate the south and southeastern parts of the state, covering about one-third of the total land area. The remaining two-thirds of the land area is dominated by plains of generally less than 600m above sea-level. **DRAINAGE AND RAINFALL**: It is drained by two groups of rivers, one is bound towards the south draining to the Benue system, while the other is towards Lake Chad. The region is generally drained by seasonally flowing rivers. Annual rainfall is 613mm. The driest month is January. There is 0 mm of precipitation in January. Most precipitation falls in August, with an average of 215 mm. **HUMIDITY**: The relative humidity is usually high, reaching a maximum during the rainy season of August when values above 80%. This falls to about 24% in March. **TEMPERATURE**: Annual average temperature is 26^{O}C. With an average of 35^{O}C, April is usually the hottest month. In January, the average temperature can fall to 30 °C. It is the lowest average temperature of the whole year. **ENVIRONMENTAL ISSUES:** Drought, desertification and wind erosion (wind speed gets above 4m/s), while those associated with the recession of Lake Chad are problems of large-scale agricultural development projects, and the decline in fishing. **SOCIAL** **ECONOMY:** Major activity and occupation is agriculture **MALE TO FEMALE RATIO**: Male: 2,988,693; Female: 2,871,489 **LITERACY LEVEL**: Male: 43.1% ; Female: 32.7%** **CRIME**: About 1,591 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 60.6% in 2010** **UNEMPLOYMENT RATE:** 29.1% IN 2011**
7	Ebonyi	**ENVIRONMENT** **SOIL:** Two main soil types are found in Ebonyi St:ate. These are the silty clayey hydromorphic soil and the grey sandy clay hydromorphic soil. **CLIMATE:** Two main seasons dominate the climate of the state. These are the rainy season, which usually begins in late April and ends in early October, and the dry season, which lasts from late November to early April. **GEOLOGY:** Ebonyi State lies mostly in the Ebonyi (Aboine) River Basin and the Cross River Plains. The area contains, two main geological formations. From the east to the west and in terms of age and sequence of exposure, the formations are, the Asu River Group of the Albian Age (Lower Cretaceous) made up of shales, sandstones and siltstones. **VEGETATION AND RELIEF:** Ebonyi State lies in an area of moderate relief (between 125 and 245m above sea level). The highest parts of the state are around Afikpo, with elevation of about 170m above sea level. Sandstone ridges form the topographic highs. The dominant vegetation is characterised by tree shrubs, with abundant palm trees particularly in the south ern and central zones of the state. **DRAINAGE AND RAINFALL:** Drainage is controlled by the Cross River and its tributaries, especially the Aboine drainage system. Areas of moderate relief are often characterised by an intermediate condition of erosion between the extremes in areas with high relief on one hand and low relief on the other hand where the underlying shales are easily eroded. Ebonyi State lies in an area of moderate relief (between 125 and 245m above sea level). The highest parts of the state are around Afikpo, with elevation of about 170m above sea level. Sandstone ridges form the topographic highs. **HUMIDITY:** The relative humidity is usually high throughout the year, reaching a maximum during the rainy season when values above 80% are recorded. **TEMPERATURE:** Average temperature is 24^{O}C **ENVIRONMENTAL ISSUES:** Ebonyi State experiences moderate sheet erosion, except in areas like Afikpo and Izzi where erosion is more pronounced. **SOCIAL**

		ECONOMY: Natural resource including salt lakes at Uburu, Okposi and Oshiri; zinc and lead deposits at Enyiagba, as well as kaolin and limestones at Ishiagu, Afikpo and Nkalagu. Ttraditional industries and crafts such as, pottery, woodwork and blacksmithing also thrive. The state is a leadin producer of leading producer of rice, yam, potatoes, maize, beans, and cassava. **MALE TO FEMALE RATIO:** Male: 1,468,996; Female: 1,411,388 **LITERACY LEVEL:** Male: 77.2% ; Female: 62.3%** **CRIME:** About 4,214 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 82.8% in 2010** **UNEMPLOYMENT RATE:** 23.1% IN 2011**
8	Edo	**ENVIRONMENT** **SOIL:** Soil type in the state is generally the red-yellow kind of ferralsols. There are variation in Akoko Edo consists of shallow/stony reddish clay at the feet of inselbergs in the higher sections, lateritic clay and fine grained to sandy soils in the upper slope/lateritic tablelands and ferruginous soils on the crystalline acid rocks of the basement complex. In Orle valley, the soil is lateritic/gravelly sandy, while on the Esan Plateau, the soil is either clayey sand or porous red sand. Soil type in the Benin low land; ranges from loose poorly productive sand in the southeast to fertile clayey soil in the northeast Close to the Niger, the Osse and the Benin Rivers are alluvial and hydromorphic soils. **CLIMATE**: Tropical savannah climate having 2 distinct seasons the dry (November–March) and the wet season (April–October). Wind speeds get to as high as 2.7meter per second between February and May. **VEGETATION AND RELIEF:** The natural vegetation in Edo State consists of rain forest in the Benin low lands Esan Plateau and savannah in the Orle valley /Akoko Edo uplands. Generally, it is a low-lying area except in the north where it is marked by undulating hills. There are six types of physical features which constitute the landscape of Edo State. In the Benin lowlands is found a sandy coastal plain and alluvium clay with some hills in the east. Slopes are tilled in the southwest direction. Rivers Osse, Orihionmwon and lkpoba drain the area. Average altitude is 86m though some areas like the Esan plateau rises up to 300m above sea level. **DRAINAGE AND RAINFALL:** Most rivers are characterized by steeply incised valleys in their upper courses; they become broad as they enter River Ethiope in Delta State. Annual rainfall is about 2025mm. Between March and October monthly rainfall usually exceeds 200mm. **HUMIDITY**: Humidity is high all year round rising up to 94% in July and 54% in January. **TEMPERATURE:** Annual average temperature is 26.1^{O}C. The warmest month of the year is April, with an average temperature of 27.5 ^{O}C. In July, the average temperature is 24.5 ^{O}C. It is the lowest average temperature of the whole year. **ENVIRONMENTAL ISSUES:** Soil erosion **SOIL** **ECONOMY:** Agriculture is the predominant occupation. Major cash crops include rubber, cocoa and palm produce. In addition, the State produces such crops as yams, cassava; rice, plantains, guinea-corn, and assorted types of fruits and vegetables. The state produces oil estimated at about 60,000 barrels a day making it the seventh largest producer in Nigeria. Other principal mineral resources are natural gas, clay chalk, marbles and limestone. **MALE TO FEMALE RATIO:** Male: 2,160,153; Female: 2,075,441 **LITERACY LEVEL:** Male: 73.5% ; Female: 53.1%** **CRIME:** About 1,729 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 64.1% in 2010** **UNEMPLOYMENT RATE:** 35.2% IN 2011**
9	Ekiti	**ENVIRONMENT** **SOIL:** Soils are Orthic brown in the south and Luvisols to the north.

		CLIMATE: The State enjoys tropical rain forest climate with two distinct seasons. These are the rainy season (April–October) and the dry season (November–March). Wind speeds get up to 2.7meters per second around March. **GEOLOGY:** It is underlain by metamorphic rocks of the PreCambrian basement complex. These basement complex rocks show great variations in grain size and in mineral composition. The rocks are quartz gneisses and schists consisting essentially of quartz with small amounts of white micaceous minerals. **VEGETATION AND RELIEF:** Tropical forest exists in the south, while savannah occupies the northern peripheries. It has a generally undulating land surface with a characteristic landscape that consists of old plains broken by step-sided out-crops dome rocks that may occur singularly or in groups or ridges. Such rocks out-crops exist mainly at Efon-Alaaye, Ikere-Ekiti and Okemesi-Ekiti. The State is dotted with rugged hills. Tropical forest exists in the south, while Guinea Savannah occupies the northern peripheries. The State is mainly an upland zone, rising above 300 meters in some areas like Akure, where elevations get to 360 meters. Generally it is an undulating area with a characteristic landscape that consists of old plains broken by steep-sided outcrops that may occur singularly or in groups or ridges. **DRAINAGE AND RAINFALL:** Annual rainfall is 1334 mm. Between March to October monthly rainfall usually exceeds 120mm HUMIDITY: Humidity is high all year round reaching as high as 90% in July and falling to 25% in January **TEMPERATURE:** The average annual temperature in Ado Ekiti is 25.1^{O}C. March is the hottest month of the year. In August, the average temperature is 22.9 °C. It is the lowest average temperature of the whole year. **ENVIRONMENTAL ISSUES**: Soil erosion **SOCIAL** **ECONOMY:** Agriculture is the mainstay of the state economy employing about 75% of the state's working population. It is the largest rice producer in Nigeria. Other food crops such as yam, cassava, and grains like maize are also grown in large qualities. Other notable crops include as kola nut and varieties of fruits cultivated in commercial quantities. Mineral resources include granite, kaolinite, columbite, channockete, iron ore, baryte, aquamine, gemstone, phosphate, limestone, **MALE TO FEMALE RATIO:** Male: 1,668,107; Female: 1,602,691 **LITERACY LEVEL:** Male: 69.7% ; Female: 56.2%** **CRIME:** About 1,380 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE**: 55.9% in 2010** **UNEMPLOYMENT RATE:** 12.1% IN 2011**
10	Enugu	**ENVIRONMENT** **SOIL**: The soils are made up of shallow and stony lithosols found on the steep slopes of the cuesta and often left uncultivated. The ferrallitic soils, also called Red Earth or Acid Sands, found on the plateau, and the hydromorphic soils of the flood plains. **CLIMATE**: The climate is comparatively congenial, and particularly equable in the hilly and ecologically transitional region of Nsukka. Wind speed gets up to 3.05 meters per second around April. **GEOLOGY**: It has 9 geological formations including the Asu River Group of the Albian (Lower Cretaceous) Age, made up of shales, sandstones and siltstones; Abakaliki anticlinorium and the related Afikpo synclinorium formation of the Turonian Age which contains shales, siltstones, of sandstones and limestones; Awgu Ndeaboh Shales formation of the Coniacian Santonian Age; Enugu Shales (to the North) and Awgu Sandstones (to the South) along the same axis. They were laid in the Campanian sub-stage. Lower Coal Measures Formation (Mamu reformation) of the Meastrichtian Age. **VEGETATION AND RELIEF:** The vegetation is of the semitropical rainforest type. It is characteristically green and is complemented in the Nsukka area by typical grassy vegetation. Fresh water swamp forests occur in the Niger Anambra Basin. Its physical features change gradually from tropical rain forest to open wood-land

		and then to Savannah. Apart from a chain of low hills, running through Abakaliki, Ebonyi State in the east to Nsukka in the north-west, and southwards through Enugu and Agwu, the rest of the state is made up of low land separated by numerous streams and rivulets, the major ones of which are the Adada River and the Oji River. **DRAINAGE AND RAINFALL:** Annual rainfall ranges between 1500 to 2030mm. The rain is almost entirely seasonal, most of it falling between May and October. **HUMIDITY**: Humidity is high all year round getting up to 84% in July and falling to 24% in January **TEMPERATURE:** Average annual temperature is 20^{O}C. The hottest period is between February to April when temperatures are up to 33^{O}C **ENVIRONMENTAL ISSUES:** Soil erosion **SOCIAL** **ECONOMY:** Its main economy depended on coal. Other minerals include limestone, iron ore, crude oil, natural gas and bauxite. Agriculture and trading are also important. **MALE TO FEMALE RATIO:** Male: 2,249,670; Female: 2,161,448 **LITERACY LEVEL:** Male: 73.1% ; Female: 58.1%** **CRIME**: About 2,171 cases of crime in reported 2017** **PER CAPITA POVERTY MEASURE:** 60.6% in 2010** **UNEMPLOYMENT RATE:** 25.2% IN 2011**
11	Imo	**ENVIRONMENT** **SOIL**: The soil is dark reddish brown at top. It can be described as sandy loam and has a tendency to be eroded by weathering agent mostly by water. **CLIMATE:** Tropical climate with significant rainfall most months and short dry season. The rainy season begins in April and lasts until October. **GEOLOGY:** Imo State is underlain by the Benin Formation of coastal plain sands. This formation, which is of late tertiary age, is rather deep, porous, infertile and highly leached. In some areas like Okigwe, impermeable layers of clay occur near the surface, while in other areas, the soil consists of lateritic material under a superficial layer of fine grained sand. **VEGETATION AND RELIEF:** Imo State is underlain by the Benin Formation of coastal plain sands. This formation, which is of late Tertiary age, is rather deep, porous, infertile and highly leached. In some areas like Okigwe, impermeable layers of clay occur near the surface, while in other areas, the soil consists of lateritic material under a superficial layer of fine grained sand. **DRAINAGE AND RAINFALL:** The main streams draining the state are Imo, Otamiri, Njaba and Ulasi rivers, all of which have very few tributaries. With the exception of Imo River, which runs through the area underlain by the Imo Shales, other rivers rise within the coastal plain sands. Annual rainfall varies from 1,990 mm to 2,200 in the north to the south respectively with July being the wettest month where rainfall is above 400mm. **HUMIDITY:** Annual average humidity is about 75% and is high during the wet season around July when humidity rises to 89% and low during the dry season around January. **TEMPERATURE:** Average annual temperature is 20^{O}C. The hottest months are January to March with temperatures rising up to 33 ^{O}C, The influence of the harmattan lasts for about 9 weeks **ENVIRONMENTAL ISSUES:** The soil erosion (gully) which is compounded by heavy seasonal rainfall **SOCIAL** **ECONOMY:** Predominantly agriculture. Major cash crops include oil palm, raffia palm, rice, groundnut, melon, cotton, cocoa, rubber, and maize. Consumable crops such as yam, cassava, cocoyam and maize. It has several natural resources including crude oil, natural gas, lead, Calcium Cabornate and zinc. Profitable flora

		including iroko, mahogany, obeche, bamboo, rubber tree and oil palm. Additionally white clay, fine sand and limestone are found in the state. There are over 163 oil wells in the state. It is the eight largest producer of oil accounting for around 17,000 barrels per day. **MALE TO FEMALE RATIO**: Male: 2,819,182; Female: 2,708,626 **LITERACY LEVEL:** Male: 85.5% ; Female: 76.1%** **CRIME**: About 1,623 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 39.4% in 2010** **UNEMPLOYMENT RATE:** 26.1% IN 2011**
12	Kaduna	**ENVIRONMENT** **SOIL:** The soil is mostly loamy to sandy type. A substantial amount of clay is found also. **CLIMATE:** Kaduna state climate is classified as tropical. When compared with the summers usually experiences more rainfall. **GEOLOGY:** Holocene of the quaternary period by the accumulation of sedimentary deposits. The major geological characteristic of the state is sedimentary alluvium. The entire state is formed of abandoned beach ridges and due to many tributaries of the River Niger in this plain **VEGETATION AND RELIEF:** The vegetation cover is Sudan Savannah type, characterized by scattered short trees, shrubs and grasses. **DRAINAGE AND RAINFALL:** Annual average rainfall is 1211 mm. **HUMIDITY:** The relative humidity is usually high throughout the year, reaching a maximum during the rainy season when values above 82% are recorded. **TEMPERATURE:** The average annual temperature in Kaduna is 25.2^{O}C. **SOCIAL** **ECONOMY:** It major economy is driven by agriculture. Major crops include cereals, cotton. It also has several mineral resources including gold, kaolin, columbite, aquamarine, sapphire. Livestock farming is also a major occupation **MALE TO FEMALE RATIO:** Male: 2,114,043; Female: 2,319,598 **LITERACY LEVEL:** Male: 61.7% ; Female: 44.4%** **CRIME:** About 1,083 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 64% in 2010** **UNEMPLOYMENT RATE:** 30.3% IN 2011**
13	Kano	**ENVIRONMENT** **SOIL:** There are four classes of soil in Kano State. The ferruginous tropical soils formed on crystalline acid rocks occupy about 20% of the state to the south, southwest and south east; the brown and reddish brown soils and latosols occur in the northern half; the brown and reddish soils are in the northeastern corner; and the juvenile and hydromorphic soils occur along the alluvial channel complexes. **CLIMATE:** There are 4 seasons: a dry and cool season, Kaka, (November to February), marked by cool and dry weather plus occasional dusty haze: the dry and hot season (March to May) when temperatures climb up to 4^{0}C and which is a transition period between the harmattan and the wet season; the wet and warm season, (May to September), is the proper wet season when the lowest diumal temperature is recorded; and a dry warm season (October to November) marked by high humidity and high temperature. **GEOLOGY:** Geologically, more than 80% of Kano is underlain by quartzite, undifferentiated metasediments and basement complex rocks of the preCambrian upper cambrian origin. Prolonged weathering of the rocks produced deep clayrich regoliths, which have been subjected to laterization. The lateritic outcrops dot the interfluve areas of the upland plain serving as caps for regolith hills e.g. Gwauron Dutse and Dala hills.

		VEGETATION AND RELIEF: The natural vegetation consists of the sudan and the guinea savannah both having been replaced by secondary vegetation. 80% of the state is now composed of farmed parkland, dotted with patches of shrub savannah. The savannah woodland, which is the second largest zone, is typified by the Falgore Game Reserve. There are few forest plantations of exotic trees **DRAINAGE AND RAINFALL:** Rivers Kano, Challawa, Watari, Jatau and Dudurun Gaya join the Hadejia, which empties into the Lake Chad while Gari, Tomas and Jakara disappear into the sands of the Chad Formation further east. There are also several manmade lakes such as Tiga, Challawa Gorge, Gari Watari, Guzuguzu, Kafin Chiri, Dudurun Gaya, Bagauda. These man-made rivers have been constructed to improve potable water supply to towns and villages and to provide water for irrigation. Mean annual rainfall ranges from over 1,000mm in the extreme south to a little less than 800mm in the extreme north. The rains last for three to five months. **HUMIDITY:** The relative humidity is usually high throughout the year, reaching a maximum during the rainy season when values above 85% are recorded. **TEMPERATURE:** Mean temperature ranges from 26^{O}C to 33^{O}C **SOCIAL** **ECONOMY:** Subsistence and commercial agriculture is mostly practiced in the outlying districts of the state. Some of the food crops cultivated are millet, cowpeas, sorghum, maize and rice for local consumption while groundnuts and cotton are produced for export and industrial purposes. Kano State is a major producer of hides and skins, sesame, soybean, cotton, garlic, gum arabic and chili pepper. The state is also endowed with minerals resources including tin, niobium/columbite, tantalum and wofram/tungsten, silica, stones and sand, kaoline and clay, lead and granites. **MALE TO FEMALE RATIO:** Male: 6,669,215; Female: 6,407,677 **LITERACY LEVEL:** Male: 36.2% ; Female: 19.0%** **CRIME:** About 5,705 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 70.4% in 2010** **UNEMPLOYMENT RATE:** 23.1% IN 2011**
14	Kogi	**ENVIRONMENT** **SOIL**: The flood plains of the Niger and Benue river valleys in Kogi State have the hydromorphic soils which contain a mixture of coarse alluvial and colluvial deposits. The alluvial soils along the valleys of the rivers are sandy, while the adjoining laterite soils are deeply weathered and grey or reddish in color, sticky and permeable. **CLIMATE**: Tropical savanna climate. There are two distinct seasons which are the dry and the wet seasons. The dry season, which lasts from November to March, is very dusty and of cold as a result of the northeasterly winds, which brings in the harmattan. The wet or rainy season is characterized by heavy rainfall and last April to October. **GEOLOGY**: Kogi State has two main rock types, namely, basement complex rocks of the Precambrian age in the western half of the state and extending slightly eastwards beyond the lower Niger valley and the older sedimentary rocks in the eastern half. The various sedimentary rock groups extend along the banks of Rivers Niger and Benue and southeastwards through Enugu and Anambra states, to join the Udi Plateau. **VEGETATION AND RELIEF:** Altitude rises from about 300 meters along the Niger Benue corflute, to the heights of between 300 and 600 meters above sea level in the uplands. Agbaja Plateau, which ranges from 335 to 366 meters above sea level **DRAINAGE AND RAINFALL:** The major rivers are Niger and Benue. Others include Mabolo, Okura, Ubele and Ofu rivers run off the Dekina Ankpa Oturkpo watershed. The big rivers have wide flood plains such as the portion of the lower Niger in Kogi state, which is more than 1,600 meters wide at Lokoja, while the in small streams have narrow valleys. The state has an annual rainfall of between 1,100mm and 1,300mm. The rainy season lasts from April to October. Between

		April and October, monthly rainfall usually exceeds 120mm. The driest month is December, with 5 mm of rainfall. The greatest amount of rainfall occurs in September, with an average of 263 mm. **HUMIDITY**: Most months experience above 50% humidity. July usually has the highest humidity at about 80% while January experiences the lowest at about 16% **TEMPERATURE**: Annual average temperature is 25.7^{O}C. Hottest month is usually February when temperatures rise to above 33^{O}C while the coolest month is usually September when temperatures drop to about 24^{O}C. **ENVIRONMENTAL ISSUES:** These include leaching, erosion and general impoverishment of the soil. These problems are compounded by the annual bush burning of the savannah that further exposes the top soil to more erosion. Floods pose a problem on the flood plains during the rainy season, while aridity is a problem to several areas at short distances from the rivers during the dry season **SOCIAL** **ECONOMY:** Predominantly agricultural. Notable crops include coffee, cocoa, palm oil, cashews, groundnuts, maize, cassava, yam, rice and melon. Mineral resources include coal, limestone, iron, petroleum and tin. It has 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. **MALE TO FEMALE RATIO**: 3,819,182 to 3,708,626 **LITERACY LEVEL:** Male: 87.8% ; Female: 69.8%** **CRIME:** About 282 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 67.4% in 2010** **UNEMPLOYMENT RATE:** 14.4% IN 2011**
15	Kwara	**ENVIRONMENT** **SOIL:** A larger proportion of the northern part of the states and those of the south are characterised by ferruginous tropical soils on crystalline acid rocks. The northeastern part. The natural vegetation comprises particularly Edu and Patigi local government areas, guinea and derived savanna and rain forest guinea savanna predominates in Baruten, Kaiama, while the bank of River Niger is characterised by Moro, Asa, Patigi, Edu and lfelodun. Alluvial and hydromorphic soils on river savanna is a predominant feature of llorin South, llorin East, llorin West, Offa and part of Ekiti, Oke Ero, Irepodun, Isin, and Oyun local government areas; the last five have some lowland rain forest **CLIMATE:** The climate is tropical having two major distinct seasons – the rainy and dry seasons. The rainy season begins occurs between March and October while the dry season lasts November to early March. **GEOLOGY:** The major geological characteristic of the state is sedimentary alluvium. Holocene of the quaternary period by the accumulation of sedimentary deposits. **VEGETATION AND RELIEF:** Vegetation types include coastal barrier island forests, mangrove forests, freshwater swamp e.g. forests and lowland rain forests. It is generally a lowland with an average altitude of less than 200m. Generally, it is a lowland state characterized by tidal flats and coastal beaches, beach ridge barriers and flood plains. **DRAINAGE AND RAINFALL:** The total annual rainfall in the state ranges from 800mm to 1,200mm in the northwestern part of the state to 1,000mm to 1,500mm in the southeast. **HUMIDITY:** The relative humidity is usually high throughout the year, reaching a maximum during the rainy season when values above 81% are recorded. **TEMPERATURE:** Mean temperature of 30^{O}C to 35^{O}C **SOCIAL**

		ECONOMY: 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 Gold, limestone, marble, feldspar, clay, kaolin, quartz and granite rocks. **MALE TO FEMALE RATIO:** Male: 1,114,043; Female: 3,109,598 **LITERACY LEVEL:** Male: 41.7% ; Female: 30.7%** **CRIME:** About 830 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 72.1% in 2010** **UNEMPLOYMENT RATE:** 7.1% IN 2011**
16	Nasarawa	**ENVIRONMENT** **SOIL:** The soils in this region are those of sandstones derived from old sedimentary rocks with extensive occurrences of lateritic crust. **CLIMATE:** Climate of the tropical type and has a maximum and minimum temperature of 27.2^{O}C and 16.7° F respectively. The months of December, January and February are cold due to harmattan wind blowing across the State from the North-East. It is characterized by two distinct season: dry and rainy. The dry season spans from November to February, while the rainy season is from March to October **GEOLOGY:** Holocene of the quaternary period by the accumulation of sedimentary deposits. The major geological characteristic of the state is sedimentary alluvium. The entire state is formed of abandoned beach ridges and due to many tributaries of the River Niger in this plain **VEGETATION AND RELIEF:** The general topography of Nasarawa State is that of hills/ dissected terrain, undulating plains and lowlands. Its valley and troughs extend inland for some 30 kilometers and it is made up of flood plains lying generally below 250 metres. The state has vast undulating plains rising to general altitude of about 400 meters above sea level with notable inselberg occurrences. Hills and dissected terrains occupy a sizeable portion of Nasarawa state and are scattered all over the land mass with height ranges of between 600 - 1200 meters. **DRAINAGE AND RAINFALL:** Major rivers that drain the landscape of the state include rivers Dep, Mada, Guma, Ayini and Farin Ruwa which are the major rivers draining into the river Benue. The area consists of very fertile alluvial soil deposited by the seasonal flood of river Benue. Rainfall varies from 131.73cm to 145cm **HUMIDITY:** The relative humidity is usually high throughout the year, reaching a maximum during the rainy season when values above 83% are recorded. **TEMPERATURE:** Average temperature is 28.4^{O}C but could rise to about 38 ^{O}C in August **SOCIAL** **ECONOMY:** Nasarawa State is a predominantly agricultural state and employs more than half of the population serving as a major occupation. Major crops are maize, rice, sorghum, millet, cowpea, groundnut, yam, cassava, soya beans, beniseed, melon and bambara nuts. Mineral Resources: Salt, Bauxite, Barytes, Sharp Sand, Tin, Marble, Salt, Coal, Semiprecious stones and Aquamarine. **MALE TO FEMALE RATIO:** Male: 2,114,043; Female: 2,109,598 **LITERACY LEVEL:** Male: 57.9% ; Female: 35.8%** **CRIME:** About 1,080 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 78.4% in 2010** **UNEMPLOYMENT RATE:** 36.5% IN 2011**
17	Lagos	**ENVIRONMENT** **SOIL**: four soil groups are identifiable. On the western half of the coastal margin, juvenile soils on recent windborne sands occur. The rest of the coastal area towards the east is covered also by juvenile soils on fluviomarine alluvium (mangrove swamp). Thirdly, a narrow and rather discontinuous band of mineral and/or organic hydromorphic soils occurs in the middle and north erneastern sections of the state. The fourth group, occurring in two rather tiny and discontinuous patches along the northern limits of the state, consists dominantly of red ferrallitic soils on loose sandy sediments.

		CLIMATE: It has a tropical climate with two distinct season – the dry and the rainy seasons. Wind speed gets to above 5.5 meters per second in July **GEOLOGY**: Recent coastal deposits occur widely in Lagos State. Also, tertiary beds from the Benin Formation stretch from Calabar in the far east through Lagos state to the borders of Benin Republic in the west. Topographically, Lagos state **VEGETATION AND RELIEF**: Characterized by the Swamp Forest of the coastal belt made up of the red mangrove, shrubs, stilt-rooted trees with dense undergrowth and raffia and climbing palms. To the north of this is the dry lowland tropical rain forest. This is made up of economically valuable trees as teak, tripochiton, seletrocylon (Arere), banclea diderrichil (Opepe) and terminahia (Idigbo) are to be found. **DRAINAGE AND RAINFALL:** Lagos State is drained by several streams and rivers emptying their contents into the Atlantic Ocean and into the lagoons. Notable rivers. Annual rainfall is about 1680mm. The wettest month being June with about 390mm while December has temperatures falling to about 20mm. Between March and October, monthly rainfall usually exceeds 120mm **HUMIDITY**: Average annual humidity is high rises above 85%. Humidity is high all year round and rarely falls below 75% **TEMPERATURE**: Annual average temperature is 27.^{O}C. Hottest month is usually March when temperatures rise to above 29^{O}C while the coolest month is usually August when temperatures drop to about 24^{O}C. **ENVIRONMENTAL ISSUES:** Includes flooding and erosion **SOCIAL** **ECONOMY:** It is the major economic centre of Nigeria. It would be the fifth largest economy in Africa. Its total generated revenue in 2017 was around ₦334 billion (equivalent to US$920 million), growing by 10.43% compared to 2016. Mineral resources include bitumen, glass sand, ball clay, kaolin, laterite soil, oil and gas. Agricultural products include maize, yam, cassava, vegetable, rice, cocoyam, cowpea, soyabean, pineapple and livestock rearing. It has more than 2,000 industries and two biggest ports in Nigeria - Apapa and Tin Can Island and is the sixth largest producer of oil accounting for around 40,000 barrels per day **MALE TO FEMALE RATIO:** Male: 2,819,182; Female: 2,708,626 **LLITERACY LEVEL:** Male: 85.4% ; Female: 75.3%** **CRIME:** About 50,975 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 40.3% in 2010** **UNEMPLOYMENT RATE:** 8.3% IN 2011**
18	Oyo	**ENVIRONMENT** **SOIL:** In the northeast soil are skeletal in nature and are of comparatively recent origin. In the south, the older sand ridge complexes exist and are brown and orange sandy soils, while the most recent ones near the coast have light grey sandy soils. The swamp flats are characterised by swampy organic and flooded organic soils, while the major part consists of decomposed and partly decomposed organic matter; whereas areas affected by tide bear saline soils. **CLIMATE:** Oyo State exhibits the typical tropical climate of averagely high temperatures, high relative humidity and generally two rainfall maxima regimes during the rainfall period of March to October. It has two distinct seasons - the dry and wet seasons with relatively high humidity. The dry season falls between from November to March while the wet season starts from April and ends in October. Average daily temperature ranges between 25 °C (77.0 °F) and 35 °C (95.0 °F), almost throughout the year. **GEOLOGY:** Holocene of the quaternary period by the accumulation of sedimentary deposits. The major geological characteristic of the state is sedimentary alluvium. **VEGETATION AND RELIEF:** The southern parts of the state, it particularly the Ibadan-Ibarapa region, are covered by the rain forest and derived savannah. Much of Lanlate, Eruwa, IgboOra in Ibarapa and Akinyele, Oluyole and Lagelu local government areas are covered by the rain forest. The composition is basically the large

		tall crowned trees, mixed with thick undergrowth. The high annual rainfall and high. The topography of the State is of gentle rolling low land in the south, rising to a plateau of about 40metres. The State is well drained with rivers flowing from the upland in the north-south direction. **DRAINAGE AND RAINFALL:** The average annual temperature is 26.5 °C. About 1311 mm of precipitation falls annually. **HUMIDITY:** The relative humidity gets high to almost 81%. **TEMPERATURE:** Average temperature is 28^{O}C **SOCIAL** **ECONOMY:** Agriculture is the main occupation of the people of Oyo State. The climate in the state favours the cultivation of crops like maize, yam, cassava, millet, rice, plantains, cocoa, palm produce, cashew etc. There are a number of government farm settlements in Ipapo, Ilora, Eruwa, Ogbomosho, Iresaadu, Ijaiye, Akufo and Lalupon. There is also abundance of clay, kaolin and aquamarine. **MALE TO FEMALE RATIO:** Male: 2,010,043; Female: 2,301,598 **LITERACY LEVEL:** Male: 67.9% ; Female: 56.9%** **CRIME:** About 2,969 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 50.8% IN 2010** **UNEMPLOYMENT RATE:** 8.9% IN 2011**
19	Plateau	**ENVIRONMENT** **SOIL**: Soils in Plateau tropical ferruginous soils, which are much thinner on the high plateau but attain greater depths in the southern part of the state. There are also sizeable pockets of loamy soil of volcanic origin in the high Plateau. **CLIMATE**: Temperate climate on the Jos Plateau and a hot and humid climate on its lower parts. It has two distinct seasons - rainy season (April-October) and much colder during the harmattan period (December - February). **GEOLOGY:** The Jos Plateau which is an erosional relic covering an area of about 7,780 sq.km and is a product of distinct phases of volcanic activities when younger granite rocks extensively intruded into the older basement complex rocks. Each phase of volcanic activities was followed by a long period of weathering and erosion when tin bearing rocks were deposited in the valleys and buried by floods of basalt from subsequent volcanic eruptions. There are also extinct volcanoes and crater lakes on the Jos Plateau. **VEGETATION AND RELIEF:** Most vegetation falls largely within the northern guinea savannah zone which consists mainly of short trees, grasses and the Plateau type of mosaic vegetation. There are also fringing woodlands or gallery forests which can be found along some river valleys. Some villages have thick hedges of cacti, which have been planted around household farms or compound lands. It has a high relief particularly in the north and this serves as a hydrological centre for many rivers (including Kaduna, Gongola, Hadejia and Yobe) in northern Nigeria and also confers on the northern part of the state a cool climate. The landscape of Plateau State rises steeply from 200 metres around the plains of River Benue in the south to an average height of 1,200 metres on the Jos Plateau. In some areas such as the Shere Hills about 1829m above sea level is recorded. **DRAINAGE AND RAINFALL:** The average annual rainfall is 1324 mm. **HUMIDITY**: Average annual humidity rises above 80%. Humidity is highest around July and August at about 85% and then usually drops to about 60% in January. **TEMPERATURE**: Average annual temperature is 22.8^{O}C. **ENVIRONMENTAL ISSUES:** Soil erosion is a major environmental issue on the Jos, Bukuru, Mangu and Barakin Ladi. Other important environmental concerns are loss of vegetation as result of over grazing which has resulted in gullying along the numerous cattle paths which criss-cross the Plateau surface.

		SOCIAL **ECONOMY:** Major activity is tin mining which is carried out on the Jos Plateau. Agriculture is also an important activity with major crops like cotton, groundnuts, rice, Irish potatoes, maize and soya bean being produced **MALE TO FEMALE RATIO:** Male: 2,142,225; Female: 2,058,216 **LITERACY LEVEL:** Male: 66.1% ; Female: 51.9%** **CRIME**: About 2,607 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 72.4% IN 2010** **UNEMPLOYMENT RATE:** 25.3% IN 2011**
20	Rivers	**ENVIRONMENT** **SOIL**: There are three major soil groups exist. First is the marine and fluvial marine sediments (found in the wet coastal region). Second is the brownish mangrove swamp alluvial soils (found in the northern part of the coastal sediments zone) and third is the freshwater brown loams and sandy loams (found in the fresh water zone of the delta.) **CLIMATE**: Port Harcourt has a tropical climate with two distinct seasons of rainy and dry season similar to all other project states. Wind speed gets to 3.3 meters per second in August and drops to 2.3 meters per second around January. **GEOLOGY**: Its surface geology consists of fluvial sediments. This includes the recent sediments transported by Niger River distributaries and other rivers, such as Andoni, Bonny and New Calabar. These materials deposited as regolith overburden of 30m thickness are clays, peat, silts, sands and gravels. **VEGETATION AND RELIEF:** The "upland" area was originally occupied by rainforest which has been drastically modified by human activities. In most places, economic trees, particularly oil palm, have been preserved and thus the sobriquet for this vegetation as "oil palm bush." The riverine area is divisible into three main hydro vegetation zones namely, the beach ridge zone (vegetated mainly by fresh water swamp trees), the saltwater zone (vegetated by the red stilts rooted mangrove) and the freshwater zone (vegetated by fresh water forest trees which are the edaphic variants of the rainforest such as the Abura tree, oil palm, raffia palm, shrubs. It is generally a lowland with rising to 18.3m above seas level. The land surface or Rivers State can be grouped into three main divisions: The fresh water bordered by natural levees and extends north wards from the mangrove swamps. This land surface is generally under 20m above sea level. Second is the mangrove swamps of Akuku Toru, Abualdual, Asari Toru, Degema, Okrika, Ogu Bolo, Bonny, Andoni and Opobo Local Government Areas; Third is the Coastal Sand ridges zone. The freshwater zone is of mean thickness and appreciates upward to about 45m in the northeast and over 9m in the beach ridge barrier zones to the southwest. The flood plain trends west wards and southwards are broken in many places by small hogback ridges and shallow swamp basins. The southern part is affected by great tidal influence. The entire topography of the State is also characterized by a maze of effluents, rivers, lakes, creeks, lagoons and swamps **DRAINAGE AND RAINFALL:** The State is drained by two main river systems, i.e. freshwater systems whose waters originate either outside or wholly within the coastal lowlands, and tidal systems confined largely to the lower half of the State. Almost all riverine LGAs are under water at one time of the year or another. Again, some areas of the State are tidally flooded, while others are seasonally. Average annual rainfall is about 2300mm. Rainfall is all year round even in the drier months of December but daily average is highest in June, July, August and September and October. **HUMIDITY**: Humidity is high all year round and rarely falls below 63% which usually happens in January. In July humidity gets to about 86%. **TEMPERATURE**: Average temperature is 25^{O}C **ENVIRONMENTAL ISSUES:** Include coastal erosion as a result of sea level rises, deforestation, oil spillage **SOCIAL** **ECONOMY:** Predominantly farming and fishing. The main root crops are yam, cassava and coco-yam; while the grains are maize, lowland rice and beans. Other crops grown for food include, vegetables, melon, pineapples and plantain. The major cash crops are oil palm products, rubber, coconut, raffia palm, timber and

		jute. About 270 species of fish have been identified in this area. Major sea produce include sea-foods as crabs, oysters, shrimps and fishes. It is a major oil producing state accounting for about 344,000 barrels per day making it the third largest oil producer in Nigeria **MALE TO FEMALE RATIO:** Male: 3,725,001; Female: 3,578,923 **LITERACY LEVEL**: Male: 83.3% ; Female: 76.0%** **CRIME**: About 1,570 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 47.2% in 2010** **UNEMPLOYMENT RATE:** 25.5% IN 2011**
21	Sokoto	**ENVIRONMENT** **SOIL:** Sandy topsoil with clayey subsoil are common, except along the flood plains of the river valleys where alluvial soils predominate. To the north of the state, especially along the border with Niger Republic, the undulating plains are covered by aeolian deposits of variable depth. These support light sandy soils. **CLIMATE:** The climate is tropical continental and is dominated by two opposing air massestropical maritime and tropical continental. The tropical maritime is moist and blows from the Atlantic, while the tropical continental air mass, which is dry, blows from the Sahara Desert. The rainy season while the tropical continental air mass predominates during the dry season. Much of the rain in Sokoto State falls between June and September in the north and from April to October in other parts. The state is characterised by two extreme temperatures relative to its tropical position viz. the hot and cold seasons. The highest temperature during the hot season is experienced in the months of March/April. Between November and February, there is the prevalence of harmattan, characterised by very cold temperatures and dust laden winds and often accompanied by thick fog of alarming intensity. **GEOLOGY:** The state is located within the Illumeden basin, which is surrounded to the east and south by the precambrian basement complex. The state is covered by a series of sedimentary rocks, which have been deposited over the basement complex. These sediments were laid down under varied environmental situations ranging from continental to marine events. The sedimentary rocks in Sokoto State have been classified under four major categories - the Gundumi formation; Rima group of three distinct marine sediments; the Sokoto group; and the Gwandu formation **VEGETATION AND RELIEF:** Sokoto vegetation falls within the Sudan Savannah. The vegetation is characterised by thorny species with a scatter of acacia specie. The river courses are lined with dum palms, which are interspersed with a herbaceous cover of annual grasses. The entire state features low land interrupted by isolated flat topped hills (mesas) and escarpments. The escarpments are found in Dange and Kalambaina and, along with the hills rise up to 488m **DRAINAGE AND RAINFALL:** The annual rainfall is between 500mm in the north and 1300mm to the south. **HUMIDITY:** The relative humidity is usually high throughout the year, reaching a maximum during the rainy season when values above 90% are recorded. **TEMPERATURE:** With an annual average temperature of 28.3^{O}C. The warmest months are February to April when daytime temperatures can exceed 45 °C **SOCIAL** **ECONOMY:** Agriculture plays a vital role in its economy and accounts for the larger percentage of the population. Major agricultural produce include wheat, maize, millet, guinea corn, rice, beans, groundnut, cotton and sugarcane. The state is also rich in natural resources such as gold, clay, kaolin, gypsum, salt, marble, granite, and Limestone. **MALE TO FEMALE RATIO:** Male: 2,549,026; Female: 2,449,064 **LITERACY LEVEL:** Male: 29.7% ; Female: 14.0%** **CRIME:** About 2,414 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE:** 86.1% in 2010** **UNEMPLOYMENT RATE:** 17.9% IN 2011**
22	Abuja FCT	**ENVIRONMENT**

		SOIL: Soils are generally shallow and sandy in nature. The high sand content particularly makes the soils highly susceptible to wind and water erosion. The shallow depths is a reflection of the presence of stony lower horizons. Those on the famous Gwagwa plains are however deep and clayey, perhaps reflecting the influence of parent materials like gabbro and fine the to medium textured biotite granite. **CLIMATE**: Abuja climate is the tropical savannah climate and thus features two distinct seasons - the distinct rainy season (April and ends in October) and the dry season (November to March). In between these two season, there is a brief interlude of harmattan occasioned by the northeast trade wind, with the main feature of dust haze and dryness. Wind speeds get as high 2.4 meters per second in January and can drop to about 1.1 meters per second in October. **GEOLOGY:** Abuja is almost predominantly underlain by high grade metamorphic and igneous rocks of Precambrian age. These rocks consist of gneiss, migmatites and granites. A schist belt outcrops along the eastern margin of the area. The belt broadens southwards and attains a maximum development to the southeastern sector of the area where the topography is rugged and the relief is high. **VEGETATION AND RELIEF:** The vegetation falls within the guinea savannah vegetation zone of Nigeria. It includes patches of rain forest which occurs in the Gwagwa plains, especially in the rugged terrain to the southeastern parts of the territory. The dominant savannah vegetation of Abuja is classified into Park or Grassy Savannah, Savannah Woodland and the Shrub Savannah. The lowest elevation in Abuja is found in the extreme southwest where the flood plain of the river Guraja is at an elevation of about 70m above sea level. From there, the land rises irregularly eastwards, northwards and northwestwards. The highest altitude of the territory is in the northeast where there are many peaks over 760m above sea level. There are many roundish isolated hills usually called inselbergs. In between these are about fifty 52% plains such as Gwagwa plains, the lku Gurara plains. **DRAINAGE AND RAINFALL:** Annual rainfall is 1389mm. The driest month is December, with 1 mm of rain. Most of the rainfall falls in September and averages 284mm. Between March and October, monthly rainfall usually exceeds 110mm. **HUMIDITY**: Average annual humidity is high rises above 85%. Humidity is highest around July and August at about 85% and then usually drops to about 4% in January. **TEMPERATURE**: The average annual temperature is 25.7 ^{O}C. Hottest month is usually March when temperatures rise to above 38^{O}C while the coolest month is usually August when temperatures drop to about 25^{O}C. **ENVIRONMENTAL ISSUES:** Soil erosion, de-vegetation, poor waste management as well as soil degradation **SOCIAL** **ECONOMY:** Agriculture in FCT produces yams, millet, maize, sorghum, and beans. Mineral resources include clay, tin, feldspar, gold, iron ore, lead, marble, and talc. **MALE TO FEMALE RATIO:** Male: 1,817,704; Female: 1,746,422 **LITERACY LEVEL:** Male: 67.3% ; Female: 47.8%** **CRIME**: About 5382 cases of crime reported in 2017** **PER CAPITA POVERTY MEASURE**: 45.5% in 2010** **UNEMPLOYMENT RATE:** 45.5% IN 2011**

CHAPTER 5: Potential Environmental and Social Risks

The MPA is expected to impact positively on the health and socio-economic development in the program states. However, during its implementations/operations, there are likely environmental, social and health risks which may pose potential environmental, social and health risks and impacts. These risks arise mainly from poor HCWM and implementation of civil works. This chapter discusses these risks and impacts.

5.1 Environmental and Social Screening Process

The objective of screening is to determine before commencement of sub-projects the appropriate level of environmental and social impact assessment and management that would be needed for a proposed subproject. It seeks to integrate relevant mitigation measures into all subproject that require mitigations in a bid to manage and reduce potential environmental and social risks and impacts.

The screening process determines which sub project will have environmental and/or social impacts. After the process of screening;

- Sub-projects with no noticeable impacts will be cleared from an environmental perspective;
- Sub-projects with some impacts proceeds to another level of conducting an environmental assessment, which will be evaluated to clear the subproject.

There is a need for a screening process particularly due to rehabilitation and renovation of HCF as well as the waste generation that is associated with every phase and module of the MPA.

Therefore, an environmental and social screening process is put in place in order to ensure all potential environmental and social impacts are adequately screened for environmental and social risks and impacts. This will include an environmental screening sheet showing the estimated impact category of each sub-project to be carried out in any of the project states. The screening process will involve an assessment of the project to determine:

- The appropriate project categorization for the EA;
- Applicable World Bank environmental and social safeguards;
- Potential for environmental and social impacts; and
- Cultural or other sensitivities.

In addition, every project will also be screened to identify relevant stakeholders and the nature and the extent of their engagement. Though the scope of the GBV good practice note applies to IPF that involves major civil works, the MPA will also be screened for GBV risk assessment tool and corresponding risk management system will be developed to address any potential GBV risk particularly as it relates to rehabilitation works and activities of non-state actors in service delivery.

Categorization of sub projects will be done through the use of an Environmental and Social Screening Checklist (ESSC) (See Annexes 4 and 5). This will determine the extent of assessment that would be carried out for the respective sub projects.

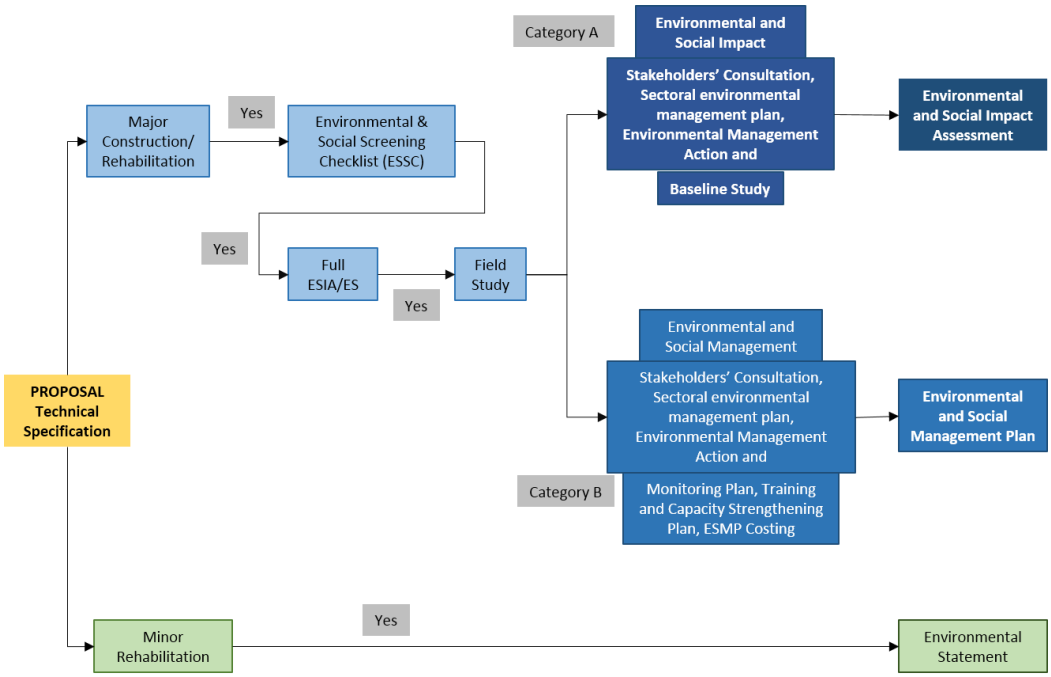

Figure 5.1: Environmental Screening Procedure

5.2 Impact Analysis and Prediction Ratings

The core of any environmental and social assessment process is predicting the magnitude of impacts. Predictions are based on the available environmental and social baseline of the selected project states (See Chapter 4). Specific environmental and social impacts will only be known after the subproject locations are identified, and then specific ESIA/ESMPs will be prepared appropriately which will include mitigation measures addressing all identified environmental and social impacts.

Table 5.1 below highlights criteria used in assessing environmental and social impacts of the MPA. See Annex 8 for impact rating and classification.

Table 5.1 Evaluation and Considerations of Identified Potential Impacts

CONSIDERATION	DESCRIPTION
Significance of Environmental / Social Aspect	This takes into consideration the importance of the environmental and social aspects that would be affected. Also taken into consideration is the location of which the aspect will be impacted.
Magnitude of Impact	This is the severity of each potential impact. The magnitude of an impact cannot be rated as high if it can be mitigated. The magnitude will also indicate whether the impact is reversible or irreversible. As with this project all impacts are envisaged to be reversible impacts.
Spatial Extent of Impact	The spatial geographical space over which an impact can be felt is also taken into consideration ▪ ***Site specific:*** Impact is felt or limited to the geographical space of the project area ▪ ***Non-site specific:*** Impact extends wider than just the project area. As with this project all impacts are envisaged to be site specific impacts.

Duration of Impact	Environmental impacts have a temporal dimension An impact can also be ▪ ***Short Term:*** Impact that lasts shorter than nine years after project completion; ▪ ***Medium Term*:** Impact that last beyond 9 years but less than 20 years after project completion; and ▪ ***Long Term:*** Impacts that last beyond 20 years after project completion. As with this project all impacts are envisaged to be short term impacts
Significance of Impact	This refers to the importance of the impact. Impacts must be evaluated using the same and appropriate choice of criteria. The most important forms of criteria used include: ▪ Specific legal requirements e.g. state, national laws, standards, international agreements and conventions, relevant policies etc; ▪ Public views and complaints; ▪ Threat to sensitive ecosystems and resources e.g. can the impact lead to extinction of species and depletion of resources, which can result, into conflicts; ▪ Cost of mitigation; ▪ Likelihood or probability of occurrence (very likely, unlikely, etc.); ▪ Reversibility of impact (natural recovery or aided by human intervention); ▪ Number (and characteristics) of people likely to be affected and their locations; ▪ Cumulative impacts e.g. adding more impacts to existing ones; and ▪ Uncertainty in prediction due to lack of accurate data or complex systems. Precautionary principle is advocated in this scenario.

Impacts where rated from 1 to 5 with 1 and 5 being the lowest and highest value respectively. See Annex Four for impact rating for environmental impacts.

5.3 Correlation between Environment and Social Risks of HCW & Baseline Studies of Project States

The impacts of HCW could vary from mild to severe impacts if managed inappropriately. Several impacts are associated with poor HCWM. For instance, open burning and incineration of health care wastes can, under some circumstances, result in the emission of (polychlorinated dibenzo-para-dioxins or PCDDs) and furans (polychlorinated dibenzofurans or PCDFs), and particulate matter. These chemicals are known as Persistent Organic Pollutants (POP) and are toxic which means they do not readily break down in the environment and bio-accumulative (able to move up the food chain). In addition, some dioxins such as 2,3,7,8 tetrachlorinated dioxin are carcinogen based and short term exposures may result in skin lesions and altered liver function. Long-term or chronic exposure to some dioxins are also related with impairment of the immune system, the developing nervous system, the endocrine system and reproductive functions. The spread of these chemicals (dioxins, POP, PM2.5 etc) would be largely dependent on the local winds as well as rainfall. The spread of this could be more in states with good wind speeds and could stay longer in the atmosphere in areas with heavy rainfall.

Health-care waste contains potentially harmful microorganisms that can infect hospital patients, health workers and the general public.

Other potential hazards may include the adaptation of species resulting in more drug-resistant microorganisms which spread from health facilities into the environment disrupting the ecosystem and adversely affecting health.

There are also occupational hazards and risk associated with HCW. See Table 5.2. These impacts could arise from sharps and needle sticks. Recent studies have shown that unsafe injections were still responsible for as many as 33,800 new HIV infections, 1.7 million hepatitis B infections and 315,000 hepatitis C infections. In addition, a person who experiences one needle stick injury from a needle used on an infected source patient has risks of 30%, 1.8%, and 0.3% respectively of becoming infected with HBV, HCV and HIV according to UN reports.

The management of leachate should also be considered and largely prevented by regular and frequent evacuation and disposal.

Leachate composition is highly variable and based on several factors including the composition of the initial waste stored, generally it is characterized by high concentration of organic matter (biodegradable and non-biodegradable), ammonia nitrogen, heavy metals, and chlorinated organic and inorganic salts.

The generation of leachate is dependent on several factors including but not limited to

- Rate of percolation and amount of precipitation
- Cap (covering design) covering the HCW
- Location hydrology
- Waste compaction
- Interaction of leachate with the environment

There could be more leachate formed in states with higher annual rainfall and percolation rates such as the southeastern and southwestern states (Abia, Anambra, Imo, Enugu, Lagos, Bayelsa, Rivers, Ondo, Rivers etc) than in northeastern state (Borno). Even at this percolation of leachate will be more in areas of loose soils such as Kogi, Kaduna etc. The impact of this is that there is a higher possibility of soil and water pollution occurring in states having high annual rainfall and loose soils as a result of leachate and this will be more likely during and around the rainy season (April to September) See Table 4.3.

In addition, there is more likelihood that air pollution will be easily spread in areas where there is adequate wind speed which can enhance diffused pollution thus increasing health hazards. There could also be cases of acid rain[3] brought about by burning of HCW. For example, when sulfuric or hydrochloric acid enters the atmosphere, it reacts with other chemicals to form salts. The acid particles then dissolve in clouds, fog, rain or snow forming dilute acidic solutions. This then falls to the soil as acid rain. The baseline studies show that this period of increased wind speed usually coincides with March See Table 4.3.

The baseline shows that wind speed is generally higher between March and April. This period also marks the start of the raining season where average monthly rainfall is usually above 100mm of rainfall. This period is also marked with high humidity and high temperatures as indicated in the baseline shown in Table 4.3. All these means the occurrence of air, water and soil pollution is potentially more during this period.

[3] Acid rain is caused by emissions of sulphur dioxide and nitrogen oxide, which react with the water molecules in the atmosphere to produce acids

HCWM must be managed adequately and sustainably to avoid and reduce adverse environmental and social impacts, and this can be achieved adapting the National Healthcare Waste Management Plan 2013 (NHCWMP).

5.4 Correlation between Environment and Social Risks of Construction/Expansion & Baseline Studies of Project States

There are also concerns from the anticipated minor renovations at HCFs and their associated potential risks and impacts. These would arise mainly from construction waste generated, occupational health and safety as well as noise, air, soil and water pollutions and this will need to be addressed even though there are expected to be minor. Some level of construction wastes, including some potentially toxic and hazardous wastes such as empty paint buckets and creosote cans, will need to be disposed of properly. In addition, workers may encounter minor occupational and safety concerns daily that need to be addressed to avoid workplace accidents. Since there are only minor renovation works, engaged workers engaged will be few and thus concerns arising from labor influx, GBV, SEA risks will be low.

These impacts are of low significance and generally will be similar across all participating states since renovation works are expected to be minor. However, the following measures will be developed and implemented to prevent GBV risk:

- Provision of cultural sensitization training for workers regarding engagement with local community;
- Sourcing of local workforce;
- Introduction of sanctions (e.g., dismissal) for workers involved in criminal activities;
- Provision of substance abuse prevention and management programs;
- Worker Code of Conduct acknowledging zero tolerance for GBV;
- Implementation of HIV/AIDS education program;
- Information campaigns on STDs among the workers and local community;
- Education about the transmission of diseases;
- Mandatory and regular training for workers on required lawful conduct in host community and legal consequences for failure to comply with laws;
- Ensuring that children and minors are not employed directly or indirectly on the project;
- Provision of casual employment to both male and female throughout the implementation cycle;
- All gender-based violence to be reported;
- Any child dropout should be reported to the relevant government agency.

5.5 Potential Environmental and Social Impacts of the MPA

Under the MPA, WB Operational Policy (OP) 4.01 on Environmental Assessment is triggered given the potential environmental that could arise from minor civil works as well as HCWM resulting from project related activities including vaccination/immunization, distribution of drugs and LLINs that generate healthcare waste such as expired vaccines and sharps. Table 5.2 shows the potential environmental and social risks as well as proposed mitigation measures.

5.5.1 Potential Impacts Associated with Healthcare Waste

Most HCW generated from activities of the MPA, will include

- Non Hazardous Waste (Class 1) such as packaging used for drugs including antibiotics, LLINs, and SMC. (HCW is usually composed of 85% of Class 1 and can be treated alongside MSW.);
- Sharps (Class 3) such as vaccines, sharps, needles, etc
- Pharmaceutical wastes (Class 5) such as drugs including antibiotics, SPs, SMCs, deworming tablets, Vitamin A supplements, Oral Rehydration

These classes of HCW and their respective managements would have impacts on the environment and social aspects if managed inappropriately. This is discussed more in Sections 5.4.1 and 5.4.2 and Table 5.2. Annex 8 shows the impact ratings and classification used to derive the classifications under Sections 5.4.1 and 5.4.2.

5.5.2 Potential Impacts Associated with the Construction and Expansion of the Lagos Cold and Dry Store

Demolition and construction work associated with the expansion and construction of the Lagos Cold and Dry Store will generate noise, vibrations, dusts, odour, increased traffic thus necessary precautions shall be taken to minimize emissions, noise and vibration using best environmentally friendly practices.

The construction and expansion of the Lagos Cold and Dry Store will involve demolition works which could involve many of the same hazards associated with construction works; however, demolition poses more additional hazards usually over a shorter period. This sub-project under the IMPACT MPA will involve the demolition of the existing warehouses located within the premises of the Lagos Cold and Dry Store. The demolition works will generate significant amount of large and heavy wastes which would include concrete, wood, metals, irons, cement blocks, glass, plastics as well as salvaged items such as doors and plumbing fixtures. All these will need to be disposed of properly or reused to the extent possible. These activities will generate loud noise, vibrations, dusts, a temporary deterioration in air quality, soil contamination, odour, increased traffic thus necessary precautions shall be taken to minimize emissions, noise and vibration using best environmentally friendly practices.

5.5.3 Potential Impacts Associated with Other Minor Rehabilitation/Civil Works

In addition, concerns would arise from anticipated minor rehabilitation. Activities associated with this would include repairs such as painting, plastering, replacing doors/windows, leaking roofs, may occur in existing buildings and health facilities. These activities would also be undertaken the construction and expansion of the Lagos Cold and Dry Store. The potential risks and impact of proposed civil works are expected to be minor, site specific and relatively easy to mitigate. Summary of potential environmental and impacts include:

Flora and Fauna: The removal of the vegetative cover and cutting of trees (non-economic trees) are not expected under this project as the HCF already exists. There are no impacts expected with regard to loss of flora and fauna and thus mitigation measures are not required.

Soil Erosion: Renovation works will be carried out on existing HCFs. Soil erosion is not anticipated from renovation works.

Air Quality: Minor renovation works envisaged under this project will not lead to any large scale change in air quality.

Water Quality: As renovations are only very minor and in already existing HCF, the impacts on water (surface and ground) are not large scale. However, generic mitigations measures are put in place.

Solid Wastes: Renovation works would generally generate construction wastes that need to be managed. The renovation works will entail mainly painting, re-roofing etc. The amount of construction wastes generated during renovation is expected to be minimal but will still require proper disposal. These concerns will include but are not limited to empty paint and thinner cans, and chemicals used in wood processing to prevent termites such as creosote. Proper handling and disposal of these wastes, some of which contain toxic substances, will need to be addressed through a Waste Management Plan (WMP) which should be adhered to.

Occupational Health and Safety: Though renovation works are expected to be light, workers may still encounter minor occupational health and safety issues that need to be addressed to avoid workplace accidents. The exact facility renovation and upgrading activities are not defined at this stage, but these activities would normally involve, for instance, working at height in case of roof repair work; issues related to electricity and welding safety; exposure to hazardous substances such as paints, thinners, creosote during painting and wood processing; and the risk of trip and fall as result of poor housekeeping in the workplace. The contractor will need to ensure safe and healthy work environment through proper arrangements and management. Some generic mitigation measures to be proffered are discussed in Sections 5.4.1 and 5.4.2 and Table 5.2. Annex 8 shows the impact ratings and classification used to derive the classifications under Sections 5.4.1 and 5.4.2.

5.5.4 Managing COVID-19 Risks In MPA Operations

When someone who has COVID-19 coughs or exhales they release droplets of infected fluid. Most of these droplets fall on nearby surfaces and objects, such sharp boxes, desks, tables or telephones, floor surfaces, bin bags etc. In addition, these droplets can fall on hand and power tools, such as screwdrivers, brushes, trowels, wrenches, knives, crimpers, clamps, mixers, saws, cutters, drills, grinders, etc during civil works. People including staff and workers could catch COVID-19 by touching these contaminated surfaces or tools, and then touching the eyes, nose, or mouth. If they are standing within 1 meter of a person with COVID-19 they can catch it by breathing in droplets coughed out or exhaled by others.

Most persons infected with COVID-19 experience mild symptoms and recover. However, some experience more serious illness and may require hospital care. Risk of serious illness rises with age: people over 40 seem to be more vulnerable than those under 40. People with weakened immune systems and people with conditions such as diabetes, heart and lung disease are also more vulnerable. Adherence to COVID-19 guidelines and protocols by HCF staff should be mandatory and reviewed frequently. There must be extra considerations made to protect engaged workers who have any underlying illnesses. See more guidelines and mitigation measures in Annex 11.

Adequate measures should be put in place to reduce the risks of COVID-19 spreading during implementation of sub-project activities. Such measures that should include physical and social

distancing, provisions of hand washing facilities at strategic locations within the compound and sanitizers etc.

In addition to adherence to COVID-19 guidelines, staff should be checked daily using thermometers for symptoms and isolated should they have symptoms. During civil works there is need to retain the names and contact details of all project workers and visitors for at least one month. This will help public health authorities trace people who may have been exposed to COVID-19 if one or more participants become ill shortly after the event. Mitigation measures and guidelines that should be considered are outlined in the ESMP-F, and further detailed guidelines are laid out in Annex 11.

For a further discussion on COVID-19 issues in construction activities and suggestions on possible mitigation measures, see World Bank Interim Note on COVID-19 Considerations in Construction/Civil Works Projects and World Bank Interim Note on COVID-19 Considerations in Construction/Civil Works Projects.

5.5.5 Environmental Impacts

Adverse environmental impacts that would be associated with the MPA will arise from HCWM as well as from minor rehabilitations and renovations. All these identified impacts readily be mitigated. Such impacts will include:

- Air pollution and quality – **(Moderate)**
- Ground and surface water contamination – **(Low)**
- Soil contamination & erosion, blocked drains and waterlogging – **(Low)**

5.5.6 Social Impacts

It is envisaged that social impacts would be similar across all participating states. Adverse social impacts that could be associated with MPA will arise from HCWM as well as from minor rehabilitations and renovations. All these identified impacts readily be mitigated. These impacts will include:

- Public Health Hazards – **(Moderate)**
- Public Safety – **(Low)**
- Occupational Health and Safety - **(Moderate)**
- Social & Commercial Activities – **(Moderate)**
- Waste Management – **(Moderate)**
- Social Exclusion – **(Low)**

More details of these impacts are included in Table 5.2

5.6 Mitigation Measures

The mitigation measures proffered for the MPA seek to produce enhancement measures for the program's implementation ensuring that it is environmentally sustainable and socially acceptable. Thus,

it is intended to safeguard the environment as well as protect human health and safety while ensuring development continues in the most sustainable manner.

The main aims of any mitigation process are:

- To discover and suggest better alternatives to producing better sustainable projects and environments
- To improve and enhance the environmental and social benefits of the proposed project
- To avoid, reduce, eliminate and or remedy adverse impacts a proposed project can have on the environment.

Table 5.2 Potential Environmental Impacts, Ratings and Proposed Mitigation Measures

ENVIRONMENTAL PARAMETER	DESCRIPTIONS	IMPACT RATINGS	PROPOSED MITIGATION MEASURES
AIR POLLUTION AND QUALITY	▪ Air pollution may arise from indiscriminate open air burning of HCW such as sharps, syringes, used and expired vaccines, general HCW generated during MPA operations. ▪ Also, waste stored for too long on site could release offensive smells into the atmosphere ▪ Air pollution may also occur from burning of construction waste during renovation. This is rated **Low** ▪ Ambient Air deterioration from release of dusts and gaseous emissions from construction and expansion of the Lagos Hub ▪ Increase in dust/PM levels as a result of demolition works	**Moderate**	▪ Indiscriminate burning of wastes at site should be avoided to reduce air pollution. ▪ Waste should be evacuated at least once a week ▪ All HCW should be directed to approved storage and dumpsites. ▪ Vehicles used in vaccine transportations should be serviced frequently and have low carbon emissions. If vaccine transportation is outsourced, contract agreement should include provisions for evaluation including company experience, certifications, staff strength and expertise, training records etc ▪ Dust suppression such as water sprinkling during dry season ▪ Use of silt fences and other barriers, such as wattles ▪ For renovation works, except where activity and site screening results show that there might be negative impacts, no mitigation measures are so far required. Renovation works are expected to be of very low impact even in the absence any mitigation measure. ▪ Develop and implement a WMP that defines approved temporary storage points, storage containers, frequency of waste disposal etc
GROUNDWATER AND SURFACE WATER CONTAMINATION	▪ Improper waste management could lead to leachate produced flowing into surface waters and infiltrating into ground water leading to contamination ▪ Infiltration of wastes such as contaminated swabs, expired vaccines, can find their way into surface water bodies causing contamination. ▪ There is a possibility of construction wastes (such as paint buckets, creosote etc) being disposed of in water channels/bodies and drainages	**Low**	▪ Provision of appropriate bags/containers for storing HCW Waste must be stored in appropriate bags/containers ▪ Reduce HCW generation to barest minimum ▪ Waste must be collected and segregated at each point of generation ▪ Waste should be evacuated at least once a week ▪ For renovation works, except where activity and site screening results show that there might be negative impacts, no mitigation measures are so far required. Renovation works are expected to be of very low impact even in the absence any mitigation measure. ▪ Develop and implement a WMP that defines approved temporary storage points, storage containers, frequency of waste disposal etc

NOISE	▪ Increase in noise levels as a result of demolition works	**High**	▪ All demolition works should be carried out during normal working hours ▪ Operations should be carried out with minimal noise and vibration disturbance. ▪ Several noisy activities should be carried out simultaneously to avoid continuous noise disturbance
SOIL CONTAMINATION & EROSION, BLOCKED DRAINS AND WATERLOGGING	▪ Disposal of HCW along surface water channels/drainages could impede water flow which over time can lead to small scale flooding or waterlogged roads/paths. Over time this can lead to small scale erosion particularly in the south eastern states (Abia, Anambra, Enugu & Imo etc) where water erosion is an environmental challenge. See Baseline ▪ When waste is stored for a long time, leachates may form, and this could in turn percolate into the soil beneath thereby contaminating it. The impact of this would be more in the more densely populated areas of Lagos, Anambra, Enugu and Imo. See Baseline ▪ Soil erosion due to over exposure of top soil particularly in regions with active erosion agents ▪ Loss of soil quality from de-vegetation ▪ Soil contamination from oil spillage particularly on the Lagos Hub sub project	**Low**	▪ All HCW should be directed to approved storage and dumpsites. ▪ Waste must be stored in appropriate bags/containers ▪ Reduce HCW generation to barest minimum ▪ Waste should be evacuated at least once a week ▪ For Renovation works, Develop and implement a WMP that defines approved temporary storage points, storage containers, frequency of waste disposal etc ▪ Develop and implement a WMP that defines approved temporary storage points, storage containers, frequency of waste disposal etc ▪ Avoid removal of vegetation where possible ▪ Protect all vegetation not required to be removed
VEGETATION	▪ Vegetation loss from land clearing and preparation activities	**Low**	▪ Avoid removal of vegetation where possible ▪ Protect all vegetation not required to be removed

PUBLIC HEALTH HAZARDS	▪ Increase in generation wastes such as expired vaccines and hazardous health waste generated by HCF if not managed properly could accumulate, produce foul smells, and attract insects and rodents which inevitably would have health implications on the general public. Particularly, this could also turn into a fertile breeding habitat for insects like mosquitoes particularly during the rainy season which can cause the spread of malaria which the MPA is trying to reduce ▪ HCW inappropriately managed and kept away from the public poses risks from inhalation of foul odors and fumes during burning ▪ Patients visiting medical facilities are at risk of gaining Hospital Acquired Infections (HAI), nosocomial infections during their stay/visits ▪ Risk of community spread of COVID-19	**Moderate**	▪ Waste generated on-site should be evacuated at least once a week ▪ Waste should be stored inside appropriate impermeable bags/containers ▪ For Renovation works, develop and implement a WMP that defines approved temporary storage points, storage containers, frequency of waste disposal etc ▪ All workers must have and use adequate PPEs
PUBLIC SAFETY	▪ Indiscriminate dumping of HCW could hamper public safety as this exposes the public to HCW such as sharps, needles and other sharp objects some of which may be infected. ▪ Risk of debris falling off vehicles enroute disposal particularly on the Lagos Hub sup project ▪ Risk of community spread of COVID-19	**Low**	▪ Prohibition of access to the wastes storage site by unauthorized persons. Proposed HCW storage and disposal sites should be clearly marked and cordoned off any access by the public ▪ For Renovation Works, areas where work is ongoing must be clearly marked and cordoned of
OCCUPATIONAL HEALTH & SAFETY	▪ Staff handling of HCW such as sharps and inhaling fumes will expose the workers to occupational health risks. ▪ Medical personnel and waste handlers are exposed to dangerous and infectious HCW (such as sharps) during collection and transportation of HCW ▪ Waste handlers and HCF staff are also exposed to Occupationally-Acquired Infections such as tuberculosis, blood-borne infections such as hepatitis B, C, tetanus and HIV from needle-sticks ▪ There are possibilities of injuries arising from construction wastes such as nails if left carelessly around	**Moderate**	▪ Workers should be equipped with appropriate Protective Personal Equipment (PPE) such as latex gloves including sanitizers. ▪ All waste storage and disposal sites should be adequately condoned off from the public ▪ Indiscriminate burning of HCW should be prohibited ▪ For Renovation Works, workers should be equipped with appropriate Protective Personal Equipment (PPE) such as boots, nose masks
SOCIAL & COMMERCIAL ACTIVITIES	▪ There could be increase in the demand for basic services due to increase in HCF patronage ▪ There is a potential for petty crime to increase in proposed sub project areas as influx of people increases ▪ Indiscriminate dumping and prolonged inappropriate storage of waste could lead to unpleasant odors and sights and this could hamper commercial activities around HCF	**Moderate**	▪ Such marked areas should have appropriate waste bags/containers ▪ Waste generated on-site should be evacuated at least once a week ▪ Waste should be stored inside appropriate impermeable bags/containers
	▪ Labor influx, may lead to SEA/SH risk	**Moderate**	▪ Use of local labour;

	▪ Conflicts and grievances among stakeholders		▪ Introduction and enforcement of sanctions (e.g., dismissal) for workers involved in criminal activities; ▪ All gender-based violence should be reported; ▪ Ensure minors are not employed directly or indirectly on the project; *N.B See also Section 5.4*
HEALTHCARE WASTE MANAGEMENT	▪ There is an expected increase in HCW generated from both public and private health centres. If not managed properly, could be harmful to the public and in extreme cases hazardous HCW could lead to disease outbreak ▪ Waste generated on site if not managed properly could accumulate and become unpleasant sights to the area. ▪ Waste dumped besides roads may intrude onto the roads causing vehicular hold ups and accidents.	**Moderate**	▪ Ensure proper handling, and disposal of HCW ▪ Waste must be stored temporarily in designated areas daily ▪ HCW should be evacuated at least once weekly ▪ On site waste collection and storage points should be located in areas easily accessible to approved waste collection personnel without hindrance to vehicle and human movement. ▪ A well detailed HCWMP should be put in place and should be prepared in accordance with the ○ National Healthcare Waste Management Policy 2013 ○ National Healthcare Waste Management Guidelines (NHCWMG) 2013 ○ National Healthcare Waste Management Plan (NHCWMP) 2013
CONSTRUCTION WASTE FROM RENOVATION WORKS	▪ Construction waste if not managed properly could accumulate and become unpleasant sights to the area. ▪ There are possibilities of injuries arising from construction wastes such as nails if left carelessly around. ▪ Waste dumped besides roads may intrude onto the roads causing vehicular hold ups and accidents. ▪	**Low**	▪ Construction waste will be collected and disposed properly in accordance a detailed approved WMP ▪ Temporary onsite storage areas must be clearly marked and cordoned from unauthorized access ▪ The records of waste disposal will be maintained as proof for proper management as designed. ▪ Reuse and recycling of materials should be encouraged as a way of reducing waste ▪ Toxic and hazardous wastes including empty paint cans will be disposed of in accordance a detailed approved WMP ▪ Open burning of construction wastes will not be allowed ▪ Dumping of wastes in water courses and in other environmentally sensitive areas such as swamps/wetlands will not be allowed

CHAPTER 6: Healthcare Waste Management and Environmental Risks

6.1 General and Healthcare Waste Management

Experience has proven that when HCW is properly managed, generally it poses no greater risks than that of properly treated municipal or industrial waste. Thus, the risks are manageable and can be mitigated. For the MPA, there will be concerns from handling HCW resulting from project related activities such as immunization that will generate HCW such as expired vaccines and sharps, needles and syringes.

However, improper and unsafe Healthcare Waste Management (HCWM) practices put at risk healthcare workers, patients, and communities at large who are exposed both within HCFs and surrounding communities. The potential risks for the MPA is considered to be small in scope, site specific, and easy to avoid, prevent, and manage as well as remediate to acceptable levels.

Most of the impacts associated with the activities under the MPA can be mitigated by implementing the National Healthcare Waste Management Policy, National Healthcare Waste Management Guidelines and the National Healthcare Waste Management Plan which the FGoN through the FMoH and in collaboration with the FMENv released in 2013.

Generally, for the MPA, it is expected that most HCW would fall under Class 1 (Non-Hazardous Waste) such as drugs and LLINs packages; Class 2 (Infectious waste) *such as swabs*, Class 3 (Sharps) *such as injections and syringes*, Class 4 (Highly infectious waste) *such as urine blood samples/products*, Class 5 (pharmaceutical wastes) *such as SP drugs*; and Class 6 (highly infectious waste*) such as contaminated blood cloths.*

6.2 Summary of National Healthcare Waste Management Plan (NHWMP)

The preferential order for waste-management options are: avoid – reuse – recycle – energy recovery – dispose, in that order. This hierarchy, together with the proximity principle that calls for managing waste close to its point of generation, may be regarded as the starting point for sound waste management practices.

According to the National Healthcare Waste Management Plan 2013 (NHCWMP) the basic principles of HCWM involves

- Waste Minimization
- Waste Segregation
- Color Coding
- Waste Collection
- Waste Storage; and
- Transportation.

It has categorized HCW generated in Nigerian HCF into different 8 different classes and approved different color codes for each waste stream. This makes collection and temporary storage and treatment easy. Fig 6.1 shows the waste classes and color coding for the MPA.

Fig 6.1 Waste Categorization and Color Codes Relevant to Activities of the MPA

6.3 Current Waste Treatment in Nigeria by Waste Class

These treatment options are based on the prevailing health systems in Nigeria as revealed in the National Healthcare Waste Management Guideline (NHCWMG). In Nigeria, burning in low-cost incinerators or burying HCW in specialized pits is for the present moment probably the most affordable and acceptable options for smaller primary healthcare facilities (PHCs). However, this option is not satisfactory environmentally. The following are recommended treatment options according to the NHCWMG.

Non Hazardous Waste (Class 1): Could be separated from other HCW and disposed of along with other MSW.

Infectious Waste (Class 2): Infectious HCW shall be incinerated in high-temperature, double chamber incinerators. In primary health centers, infectious waste may be burnt and buried away from water bodies

and in a protected pit when there is no risk of contaminating underground water. Infectious waste pits must be fenced to prevent access.

Sharps (Class 3): Sharps should undergo incineration whenever possible. Where this is not possible, they should be encapsulated and then land filled, or buried in specially constructed sharps pits. Based on the current unavailability of functioning incinerators, two treatment options should be used

- ***Option 1:*** For states with functioning incinerators, sharps should be stored temporarily in HCFs and transported at least twice a month to the central location (preferably the Local Government Area Council office) for onward transportation and treatment at the pre-determined incinerator. After burning of the sharps at the central incinerator, the ashes should be taken to an approved landfill. Each HCF must have a designated temporary storage area which must be cordoned off from easy access by rodents and unauthorized persons.
- ***Option 2:*** For states without functioning incinerators, sharps should be encapsulated. Particularly for rural HCF that generate small HCW by volume. Full safety boxes should be closed and put into high density plastics or metal containers. When the container is full, an immobilizing agent such as cement, plastic foam, sand or clay is added. When the immobilizing material has dried, the containers are sealed and disposed of in the approved landfill site or left in place if they are constructed in the ground. They can also be buried within the HCF premises. See Annex 5. Using this method reduces to a great extent the possibilities of waste pickers being infected by the sharps as contact is reduced.

Pathological/Anatomical Wastes (Class 4): Pathological and anatomical waste can be treated by pyrolitic incineration. Low-temperature, artisan incinerators must not be used for large amounts of pathological waste. Anatomical waste and placentas can be buried at a sufficient depth (greater than 1meter) inside the HCF compound. If transportation and disposal cannot be immediately ensured, anatomical waste should be stored in the mortuary.

Pharmaceutical Wastes (Class 5): High temperature incineration is the best way to dispose of pharmaceutical waste. The waste should be disposed of with their cardboard packaging to ensure optimal combustion conditions. Low-temperature incineration (<800°C) is not recommended. Cement kilns are particularly well suited for the treatment of pharmaceutical waste since the temperatures reached often exceed 1,200-1,400°C, thus ensuring both complete combustion and near to zero toxic exhaust gases.

Small quantities of pharmaceutical waste may be encapsulated (can be mixed with sharps), buried, land filled (provided that they are dispersed in large quantities of general waste). Cytotoxic, antibiotics, or narcotic drugs, however, should never be discharged into the sewer or land filled, even in small quantities.

PHC that cannot treat Class 5 wastes in accordance with the above can return the expired drugs, vaccines to their SMoH for onward treatment and disposal as is currently being practiced in some states.

Highly Infectious Wastes (Class 6): Whenever possible, highly infectious waste should be sterilized by autoclaving at the earliest possible time, before being disposed of with medical waste. This is not feasible

in most Nigerian healthcare facilities thus, it is recommended that, a chemical pretreatment in a concentrated solution of sodium hypochlorite prior to disposal with other clinical wastes.

Radioactive Wastes (Class 7): All radioactive waste shall be stored to allow decay to background level. They shall be placed in a large container or drum and labelled with the radiation symbol showing the radionuclide's activity on a given date, the period of storage required, and marked "caution! Containers or tanks with radioactive waste that have not decayed to background level, shall be stored in a specific marked area, preferably in a lead shielded storage room or alternatively in a room with concrete walls 25cm thick.

Non-infectious radioactive waste, which has decayed to background level, shall follow the non-risk HCW stream (Class 1) while infectious radioactive waste which has decayed to background level shall follow the hazardous HCW stream (class 2). Liquid radioactive waste shall be discharged into the sewerage system or into a septic tank only after it has decayed to background level in adequate tanks.

Mercury Wastes (Class 8): This should be treated as a specialized kind of waste and should be collected and stored in a tin container at room temperature and transported to where it will be treated in an environmentally sound manner. Effort should be made at facility levels to discontinue the use of mercury containing devices.

Long Lasting Insecticides Nets (LLINs): If LLINs and their packaging (bags and baling materials) are collected, the best option for disposal is high-temperature incineration. They should not be burned in the open air. In the absence of such facilities, the recommended method of disposal is burial. Burial should be away from water sources and preferably in non-permeable soil.

If recycling or incineration is not possible, and if LLIN producers provide directions on methods for safe disposal, care should be taken to follow the manufacturer's recommendations. Alternatively, landfilling of bags and baling material in a properly engineered landfill is an option. See Annex 7C. In addition, Residents should also be advised not to dispose of old LLINs.

More details of this are discussed and explained in the separate stand-alone HCWMP

CHAPTER 7: Implementation of the Environmental and Social Management Plan Framework (ESMP-F)

7.1 Institutional Arrangement for Implementation of the ESMP-F for the MPA

Institutional arrangements for the MPA would be streamlined into the existing government structure at the Federal, State and Local Government levels. Additional technical assistance and coordination support will be provided through the project to strengthen implementation. See Table 7.1.

The FMoH will be responsible for the overall policy formulation and program coordination for the MPA as a whole. It will serve as the responsible line ministry for the program and provide policy direction for achievement of targets set by the MPA, monitor progress toward these results, and use these to inform policy and programmatic adaptations as the MPA evolves, including requesting for potential restructuring of the Project if needed due to changing situation on the ground (as included in the World Bank guidelines).

At the federal level, the MPA will be under the supervision of a National Steering Committee (NSC) chaired by the Honorable Minister of Health and including representation from the NPHCDA, NMEP, Department of Health Planning, Research and Statistics (DHPRS), Department of Public Health (DPH), Department of Food and Drug Services (DFDS), Nigeria Institute of Medical Research (NIMR), Nigeria Institute of Pharmaceutical Research and Development (NIPRD), Nigeria Centre for Disease Control (NCDC), Ministry of Finance (the International Economic Relations Department), and Budget and Planning; State Ministries of Health and Finance; State Primary Health Care Development Agencies (SPHCDAs); development partners; and community service organizations. DHPRS will serve as the secretariat of the national steering committee. The NSC will ensure intergovernmental coordination and policy alignment for the program and will meet at least twice per year to oversee coordination, knowledge sharing, and achievement of the MPA's PrDO and related results.

At the state level, the State Steering Committees (SSCs) will be chaired by the Honorable Commissioners of Health and will include representation from state ministries of health and finance, SPHCDAs, and relevant development partners and community service organizations. The composition of the steering committees, at both federal and state levels, may change in subsequent phases to ensure that all relevant ministries and agencies are represented.

To ensure close collaboration and strengthen the implementation of areas of synergy, the FMoH will also host the National Coordinating Committee (NCC) which will be co-led by staff from NMEP and NPHCDA. Specific areas of synergy for NMEP/NPHCDA, to be coordinated through the NCC, will include Procurement Supply Management (PSM), M&E, Environmental and Social Safeguards, Social and Behavior Change Communications (SBCC), TAs, and support to states on recruitment of NSAs to boost delivery of services to communities. The NCC will help mitigate implementation risk by strengthening information flow and collaboration between NMEP and NPHCDA. In addition, both the NMEP and the NPHCDA shall have designated Environmental Safeguard Specialist (ESS) and Social Safeguard Specialists (SSS).

Table 7.1 Federal Level Institutional Arrangement for the Roles and Responsibilities in Implementing the MPA

S/N	MDA	ROLE AND RESPONSIBILITY	
1	Federal Ministry of Finance	▪ Provide financial oversight in ensuring timely effectiveness of the various phases of the MPA and maintenance of funds flow	Entire MPA
2	Federal Ministry of Health	▪ Serve as the responsible line ministry for the program and provide policy direction for achievement of targets set by the MPA ▪ Responsible for the overall coordination and program management for the MPA and host the various phases in its departments and parastatals ▪ Provide strategic direction for achievement of targets set by the MPA ▪ Monitor progress towards these results and use these to inform policy and programmatic adaptations as the MPA evolves	Entire MPA
3	**National Steering Committee** *Domiciled in Federal Ministry of Health (FMoH)*	▪ ensure intergovernmental coordination and policy alignment for the program ▪ Oversee coordination, knowledge sharing, and achievement of the MPA's PrDO and related results	Entire MPA
4	National Project Management Team (NPMT)	▪ responsible for securing a slot for the Honorable Minister of Health to present progress on the MPA to the Governors' Forum once/twice per year (i.e., following SC meetings) ▪ help mitigate implementation risk by strengthening information flow and collaboration between NMEP and NPHCDA, particularly in contracting firms for M&E, TA and SBCC. ▪ ensure close collaboration and strengthen the implementation of the third component, Knowledge for Change, and other areas of synergy.	
5	**National Malaria Elimination Program (NMEP)** *Domiciled in the Federal Ministry of Health (FMoH)*	▪ Responsible for coordination and oversight of malaria activities at the federal level ▪ Provide specifications for anti-malaria commodities to be procured by the program ▪ Responsible for the procurement of LLINs ▪ Provide support to states on the recruitment of NGOs ▪ Conduct capacity assessments of states in collaboration with its partners ▪ Inform the capacity development efforts of technical assistance; ▪ Along with the World Bank team, the NMEP will leverage its National Malaria Operations Research Agenda to inform the learning agenda for the malaria component.	Phase I and Phase III
6	**National Primary Healthcare Development Agency (NPHCDA)**	▪ Provide support to states on the recruitment of NSAs involved in immunization activities ▪ Responsible for coordination and implementation of Phase II (Basic Healthcare Provision Fund) at the federal level ▪ NPHCDA will be responsible for implementing immunization plus activities under Component 2 and activities under Component 3 ▪ Responsible for strengthening service delivery through state entities through decentralized financing provide supervisory oversight, technical assistance and validation of services provided by facilities through the SPHCDAs	Phase I, and Phase II
7	National Health Insurance Scheme (NHIS)	▪ responsible for strengthening service delivery through state entities the Fee-for-Service (FFS) ▪ provide supervisory oversight, technical assistance and validation of services provided by facilities through the State Social Health Insurance Agencies (SSHIAs)	Phase II
8	Non State Actors (NSAs)	▪ Responsible for ensuring expansion and quality of service delivery at public and private health facilities within the states ▪ Responsible for procurement and provision of anti-malaria commodities to health facilities, capacity development of health workers especially on Integrated Management of Childhood illnesses, conducting mass campaigns for bed nets and	Entire MPA

		demand creation for utilization of both malaria and immunization services at community level	
9	World Bank	▪ Supervisions and provisions of technical support and guidance ▪ Advisory and Supervision of the implementations of sub projects ▪ World Bank team, the NMEP will leverage its National Malaria Operations Research Agenda (NMORA) to inform the learning agenda for the malaria component	Entire MPA
10	WHO and UNICEF	▪ Finance and procurement of vaccines and routine immunization operations support	Entire MPA

Table 7.2 State Level Institutional Arrangement for the Roles and Responsibilities in Implementing the MPA

S/N	MDA	ROLE AND RESPONSIBILITY	PHASE
1	**State Steering Committee** *Domiciled in State Ministry of Health (SMoH)*	▪ ensure intergovernmental coordination and policy alignment for the program ▪ Oversee coordination, knowledge sharing, and achievement of the MPA's PDO and related results	
2	**State Project Management Team (SPMT)**	▪ Co-lead a similar meeting platform like the NPMT regardless of whether they are participating in the malaria or the immunization plus component during the first phase of the MPA regardless of the source of financing	Phase I
3	**State Malaria Elimination Programs (SMEPs)** *Domiciled in the State Ministries of Health (SMoHs)*	▪ Responsible for day-to-day coordination and oversight of malaria activities at the State level ▪ Within its existing mandate in the provision of primary healthcare treatment and diagnosis of malaria ▪ SMEPs will also be responsible for contracting of NSAs related to the Malaria Control Component SPHCDAs within their existing mandates in the provision of primary healthcare treatment and diagnosis of malaria Responsible for all other non-primary healthcare-related activities for malaria with guidance and supervision from the NMEP	Phase I
4	**State Primary Healthcare Development Agencies (SPHCDAs)**	▪ Collaborate with the SMEPs to strengthen management of malaria and other related communicable diseases, including primary healthcare-related preventive services ▪ Responsible for coordination and implementation of Phase II (Basic Healthcare Provision Fund) at the state level ▪ Responsible for day-to-day coordination and responsible for implementing day-to-day immunization plus activities. ▪ SPHCDAs will be responsible for implementing immunization plus activities under Component 2 and activities under Component 3	Phase I and Phase II
5	State Social Health Insurance Agency (SSHIAs)	▪ Carry out routine (at least twice every quarter) ex-ante verification of quality and quantity of services delivered.	Phase II
6	Local Government Health Authorities (LGHA)	▪ through malaria and officers working on immunization plus activities will oversee supportive supervision at the primary health care facilities. ▪ Responsible for developing micro plans at LGA level and using results of the LQAS to improve service delivery	Phase II

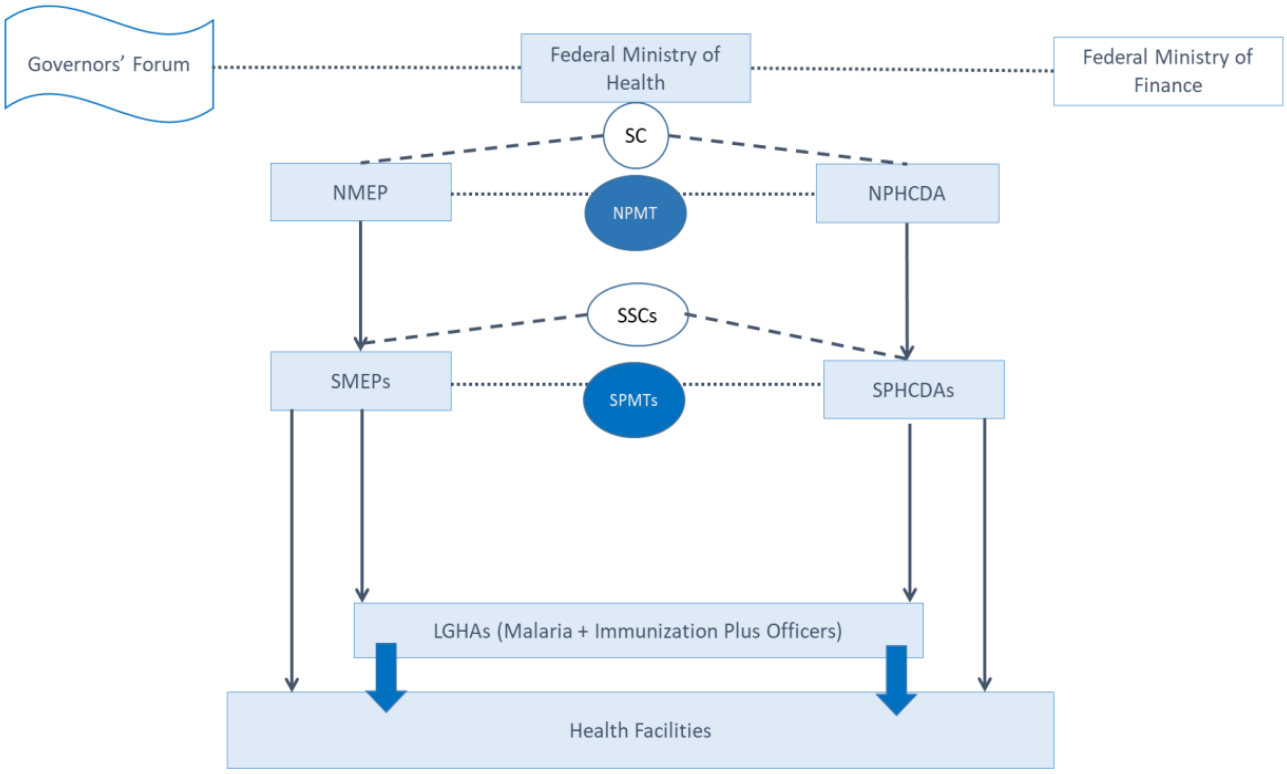

Fig 7.1 Schematic of Implementation Arrangement for Phase I

7.2 Structure of Project Implementation Units (PIUs)

NSAs will be recruited from a pool of firms shortlisted and quality-assured by the State Steering Committee (SCCs) and will be directly managed by SMEPs/SPHCDAs. The performance of NSAs will be assessed independently every half year and remuneration for results-based payments will be made by the responsible state agency based on verified results.

At the state level, the State Steering Committees (SSCs) will be chaired by the Honorable Commissioners of Health and will include representation from state ministries of health and finance, SPHCDAs, and relevant development partners and CSOs. The composition of the SC, at both federal and state levels, may change in subsequent phases to ensure all relevant Ministries and agencies are represented.

The NMEP team will have a designated program manager supported by a case manager, behavior change specialist, M&E specialist, environmental and social safeguards specialists, FM specialist, internal auditor, and procurement specialist.

The SMEPs will designate a PIU, led by the SMEP program manager, to oversee the malaria activities of the project. Team members will consist of a case manager, integrated vector management specialist, behavior change specialist, M&E specialist, environmental and social safeguards specialists, FM specialist, internal auditor, and procurement specialist.
The NPHCDA immunization team will include a designated program manager supported by a case manager, behavior change specialist, monitoring and evaluation specialist, logistics and supply chain

specialist, environmental and social safeguards specialists, financial management specialist, and procurement specialist.

SPHCDAs will designate a PIU, led by the SPHCDA program manager, to oversee the immunization plus component of the Project. Team members will comprise of a case manager, behavior change specialist, monitoring and evaluation specialist, environmental and social safeguards specialists, financial management specialist, and procurement specialist.

At both levels (federal and state), Project Implementation Units (PIUs) constituting key officers for case management, monitoring and evaluation, procurement, and supply chain management, social, mobilization/behavior change etc. will be nominated.

7.2.1 PIU Roles and Responsibilities in Implementing the ESMP-F

Table 7.3 PIU Roles and Responsibilities in Implementing the ESMP-F

S/N	ROLE	RESPONSIBILITY
1	Project Manager (PM) - NMEP	He/She will head the NMEP (at the federal level) or the SMEP (at the state level). He/she will be responsible for the MPA management on activities related to the malaria activities of the Program. The project manager will be supported by a small team of officers which should include a Procurement officer, Supply Chain and Logistics Specialist, Case Management Specialist, Behaviour Change Specialist, Project accountant, Auditor, M&E/MIS officers, ICT Specialist, Communication Specialist, Environmental and Social Safeguards Specialists, Gender and Grievance Officer. Short-term technical assistants may also provide necessary expertise as and when required.
2	Project Manager (PM) - NPHCDA	He/She will head the NPHCDA (at the federal level) or the SPHCDA (at the state level). He/she will be responsible for the MPA management on activities related to the immunization component of the program. The project manager will be supported by a small team of officers which should include a Procurement officer, Supply Chain and Logistics Specialist, Case Management Specialist, Behaviour Change Specialist, Project accountant, Auditor, M&E/MIS officers, ICT Specialist, Communication Specialist, Environmental and Social Safeguards Specialists, Gender and Grievance Officer. Short-term technical assistants may also provide necessary expertise as and when required.
2	Environmental Safeguards Specialist (ESS-PIU). See Annex 9 TOR for recruiting an ESS	▪ Preparing appropriate and coordinated response to environmental aspects of the project and sub-projects; ▪ Ensuring all activities of sub projects are in line with best practices and the framework of the ESMF and guidelines of the country; ▪ Ensuring that environmental impacts such as air pollution, water pollution are addressed ▪ Assessing each sub-project and its environmental impacts; and ▪ Assessing and monitoring environmental mitigation measures for relevant subproject(s)
3	Social Safeguards Specialist (SSS-PIU) See Annex 9 TOR for recruiting an SSS	▪ Preparing appropriate and coordinated response to social aspects of the project and sub-projects; ▪ Ensuring all activities of sub projects are in line with best practices and the framework of the ESMF and guidelines of the country; ▪ Ensuring awareness on potential GBV, SEA and other social issues are prevented

		▪ Assessing each sub-project and its social impacts; and ▪ Assessing and monitoring social mitigation measures for relevant subproject(s)
4	Financial Management Specialist (FS – PIU)	▪ Ensuring all financial funds given to NMEP are in line with the Bank-UN Financial Management Framework Agreement; and ▪ Ensuring that all funds disbursed to NMEP by the Bank for are used for the purpose intended with due regard to economy and efficiency.
5	Monitoring and Evaluation Specialist (M&E-PIU)	▪ Monitoring of mitigation measures that would be put in place for each sub-project; ▪ Perform periodic monitoring of all aspects as contained in the sub-project Environmental and Social Monitoring Plan; ▪ Monitoring the implementation of the ESMP to ensure it keeps to schedule; and ▪ Monitoring the implementation of the HCWMP which will be based on the NHCMWP.
6	Case Manager (CM-PIU)	▪ Communicate regularly with residents and their families about the MPA ▪ Provide technical support on relevant issues such as treatment plans, illness progression etc to residents. ▪ Devise procedures and protocols for patient admission and filtration so that patients receive consistent, attentive care through the duration of the MPA ▪ Monitor and adjust patient statuses based on changing needs and conditions ▪ Provide technical assistance on providing care that is safe, timely, effective, efficient, equitable, and client-centered ▪ Handling case assignments, draft service plans, review case progress and determine case closure
7	Behavior Change Specialist (BCS-PIU)	▪ Collaborate with relevant stakeholders (SMoH, SPHCDA, SERICC and SSHIAs, etc) to develop community radio or other communication strategies to make information and critical discourse related to the program and counseling to the public ▪ Design and implement behavior change communication strategies, such as provision of training and technical assistance to support behavior change intervention ▪ Develop or review relevant guidelines, materials, trainings, job aids and tools to ensure the technical strategies are reflected accurately ▪ Support the Maternal – Neonatal child health care awareness programs

7.3 Monitoring of ESMF Implementation for the MPA

The environmental and social development specialist shall be largely responsible for monitoring the requirements of the ESMF. Subsequently, they shall be required to prepare a quarterly audit on the ESMF implementation in addition to the project reports as may be required. Monitoring roles of the PIU are shown in Table 7.3.

No major civil work is expected to be carried out under the MPA. However, minor civil works are expected to be carried out and these could require preparation of ESMPs. Should this need arise the NMEP through its ESS and SSS will be required to prepare a site specific ESMP in line with WB Policies. To this end a screening process, checklist and TOR have been included in this ESMF specifically under Sections 5.1 and Annexes 4 and 5.

The FMoH, SMoH, FMEnv and the SMEnv shall carry out independent monitoring. This would take the form of giving these agencies the mandate to carry out independent monitoring of the implementation of the ESMF at periodic intervals of quarterly or half yearly (as circumstances dictate) during the project life. For the successful implementation of the ESMF, the roles and responsibilities of the key stakeholders is shown in Table 7.3.

Table 7.3: Roles and Responsibilities of Stakeholders in Implementing Safeguard Instruments

S/N	STEPS/ACTIVITIES	RESPONSIBLE	COLLABORATION	SERVICE PROVIDER
1.	Identification and/or siting of the sub-project	▪ NMEP and NPHCDA (IMPACT) ▪ The Secretariat NSC (BHCPF)	▪ Local authority ▪ FMoH, SMoH ▪ SMEPs ▪ SPHCDAs ▪ NHIS, SSHIAs ▪	▪ The World Bank
2.	Screening, categorization, and identification of the required instrument (use the national EIA procedure)	▪ Environmental Safeguards Specialist (ESS-PIU)* ▪ Social Safeguards Specialist (SSS-PIU)*	▪ Beneficiary; ▪ Local authority ▪ FMEnv ▪ SMEnv	▪ The World Bank
3.	Approval of the classification and the selected instrument by the World Bank/FMEnv	▪ PM-NMEP IMPACT ▪ PM-NMEP NPHCDA ▪ PM-NSC (BHCPF)PM-NPHCDA (IMPACT)	▪ ESS-PIU ▪ SSS-PIU	▪ EA Department under the FMEnv ▪ The World Bank
4.	Preparation of the safeguard document/instrument (ESIA, EA, ESMP, etc.) in accordance with the national legislation/procedure (taking into account the Bank policies requirements)			
	Preparation and approval of the ToRs	▪ ESS-PIU ▪ ESS-PIU	▪ SSS-PIU ▪ ESS-PIU	▪ The World Bank
	Preparation of the report		▪ SSS-PIU ▪ ESS-PIU	▪ Consultant
	Report validation and issuance of the permit (when required)		▪ Local authority	▪EA Department under the FMEnv ▪The World Bank
	Public Disclosure of the document		▪PM-NMEP IMPACT ▪PM-NSC (BHCPF) ▪PM-NPHCDA (IMPACT)	▪ 2 (National Dailies), media ▪ The World Bank external website
5.	Implementation of safeguards measures including mitigation, environmental monitoring (when relevant) and sensitization activities	▪ ESS-PIU ▪ ESS-PIU	▪ PS- PIU ▪ TS- PIU ▪ FS- PIU ▪ Local authority	▪ Consultant ▪ National specialized laboratories ▪ NGOs
6.	Oversight of safeguards implementation (internal)	▪ ESS-PIU ▪ ESS-PIU	▪ M&E- PIU ▪ FS- PIU ▪Local authority	▪ EA Department under the FMEnv ▪ The World Bank
	Reporting on project safeguards performance and disclosure	▪ M&E- PIU ▪ ESS- PIU ▪ SSS- PIU	▪ PM-NMEP IMPACT ▪ PM-NSC (BHCPF) ▪ PM-NPHCDA (IMPACT)	▪ The World Bank

	External oversight of the project safeguards compliance/performance	▪ EA Department under the FMEnv ▪ The World Bank	▪ M&E- PIU ▪ ESS- PIU ▪ SSS- PIU ▪ PS- PIU	▪ The World Bank ▪ FMEnv ▪ SMEnv
7.	Building stakeholders' capacity in safeguards management	▪ ESS-PIU ▪ SSS- PIU	▪ PS- PIU ▪ M&E- PIU	▪ Consultant ▪ Other qualified public institutions
8.	Independent evaluation of the safeguards performance	▪ ESS-PIU	▪ SSS- PIU ▪ PS-PIU	▪ Consultant

7.4 Training and Capacity Strengthening Program

Trainings should be targeted at the Implementing Ministry at federal and states, relevant MDAs at federal, state as well as the PIU. NSAs are also targeted in these proposed trainings as shown in Table 7.4.

During consultations at Federal and State level, gaps emerged showing a lack of training and adequate knowledge Healthcare Waste management, WB Safeguard Policies, policy requirements of the ESMF, monitoring procedures as well as screening and scoping procedures and impact identification. Training/capacity building is paramount prior to and during project implementation and have been identified to enhance the implementation of this updated ESMF. A separate training, capacity and strengthening program on HCWM has been included in the separate disclosed HCWMP.

There are capacity building accommodations made for the other phases of the MPA (BHCPFP and NPESP AF3) as a result, trainings under this MPA will be targeted mainly at the NMEP and SMEPs of the selected project states.

Table 7.4 Training and Capacity Strengthening Program

S/N	TRAINING PROGRAM	TIME OF TRAINING	TARGET AUDIENCE	TYPE OF TRAINING	DURATION	COST ($)	COST (Naira)
1	General training on Safeguard Policies, EAs, Scoping and Screening	Before program commencement	FMoH, SMoH, NMEP, SMEPs, NPHCDA, SPHCDA	Seminar	1 day	4,000	1,520,000
2	Legal and Institutional responsibilities under the MPA. Policy requirements, legal and compliance	Before program commencement	FMoH, SMoH, NMEP, SMEPs, NPHCDA/SPHCDAs/,	Seminar	1 day	4,000	1,520,000
	Project Management (scope, implementation, time, budget, costs, resource,	▪ Before program commencement ▪ During program implementation	FMoH, SMoH, NMEP, SMEPs, NPHCDA and SPHCDAs	Workshop	1 day	4,000	1,520,000

	quality, procurement, mitigation and monitoring, and evaluation).						
	Identifying grievances and Grievance Redress	▪ Before program commencement ▪ During program implementation	FMoH, SMoH, NMEP, SMEPs, NPHCDA, SPHCDAs, LGHAs				
3	Occupational health and safety	▪ Before program commencement ▪ During program implementation	HCF staff, LGAs, Sub project contractors such as waste collecting companies	Workshop	1 day	4,000	1,520,000
4	Public health and safety	▪ Before program commencement ▪ During program implementation	HCF staff, FMoH/SMoH, NMEP, SMEPs, NPHCDA/NERICC, SPHCDAs/SERICC, NHIS/SSHIAs, MDAs, NSAs, LGAs, Sub contractors such as waste collecting companies	Workshop	1 day	4,000	1,520,000
5	Healthcare Waste Management (HCWM)	▪ Before program commencement ▪ During program implementation	HCF staff, SMoH, NMEP, SMEP, NPHCDA, SPHCDA, Local governments, Sub contractors such as waste collecting companies	See Separate HCWMP			
				TOTAL COST		**20,000**	**7,600,000**

**380 NGN to 1 USD*

7.5 Cost Estimates for Implementing the ESMF

Necessary budgetary provisions must be made for implementing environmental and social measures as part of the ESMF implementation. This enables preparedness for financial requirements and allows early planning and appropriate budgeting. The indicative cost of implementing the ESMF **is Twenty Three Thousand Nine Hundred Twenty Nine Dollars and Forty Cents** (Nine Million Ninety Three Thousand One Hundred Seventy Two Naira)**.** The breakdown is shown in Table 7.5 below.

Table 7.5 Summary of indicative budget breakdown and responsibility of the cost for implementing the ESMF

S/N	ITEM	RESPONSIBILITY	COST BREAKDOWN	ESTIMATE (US$)	ESTIMATE (Naira)
1	Mitigation	HCF	See HCWMP prepared for the MPA	N/A	
2	Management	5% of Mitigation Cost		To be determined	
3	Capacity Building	FMoH, SMoH, NMEP, SMEPs, NPHCDA, SPHCDA	Workshops and Seminars	20,000	7,600,000
4	Public Disclosure of ESMF	FMoH, NPHCDA, NMEP, FMEnv	ESMF advertisement in 2 national dailies, physical copies to various project states	1,754	666,520

5	Preparation of required environmental instruments	Consultant, NMEP/SMEPs, NPHCDA/SPHCDAs	This estimation includes cost for reconnaissance survey, field studies, public consultation and report preparation etc	To be determined	
6			**Sub Total**	**21,754**	**8,266,520**
			Contingency (10% of Sub Total)	**2,175.40**	**826,652**
			TOTAL	**23,929.40**	**9,093,172**

**380 NGN to 1 USD*

7.6 Disclosures of Safeguard Instruments

The updated ESMF has been prepared in consultation with the relevant Federal and State stakeholders. Copies of this ESMF, like other safeguard instruments (such as ESIAs/ESMPs) that might be prepared for the MPA and its sub-projects will be made available to the public by (1) the NMEP through the FMoH, and (2) NPHCDA through the FMoH. This shall be based on the states participating in either the malaria or the immunization component. Disclosure will be made in at least 2 Nigerian national dailies (or as directed by the Federal Ministry of Environment) as required by the Nigeria EIA public notice World Bank Disclosure Policy. After this the WB shall disclose same on its External website. Copies of other safeguards instruments (such as ESMPs if required) shall be disclosed in a similar manner. Table 7.5 below outlines documents to be disclosed. Disclosure period will last 21 working days as stipulated by the Nigerian EIA public notice. After this period further comments cannot be made by the public.

Table 7.6: Disclosure of Safeguards Instruments

S/N	TOPIC	DOCUMENTS TO BE DISCLOSED	FREQUENCY	MEDIA
1	Public Consultation	Minutes of formal public consultation	Within two weeks of meeting	FMEnv, MPA Website if available, State Ministry of Environment, PIU, Local government Secretariat, World Bank external website.
2	Environmental Management	▪ ESMF ▪ Other instruments such as ESMPs, EA, ESIA if required	Prior to commencement of project activities	National Dailies, FMEnv, SMEnv, FMoH, SMoH, Local Government Secretariat, World Bank external website and MPA Website if available,

CHAPTER 8: Stakeholders' Consultation

8.1 Objectives

Consultations were conducted to ensure the project will be carried out effectively within budget and agreed timelines and to make certain all stakeholders are involved in the process of implementing the MPA. Information about the project was shared with the stakeholders, to enable meaningful contribution, and enhance the success of the project. This will help to create a sense of ownership by the stakeholders.

The following principles were at the fore front when carrying out consultations

- Promotion of easiest means and modes of communication;
- Openness to the true state and plan of the MPA;
- Ensuring effective and deep rooted involvement of all stakeholders in the development of the project;
- Helping and increasing relevant stakeholders understanding of the project, project goals and the implementation processes;
- Using all strategies and techniques that provide prompt and adequate opportunities for all stakeholders to get involved in the project;
- Evaluating the effectiveness of the engagement plan against the expected outcomes; and
- Continuous consultation throughout the life cycle of the project

An effective Stakeholder engagement requires meaningful consultation in a way which provides stakeholders with opportunities to express their views related to project activities, risks, impacts and mitigation measures and allows the project to consider and respond to them. It is expected that this engagement will continue to throughout the entire MPA.

8.2 Citizen Engagement

Citizens play a critical role in advocating and helping to make public institutions more transparent, accountable and effective, and contributing innovative solutions to complex development challenges. Effective citizens' engagement is largely affected by social, political, economic, environmental, cultural, and geographic factors. It is also affected by gender dynamics as well as the governments and citizens' capacity and willingness to engage. Under the right conditions, citizen engagement will boost the potential for the MPA to achieve its PDO. This engagement should be seen as a two-way interaction between citizens and governments or the private sector. This approach gives citizens a stake in decision-making in order to improve the intermediate and final development outcomes. Project design must be citizen-oriented, and have at least one mechanism to engage with targeted beneficiaries of the MPA.

Citizens engagement under this MPA will support the training and awareness under the project's key delivery areas particularly at the HCF level and subproject stages. In engaging the citizens further in the activities of the MPA, special attention should be placed on the environmental and social impacts the MPA would have on their environment with specific focus on healthcare waste generation and management.

The capacity building activities should focus more on women and children as they are the major target of this MPA and thus should be the prime target audience.

The target audience of such training activities should include, but not limited to:

- Casual HCF workers (such as cleaners), patients and visitors;
- People who live in and around selected HCFs;
- People who would benefit from the MPA particularly at the HCF level; and
- Relevant NSA, NGO and CSO

Trainings have been provided that would enhance the citizens' engagement in the MPA. See Table 6.1 of the HCWMP prepared for this MPA.

Capacity development for staff of NPHCDA and the SPHCDAs, NMEP and the various SMEPs as well as HCFs will also be implemented because they are the institutional gateways that will reach out to the HCFs and citizens/patients for the malaria and immunization components respectively. It becomes necessary for these staff to be well grounded with adequate information on the MPA, HCWM and social inclusion. 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. See Table 7.4 and Sections 6.2, 6.3, 6.4 and Table 6.1 of the HCWMP prepared for this MPA.

Building trust and maintaining good rapport with the patients and HCF visitors by providing relevant and adequate information on the MPA as well as responding effectively to their needs and concerns will help solve issues before they even become grievances.

Stakeholder and citizen engagement should be built by:

- Setting up effective GRMs and beneficiary feedback mechanisms. See Section 8.3;
- Ensuring an intensive program of engagement with project stakeholders through trainings. See Table 7.4;
- Deploying of effective strategic communications and public education. See Section 6.3 of the HCWMP prepared for this MPA; and
- Monitoring social impact through annual stakeholder and citizen engagement surveys.

In achieving these amongst other things, a firm with expertise in both demand- and supply-side interventions will be responsible for Social Behavior Change Communication (SBCC). The firm will use a mix of interpersonal and mass media/social media approaches to increase the use of anti-malaria commodities (bed nets and SP during antenatal care), increase knowledge of malaria symptoms and treatment options in households, and improve uptake of clinical services for childhood illnesses, including immunization. Another firm will be recruited to provide SBCC through religious and traditional leaders. The household surveys will measure the performance of the SBCC firms and allow for the firms to adjust their SBCC strategies. The firms will support the federal and state implementing agencies to establish a citizen feedback and grievance redress mechanism.

8.3 Summary of Outcome of Stakeholders' Consultation

8.3.1 Stakeholder Consultation Held On 28 April 2021

Considering that the IMPACT MPA would be restructured to accommodate the construction and expansion of the Lagos Cold and Dry Store, it became necessary to conduct additional consultations with key stakeholders to ensure they are fully aware of the changes to the program, identify how it would affect them as well as how they could contribute to improving the MPA.

To this end, a stakeholders' consultation was carried out on 28th April 2021. Considering the circumstances and the COVID-19 guidelines regarding the limit to persons allowed at public gatherings, the consultant decided to use an online media of zoom to conduct a virtual meeting. See Annex 3A for the list of attendance. Below in 8.1 gives a summary of the consultation.

Table 8.1: Summary of the Outcome of Stakeholders Consultation

ITEMS	DESCRIPTION
Date of Public consultation	28 April 2021
Stakeholders	NPHCDA, SPHCDAs, NMEP, SMEP, FMoH, SMoH (See Annex 3A for list of attendants)
Language	English
Introduction	The consultant informed stakeholders that the IMPACT MPA was being restructured to include the Construction and Expansion of the Lagos Hub, an activity that could not be completed under the Nigeria Polio Eradication Support Project AF3 (NPESP AF 3). He informed them that the Environmental and Social Manage Plan (ESMP) for the Rehabilitation and Expansion of the Lagos Hub had already been prepared and disclosed by the Lagos State NPHCDA. He explained the scope of the ESMF and why it was very important to carry out the stakeholder's consultation. After which discussions about project implementation, environmental and social impacts such as health care waste management ensued.
Concerns/Complaints/Remarks/Recommendations	▪ Dr Elezuo, M & E Officer, Abia IMPACT PIU, requested for a copy of the ESMF ▪ Dr Hamza, Executive Secretary, Kaduna SPHCDA, requested that the consultant confirms the availability of the HCWMP and the initial ESMF prepared for the MPA In response to the above, the Consultant explained the process of public disclosure and explained that the hard copy of the instruments could likely be accessed at the State Ministries of Environment which is the case with most disclosed documents in line with the EIA Act. He also said soft copies could be got from the NPHCDA as well as on the World Bank's external website.
Observations	▪ The stakeholders showed understanding and interest in the MPA with most having read through the Project Implementation Manual (PIM) ▪ Almost all the states did not have adequate number of incinerators to burn sharps. ▪ Most incinerators across all the states are either of low capacity - if functional. In most states as revealed, most of their incinerators were not functional including the ones purchased by the NPHCDA/SPHCDA. ▪ Some states like Kogi, Plateau and Sokoto have Memorandum of Understanding (MoU) with Obajana cement, Veterinary Research Institute and BUA Cement respectively. In this case, the states make payment to use their incinerators, and this was done usually during campaigns. ▪ There is lack of awareness of the safeguard instruments prepared for the MPA. All states representatives revealed they had not seen both the initial ESMF and the HCWMP. The PM

	IMPACT Dr Chidama as part of the action plan promised to send a soft copy of the HCWMP to the states and would do same once the updated ESMF is disclosed.

8.3.2 Stakeholder Consultation Held On 13 September 2018

A stakeholders' consultation was held on 13 September 2018 in Newton Park Hotel, Wuse 2, Abuja. In attendance included representatives from the FMoH, SMoH, NMEP, AfDB and IsDB all SMEP excluding Ondo State. Also in attendance was the PM of IMPACT. See Annex 3 for the attendance sheet.

Table 8.2: Summary of the Outcome of Stakeholders Consultation

ITEMS	DESCRIPTION
Date of Public consultation	13 September, 2018
Name of Stakeholders	NMEP, SMEP, SMoH, AfDB, IsDB. See Annex 3A for list of attendants
Language	English
Introduction	The consultant explained to all stakeholders the World Bank Safeguards Policies as they relate to the MPA. He also explained the importance and why the WB is preparing this ESMF prior to the start of the project. He went on to explain that as the project advances, there could be a need to prepare other reports such as the ESMP, ESIA, ARAP etc. He explained the scope of the ESMF and why is was very important to carry out the stakeholders consultation early in this project. After which discussions bothering around project implementation, environmental and social impacts such as health care waste management ensued.
Concerns/Complaints/Remarks/Recommendations	▪ The stakeholders explained that they would be concerns over the management of HCW in their various states ▪ All stakeholders were particularly concerned about the time before commencing on the project ▪ They sought clearance as to how the ESMF would be disclosed and the roles each of the states would be required to play to achieve early Disclosure ▪ After seeking clarifications on the Public Disclosure process, they expressed determination to facilitate the Disclosure as soon as possible. ▪ It was suggested that a HCWMP be prepared for the MPA to assist in managing the HCW that would be generated as a result of the project activities. ▪ It was suggested that both the ESMF and the HCWMP be disclosed together

8.4 Summary of Outcome of State/Field Visits

Field visits were also undertaken to selected states to ascertain and create awareness towards the project, determine the current HCWM practices and the HCF level considering that these are the major environmental and social risks and impacts identified under the MPA. Targeted stakeholders included the SMEP, SPHCDAs and SERICCs. Other targeted stakeholders included the State Immunization Officers (SIOs), Local Immunization Officers (LIO), and the CMOs and staff at some selected HCFs. See

Benue and Kogi State were chosen for field visits. These sample states were chosen because Kogi State is participating in both the malaria and immunization programs under the MPA and has also been participating in the National Polio Eradication Support Project AF3 (NPESP AF3) while Benue State was chosen because it is yet to be a part of a World Bank financed project in the health sector. Consultations

in Kogi and Benue States took place between 14 to 15 March, and 4 to 5 April, 2019 respectively. The visits revealed similar practices, constraints and concerns. See Table 8.2.

Table 8.2: Summary of the Outcome of State and Field Visits to Benue and Kogi States

VISIT TO BENUE AND KOGI STATE		
ITEMS	**DESCRIPTION**	
	BENUE STATE	**KOGI STATE**
Date of Public consultation	Between April 4 and 5, 2019	Between March 14 and 15, 2019
Stakeholders	Benue State Primary Healthcare Board (BSPHCB), State Malaria Elimination Program (SMEP), State Emergency Routine Immunization Coordination Center (SERICC), State Immunization Officers (SIOs), CCO. See Annex 3B for list of attendance	Kogi State Primary Healthcare Development Agency (KSPHCDA), State Malaria Elimination Program (SMEP), State Emergency Routine Immunization Coordination Center (SERICC), State Immunization Officers (SIOs), Local Immunization Officers (LIOs), CCO. See Annex 3C for list of attendance
Language	English	English
Introduction	The consultant explained the MPA and its PDO as well as the importance and why the World Bank is preparing this ESMF prior to project implementation. The scope of the ESMF was explained and why is was very important to carry out the stakeholders consultation early in this project. The consultant also explained the risks and impacts that the MPA could have on the environment and social aspects of their states with emphasis being made on HCW and how it is managed at the state level as well as at the HCF level. He also explained that the consultations will assist in facilitating and implementation of the MPA After which discussions bothering around project and particularly HCW was discussed	The consultant explained the MPA and its PDO as well as the importance and why the World Bank is preparing this ESMF prior to project implementation. The scope of the ESMF was explained and why is was very important to carry out the stakeholders consultation early in this project. The consultant also explained the risks and impacts that the MPA could have on the environment and social aspects of their states with emphasis being made on HCW and how it is managed at the state level as well as at the HCF level. He also explained that the consultations will assist in facilitating and implementation of the MPA After which discussions bothering around project and particularly HCW was discussed
General Remarks and Observations	▪ There was little awareness of the MPA ▪ However, all invited stakeholders expressed acceptance and willingness to ensure the project is sustainable and implemented in their states. ▪ The state admitted they have serious challenges with HCW and its management ▪ Most staff showed awareness on the classes of HCW they generate and also on color coding ▪ Four incinerators have been installed in the state (Gboko, Makurdi, Otukpo and Katsina Ala) but are not functioning and can only burn plastics (syringes) but not sharps (needles). A fifth incinerator in Oju LGA burns only about 100 safety boxes a day. ▪ Sharp boxes have been stored at LGAs for about a year without treating or onward disposal ▪ Limited training have been carried out by organizations such as WHO and USAID	▪ There was little awareness of the MPA, however, all invited stakeholders expressed acceptance and willingness to ensure the project is sustainable and implemented in their states. ▪ All staff showed awareness on the classes of HCW they generate and also on color coding ▪ Three incinerators have been installed in 3 LGAs in the state (Dekina, Mopa-Muro and Okehi) and only the incinerator in Dekena LGA is functioning but has a low capacity. The Federal Medical Centre in Lokoja also has an incinerator which is not working. ▪ A fourth incinerator owned by the Obajana Cement Plc is being used to incinerate sharps at a financial cost. ▪ The state admitted they have some challenges with HCWM ▪ Though some training on HCWM had been done in the state, the outcome of this has proven to be inadequate
VISITS TO SELECTED HCFs IN BENUE AND KOGI STATE		

ITEM	DESCRIPTION	
Date of Public consultation	Between April 4 and 5, 2019	Between March 14 and 15, 2019
Stakeholders	CMO and staff at HCF including Nurses	CMO and staff at HCF including Nurses
Current State and Practice	▪ The general management of sharps is for the HCFs to transport all filled safety boxes to the LGA headquarters weekly from where it is taken to an incinerator. ▪ In all HCFs visited, segregation is practiced at the generation point however, only the sharps are transported out of the HCF to the LGAs while all other wastes are lumped together and burnt in either a pit or on open grounds after which it is buried or evacuated ▪ In most HCFs visited, areas used to burn wastes are not cordoned off and are extremely accessible to the public. See Pics 8.1 and 8.2 ▪ Labelling of HCW was not practiced at any of the HCFs visited ▪ There is no designated officer in charge of HCW at any HCF ▪ There is no record of HCW or a manifest and there are no monitoring plans addressing HCWM ▪ All HCFs lack IEC materials and posters ▪ There is no dedicated budget to address HCWM at the HCFs ▪ Class 5 wastes (drugs, pharmaceuticals) are returned to the SMoH	▪ The general management of sharps is for the HCFs to transport all filled safety boxes to the LGA headquarters weekly from where it is taken to an incinerator. ▪ In all HCFs visited, segregation is practiced at the generation point however, only the sharps are transported out of the HCF to the LGAs while all other wastes are lumped together (after segregation) and burnt in either a pit or on open grounds after which it is buried or evacuated ▪ In most HCFs visited, areas used to burn wastes are not cordoned off and are accessible to the public. See Pics 8.3 and 8.4. ▪ Labelling of HCW was not practiced at any of the HCFs visited ▪ There is no designated officer in charge of HCW at any HCF ▪ There is no record of HCW or a manifest and there are no monitoring plans addressing HCWM ▪ All HCFs lack IEC materials and posters ▪ There is no dedicated budget to address HCWM at the HCFs ▪ Class 5 wastes (drugs, pharmaceuticals) are returned to the SMoH
Concerns/Complaints/Remarks/Recommendations	▪ There is little finance particularly when it comes to transporting Class 3 wastes (Sharps) from the HCFs to the LGAs ▪ There is no training structure on HCWM at the HCFs in the state ▪ Most staff are aware of the National Healthcare Waste Management Plan and Guidelines but have not seen it or been trained on it	▪ There is little finance particularly when it comes to transporting Class 3 wastes (Sharps) from the HCFs to the LGAs and this cost is usually taken up by the individual staff of ▪ There is no training structure on HCWM at the HCFs in the state ▪ Most staff are aware of the National Healthcare Waste Management Plan and Guidelines but have not seen it or been trained on it

Pics 8.1: Open and exposed area where HCW is burnt at PHC Asase, Benue State. (Picture taken April 4, 2019)

Pics 8.2: Open and exposed pit (showing sharp box) where HCW is burnt at PHC Wadata, Benue State. (Picture taken April 4, 2019)

Pics 8.3: Stakeholders' Consultation at PHC Adankolo, Kogi State (Picture taken March 14, 2019)

Pics 8.4: Open and exposed Pit where HCW is burnt at PHC Old Market, Kogi State. (Picture taken March 15, 2019)

8.5 Grievance Redress Mechanism (GRM)

GRM is an important mechanism that encourages and promotes ownership of projects. It provides an avenue for communities to give feedback on services received and ultimately leads to a more sustainable and successful project with inputs from the various communities in the project states. It ultimately helps to manage the social, environmental and other risks. Experience has revealed that this type of open dialogue and collaborative grievance resolution represent the best practice. Having a GRM also shows willingness for transparency in any project.

For a GRM to be effective as an all-inclusive engagement tool, it must be structured to accommodate everyone from the public and private PHC to the general public. In addition, clear procedures with timelines must be established for complaints/redress and made easily available to the public by way of public notices and signs posted in all participating HCFs. The grievance mechanisms will

- Provide a way to reduce risk for projects;
- Provide an effective avenue for expressing concerns and achieving remedies for the grievant;
- Promote a mutually constructive relationship; and
- Prevent and address community concerns.

Key objectives of the grievance process are:

- Provide affected people with avenues for making a complaint or resolving any dispute that may arise during
- project implementation;
- Ensure that appropriate and mutually acceptable corrective actions are identified and implemented to
- address complaints;
- Verify that complainants are satisfied with outcomes of corrective actions;
- Avoid the need to resort to judicial (legal court) proceedings.

Considering the project is not envisaged to involve construction activities, all complaint should be addressed directly to the medical facility in the respective local area. Based on above objectives, grievance management process is described below:

Step 1: Receipt of complaint
A verbal or written complaint from a complainant will be received by the medical officer in charge at the facility and recorded in a complaints log kept in the center. Complainants will also report any project related comments directly to the medical officer of health in the responsible local government area.

Step 2: Determination of corrective action
If in his/her view, a grievance can be solved at this stage, the medical officer will determine a corrective action in consultation with the aggrieved person. The complaint will be logged in, resolved and status reported back to complainants within 5 working days. If more time is required, this will be communicated clearly and in advance to the
aggrieved person.

Step 3: Meeting with the complainant
The proposed corrective action and timeframe in which it is to be implemented will be discussed with the complainant within 5 days of receipt of the grievance. Consent to proceed with corrective action will be sought from the complainant and witnessed by the local government area medical officer of health and a member of the health care facility team.

Step 4: Implementation of corrective action
Agreed corrective action will be undertaken by the medical officer in-charge of health care facility within the agreed timeframe. The date of the completed action will be recorded in the grievance log.

Step 5: Verification of corrective action
To verify satisfaction, the aggrieved person will be asked to return and resume the grievance process, if not satisfied with the corrective action.

For the MPA, a separate stand-alone GRM would be prepared which will detail out the grievance redress channel for addressing potential complaints and grievance from beneficiaries and communities at large. The GRM will focus on grievances and complaints related to the MPA alone.

8.5.1 Guiding Principles for the MPA's GRM

The GRM for the MPA must be designed on the following universal principles:

- ***Simplicity:*** The filing of complaints and grievances will be kept simple and the process of redress will be easily understandable by all stakeholders and the public.
- ***Transparency:*** The system will encourage both positive and negative feedbacks. These feedbacks will be made available to all stakeholders to ensure they are adequately informed on issues that might hinder or enhance the sustenance of the project. The GRM will view and analyze all issues with transparent objectivity.
- ***Fair Unbiased Analysis:*** In grievance redress it is important for handlers to be clear on all the issues. The first step is an honest appraisal of whether the feedback is proactive or reactive. Facts have to be established against the interest and goal of grievant. Fact-finding is essential for meaningful and sustainable grievance/conflict redress. The handlers of grievance redress also need to appraise the complaints against relevance to the project objectives and policies. Grievance handlers also need to know the category of grievance involved and treat accordingly. Grievances need to be characterized both for the sake of proper redress and for evaluation purpose.
- ***Quick Action:*** Response to grievance and feedbacks will be prompt and direct to the grievant or the feedback provider. Grievances will be acknowledged at the point of uptake and the ensuing decisions will be communicated within 48 hours of reaching them. The entire process from receiving a complaint to final conclusion should not exceed 20 working days and must be made known to every grievant.
- ***Accessibility and Social Inclusion:*** The process has to be easily accessible to everybody that feels aggrieved and affected by the project regardless of age, gender or economic status in the communities. Vulnerable groups including women, children and the physically challenged should have the same equal opportunities and access to present their complaints without complications as with other people. This means there will be provisions for the disabled (including the physically impaired) to get across their grievances to the appropriate quarters using the GRM.
- ***Inclusivity:*** It is important that representatives of the community and stakeholders are involved in the GRM and everybody kept informed on any progress made in them. Investigation and deliberations on the complaint will be publicly disclosed and communicated promptly.
- ***Due Process and Impartiality:*** Every grievant will have the right to be present and be heard before a duly constituted body saddled with the responsibility of hearing and managing their grievances.
- ***Qualification:*** Personnel that would be involved in grievance redress should have basic communications skills as well as mediation, reconciliation and negotiation training. A good knowledge of the local language should be essential.
- ***Grievance Uptake Centers:*** There will be specified grievance uptake points where grievances/complaints will be lodged. Such centers must be easily accessible at all HCF.

ANNEX 1: Terms of Reference

A Consultant Assignment to Update the Environmental and Social Management Framework (ESMF) for the NIGERIA IMPROVED CHILD SURVIVAL FOR HUMAN CAPITAL MPA

BACKGROUND AND PROJECT DESCRIPTION

The Federal Government of Nigeria (FGON) in collaboration with the World Bank has prepared projects following the multi-phased approach (MPA) to reduce under-five mortality in Nigeria.

The IMPACT Project (Phase I) under the MPA is being restructured to uptake outstanding activities under the Nigeria Polio Eradication Support Project – Additional Financing Three, specifically the construction and expansion of the National Primary Health Care Development Agency (NPHCDA) South West Zonal Cold and Dry Stores, located in Oshodi, Lagos State.

The components for IMPACT are:

Component 1: Malaria Control (US$ 188.0 million)

This component seeks to improve utilization and quality of malaria prevention and treatment activities in Abia, Borno, Ekiti, Imo, Lagos, and Rivers states in addition to support at the federal level.

Subcomponent 1.1: Strengthening Service Delivery (US$170.9 million)

This subcomponent will finance performance-based contracts with NGOs in participating states. Participating NGOs will be national, regional, and local NGOs that currently provide malaria service delivery in Nigeria. The NGOs will also take active steps to ensure that interventions are climate resilient and adapt to the changing vector ranges. The interventions are to:

(a) Strengthen the capacity of public and private sectors in management of sick children, including those with malaria.
(b) Provide LLINs to households and ensure nets are hung and used.
(c) Distribute SP to pregnant women (known as intermittent presumptive therapy [IPT]) during antenatal care through both the public and private providers.
(d) Provide SMC to under-five children in Borno (Sahelian State).
(e) Conduct interpersonal behavior change communication to improve behavior and knowledge in malaria prevention, care seeking, and treatment in communities; and
(f) Procure commodities starting in the third year of the projects and manage the supply chain in collaborations with the State Ministry of Health (SMoH).[4]

Procurement of malaria commodities. The subcomponent will also finance procurement of preventative and curative medicines and commodities for malaria including LLINs, ACTs, RDTs, SP, SPAQ- SMC[5] for Borno (Sahelian state), and so on. The NMEP will procure LLINs for the duration of the project and other malaria commodities for the first two years of the project.
Finally, the subcomponent will develop a policy for the Low Carbon Public Procurement of vehicles, bed nets, malaria chemoprophylaxis, and vaccines.

Subcomponent 1.2: Health Systems Strengthening and Technical Assistance (US$17.1 million)

The project will support the health system and provide TA at federal and state levels through:

(a) **Training and technical support to SMEPs** on (i) NGO contract management and supervision; (ii) data analysis and performance evaluation of the NGOs; (iii) organizing of annual or semiannual results conferences that bring together all states to learn from their implementation experience, and (iv) goods and operating costs to support day-to-day project management.

(b) **Training and technical support to the NMEP** on (i) contract management and supervision for national-level contracts (see Component 3); (ii) large-scale procurement of LLINs and other antimalarial commodities; (iii) TA for private sector engagement to support local manufacturers toward attaining pre-qualification for malaria commodities; (iv) TA to

[4] The NMEP will procure malaria commodities in the first two years for rapid procurement in the initial implementation stage.
[5] SPAQ (sulfadoxine-pyrimethamine + amodiaquine) for Seasonal Malaria Chemoprevention (SMC).

support policy engagement and advocacy efforts to address identified policy constraints for local manufacturing, and (v) goods and operating costs to support day-to-day project management; and

(c) **Performance frameworks** to foster accountability of SMEPs and the NMEP for results and critical project activities with a view to improve project management practices within state and federal entities, for completion of critical management processes such as proper FM, conducting of supportive supervision, mobilizing of domestic resources, data analysis and utilization, and effective contract management.

Component 2: Immunization Plus (US$ 409.3 million)

This component will support strengthening service delivery and health systems for immunization, maternal, child and neonatal services at the Federal level, and for select participating states, and will also finance vaccines and cold chain strengthening.

Subcomponent 2.1: Strengthening Service Delivery (US$150.2 million)

This subcomponent will finance interventions that will strengthen routine immunization, maternal, child, and neonatal service delivery in the context of strengthening PHC in 12 states (Adamawa, Benue, Ebonyi, Kogi, Kwara, Nasarawa, Oyo, Plateau, Bauchi, Kaduna, Kano, and Sokoto).

Decentralized funding with performance-based allocation for quality improvement directly to PHC facilities. Building on the successful experience of NSHIP, the project will provide operating budgets directly to PHC facilities, an innovative approach known as DFF. DFF will strengthen provision of immunization services; curative care for under-five children; outreach activities in reproductive, maternal, and child health services; skilled delivery; postnatal care; and maintenance and minor repair of existing PHC infrastructure.

vi) The project will also finance initial investments to improve the facility quality standards and provide TA to the states to ensure that facilities, LGAs, and states themselves are trained in DFF implementation.

vii) All DFF facilities will also be trained on standard operating procedures for referral services to improve the link between primary health facilities and secondary hospitals. About 40 percent of the financing received under DFF will be based on the performance of the health facilities in improving quality of care as measured by structural and clinical quality of care including competency tests.

Data-driven health facility supervision. The project will finance the development and implementation of an advanced health facility supervisory system that will reinforce immunization and other RMNCH service delivery.

Improving quality and access of care. The subcomponent will finance TA to design interventions to improve quality of care, such as mentoring, peer review, continuous quality improvement techniques, and so on. The TA will draw on successful pilots within the country and elsewhere and support the implementation of these interventions. The focus of the quality improvement will include, but not be limited to, Basic Emergency Obstetric and Newborn Care, essential newborn care, and postnatal care including postpartum family planning. Because much of the curative care is provided by the private sector, the quality-strengthening interventions will involve private sector engagement. Additionally, a voucher program for improving transportation of women and under-five children from their communities to the nearest PHCs will be launched to reduce any transportation barriers to seeking care.

Subcomponent 2.2: Health Systems Strengthening and Technical Assistance (US$75.3 million)

This subcomponent will be implemented at the national and state levels and will support the following activities:

(a) **Project operations and TA.** The subcomponent will also provide TA to national- and state-level PIUs and to LGA PHC Departments in the areas of management, supervision, and data analysis. The project will also help meet the operational costs of the PIUs and the Local Government Health Authorities (LGHAs). The operational expenses at the state and LGHA level will be financed through performance contracts. This subcomponent will also finance TA for introducing and implementing DFF in project states including training and monitoring support to state, LGHA, and PHC facilities and spot-checks of facilities to ensure independent verification of DFF funds utilization. DFF introduction and implementation will also include an HR listing exercise for human resources for health (HRH) gap analysis at the state level.

(b) **Performance frameworks.** The project will finance performance frameworks for key national, state, and LGA-level officials engaged in immunization plus activities in areas such as providing proper FM, conducting supportive supervision, mobilizing domestic resources, and conducting data analysis and utilization.

Subcomponent 2.3: Vaccines, Cold Chain and Logistics (US$183.8 million)

Through this subcomponent, the project will support financing of the procurement of vaccines with an emphasis on new or recently introduced vaccines and strengthening of the cold chain and logistics.

Vaccines. The subcomponent will support the Government in financing vaccine procurement through United Nations Children's Fund (UNICEF) with an emphasis on PCV, rotavirus vaccine, and meningococcal vaccine.

Cold chain and polio operations and logistics. The subcomponent will also strengthen the cold chain by financing (a) the gap in the planned procurement of the Cold Chain Equipment Optimization Plan for service delivery points; (b) installation of cold rooms and accessories, generating set, and solar power system (Equipping the Lagos hub)—all through an MoU with UNICEF; (c) distribution of vaccines from national to state level through contracts with six vendors; (d) preventive maintenance and as-needed repairs of walk-in cold rooms and national and zonal levels through long-term agreements with the private sector; (e) polio eradication support; and (f) vaccine logistics systems strengthening. Additionally, the subcomponent will employ innovative and high-impact activities for polio eradication support through provision of funds for surveillance operations and supplementary immunization activities managed by the World Health Organization (WHO), as well as for social mobilization and logistics support activities delivered through UNICEF. Finally, with the new restructuring, this subcomponent will also finance rehabilitation of the Lagos hub.

Component 3: Knowledge for Change (US$52.7 million equivalent IDA credit)

Subcomponent 3.1: Strengthening Monitoring and Evaluation Systems (US$23.2 million)

The project will further support strengthening of M&E systems as discussed in the following paragraphs.

Quarterly performance evaluations through LQAS. The project will support the conduct of LQAS surveys to help assess performance at LGA and state levels for four years and also fund an external assessment of the LQAS methodology to draw lessons for implementation in other countries, especially in low coverage settings.

Robust household and health facility surveys for utilization, quality, and mortality estimates. The project will support the annual household and health facility surveys (SMART and NHFS) for the years that there is a funding gap.

Improvements in routine data quality. The project will strengthen routine data used for planning and monitoring by supporting (a) DQA[6] on a sampling basis to improve routine District Health Information System-2 (DHIS-2) reporting accuracy and reliability of supervision scores, (b) resource mapping at the state level, and (c) microplanning activities to derive household-level population estimates of under-five children using GIS data and satellite imagery.

Climate and Health Vulnerability Assessment (CHVA). The project will finance a CHVA to identify the specific health threats faced by the Nigerian population and to ensure most efficient targeting of resources to deal with the risks faced now and into the future.

Subcomponent 3.2: Integrating Social Behavior Change Communications (SBCC) Activities (US$15.1 million)

Comprehensive SBCC campaigns are important to address demand-side barriers to child health in Nigeria. The project will finance the contracting of a firm to carry out formative research, development, and implementation of a comprehensive SBCC strategy for under-five health using mass media and social media. Another firm will be recruited to support SBCC provision through religious and traditional leaders. The household surveys will measure the performance of the SBCC firms and allow for the firms to adjust their SBCC strategies. The project will also fund training of community mobilizers (community health influencers, promoters, and services [CHIPS]) and PHC health workers in interpersonal communication to encourage care-seeking behavior.

Beneficiary feedback and grievance redress mechanism (GRM). The project will also finance regular workshops and focus groups with beneficiaries to understand community perceptions about services. It will also strengthen the Government's GRM ('Servicom') to ensure prompt and transparent feedback of the project performance, including a comprehensive mechanism for tracking and responding to grievances related to service quality and utilization at the health facility and community level.

Climate and health behavior change interventions. The subcomponent will support the dissemination of health promotion messages focused on social acceptability of preventive behaviors for children to households. Alongside this, the subcomponent will also develop and disseminate climate and health-related health promotion information.

Subcomponent 3.3: Learning Agenda (US$14.4 million)

Operations research to support the learning agenda. This subcomponent will finance operations research including process and IEs using both qualitative and quantitative methodologies to understand the impact of innovations financed by the project, and how they can be tailored to the country context and implemented in subsequent phases. The subcomponent will also finance warehouses and cold-store capacity assessment at the state level, and based on findings from this assessment, Phase II may include provisions for any rehabilitation and construction of these buildings. Finally, the sub-component will also provide TA to

[6] *Note:* IMPACT will support a robust DQA which would entail verification of a sample of the DHIS-2 entries through household visits, ideally conducted by an independent verifier.

support the design and learning for the Emergency Medical Services (EMS) as part of the implementation of the emergency gateway of the BHCPF.

Randomized Controlled Trial to test innovative approaches in improving health services. Given the need to quickly and dramatically improve immunization plus coverage among the poor and underserved, the project will finance testing of innovations in poorly performing LGAs as defined by both low Routine Immunization coverage and low levels of SBA.

Component 4: Contingent Emergency Response Component (CERC) (US$0 million)

The CERC should be able to respond quickly health emergency with the potential to cause major adverse economic and/or social impacts. The CERC will serve as a first-line financing option for emergency response. Unused IDA financing will be allocated to this component in an emergency. These measures will ensure a swift mobilization and deployment of resources thereby limiting the financial and operational burden on the Nigerian health system.

A. OBJECTIVES OF THE ASSIGNMENT

The objective of this assignment is to update the existing ESMF prepared under the Project to accommodate the recent changes on Project component 2.3. As agreed during design, the project would continue to finance equipping of the Lagos hub (NPHCDA South West Zonal Cold and Dry Stores). With the restructuring, the project will now also finance Construction of the Lagos hub.

B. RATIONALE FOR UPDATING THE ESMF

Specifically, the ESMF will include information on the proposed construction[7] of the South West cold store (referred to as Lagos Hub) located within the compound of the Federal Medical Stores (FMS), Oshodi, Lagos State. The cold store would be used for the storage and distribution point for vaccines to the states in the South West and South South zones. The dry store will serve the same states, and also serve as the first storage and distribution point for all injection devices and other Primary Health Care commodities that may arrive through the Lagos seaport. An Environmental and Social Management Plan (ESMP) was prepared and disclosed[8] under the Polio Project for the Lagos Hub as a requirement by Nigeria EIA Act and World Bank Safeguard Policies to identify the potential environmental and social risks/impacts of the sub-project activity and provide mitigation measures to address the identified impacts/risks. The ESMP was consulted upon with potential project affected persons (PAPs) and stakeholders and disclosed in-country and on the World Bank website.

C. SCOPE OF WORK

Specific sections of the ESMF report would be updated to include information on the restructured component of the IMPACT and ensure languages on implementation of civil works in line with COVID 19 requirements are included. Additionally, institutional level stakeholders would be consulted, and output from the engagements documented in the ESMF. The ESMF would also be redisclosed in-country in collaboration with the Federal and State Ministries of Health and the Federal Ministry of Environment and on the World Bank external website.

D. CORE TASKS FOR THE CONSULTANT

The consultant is expected to update the ESMF to reflect the additional information from the construction of the Lagos Hub

The updated ESMF should include:

(a) An updated Executive Summary;
(b) The assessment should identify relevant regulations and guidelines, which apply in the context and the compatibility between
    - World Bank Safeguard Policies Environmental Assessment (OP 4.01);
    - National acts, laws and/or regulations on environmental impact assessments in the health sector;

[7] This includes demolition of the existing building and the construction of an expanded cold and dry stores with other ancillary works. These activities would involve civil works which will trigger both environmental and social impacts and risks.

[8] http://documents1.worldbank.org/curated/en/544701605245961842/pdf/Environmental-and-Social-Management-Plan-for-the-Construction-and-Expansion-of-the-NPHCDA-South-West-Zonal-Cold-and-Dry-Stores-Oshodi-Lagos-State.pdf

- Other relevant ESMFs prepared for other recent World Bank projects in Nigeria

(c) A description of Proposed program and IMPACT project in addition to the Lagos Hub sub-component;
(d) A comprehensive review of relevant programmatic Baseline Data for Nigeria including a review of the environmental and socio-economic characteristics participating States;
(e) An updated comprehensive assessment of the potential environmental and social impact of the MPA in general and IMPACT in particular, including but not limited to air, water and soil pollution, Occupational Health and Safety of workers, public health and safety, disease transmission (HIV/AIDs, STDs), Gender Based Violence, access to service by socially vulnerable citizens, citizens engagement, grievance redressal mechanisms etc.;
(f) Recommendations of practical and cost-effective mitigation measures for any potential negative environmental and/or social impacts that are anticipated from project implementation;
(g) Identification of the capacity building needs and recommendations of actions to strengthen the implementing agencies to ensure compliance with environmental and social safeguards policies of the World Bank triggered by the proposed operations
compliance;
(h) Develop a timed, costed updated Environmental and Social Management Plan (ESMP) for IMPACT as well as a monitoring plan with clear roles and accountabilities outlined for key stakeholders in the implementation of the ESMP;
(i) Develop a Citizens Engagement and Grievance Redress Mechanism (CE and GRM);
(j) Update the Public consultations section of the report to reflect the additional consultations with stakeholders on the additional and disclosure of project safeguard instruments prior and during project implementation;
(k) An environmental and social management checklist for reviewing performance against ESMP during project implementation; and
(l) Include annexes on implementation of civil works and consultation in line with COVID-19 Protocols.

E. QUALIFICATION AND EXPERIENCE

The consultant is expected to have previous experience in the preparation of Technical instruments/documents recognized by the World Bank. Strong country knowledge, knowledge of World Bank Safeguard Policies, Participation in World Bank Orientation on Safeguards Supervision for Consultants.

Consultant's qualification

a) Degree in Medical Sciences or Environmental Sciences or Sociology/Anthropology or any other relevant course
b) M.Sc in any of the following disciplines
   - Public Health
   - Environmental Management
   - Social Development
   - Or any other relevant discipline
c) At least 5 years working experience in Nigeria or in a developing country under similar projects
d) At least 5 years' experience of working with communities and working on stakeholder engagement and management
e) Ability to cooperate and interact with stakeholders including facilitating meetings and workshops.
f) Ability to assess complex situations, identify critical issues, and derive appropriate conclusions and adequate recommendations.
g) Experience in developing training manuals or other training documents for programs/projects funded by multilateral agencies.
h) Excellent writing and organizational skills

F. DURATION OF CONSULTANCY

The deliverables for this consultancy will be made available to the Task Team within 10 days. The Consultant would support the PIU in the in-country disclosure of the ESMF.

G. REPORTING

The Consultant will report to the TTLs of the Nigeria Improved Child Survival for Human Capital MPA.

ANNEX 2: Summary of World Bank Environmental and Social Safeguard Policies

- ***Environmental Assessment (OP 4.01).*** Outlines Bank policy and procedure for the environmental assessment of Bank lending operations. The Bank undertakes environmental screening of each proposed project to determine the appropriate extent and type of EA process. This environmental process will apply to all sub-projects to be funded by MPA.
- ***Natural Habitats (OP 4.04).*** The conservation of natural habitats, like other measures that protect and enhance the environment, is essential for long-term sustainable development. The Bank does not support projects involving the significant conversion of natural habitats unless there are no feasible alternatives for the project and its siting, and comprehensive analysis demonstrates that overall benefits from the project substantially outweigh the environmental costs. If the environmental assessment indicates that a project would significantly convert or degrade natural habitats, the project includes mitigation measures acceptable to the Bank. Such mitigation measures include, as appropriate, minimizing habitat loss (e.g. strategic habitat retention and post-development restoration) and establishing and maintaining an ecologically similar protected area. The Bank accepts other forms of mitigation measures only when they are technically justified. Should the sub-project-specific ESMPs indicate that natural habitats might be affected negatively by the proposed sub-project activities with suitable mitigation measures, such sub-projects will not be funded under the MPA.
- ***Pest Management (OP 4.09).*** The policy supports safe, affective, and environmentally sound pest management. It promotes the use of biological and environmental control methods. An assessment is made of the capacity of the country's regulatory framework and institutions to promote and support safe, effective, and environmentally sound pest management. This policy does not apply to the MPA.
- ***Involuntary Resettlement (OP 4.12).*** This policy covers direct economic and social impacts that both result from Bank-assisted investment projects, and are caused by (a) the involuntary taking of land resulting in (i) relocation or loss of shelter; (ii) loss of assets or access to assets, or (iii) loss of income sources or means of livelihood, whether or not the affected persons must move to another location; or (b) the involuntary restriction of access to legally designated parks and protected areas resulting in negative impacts on the livelihoods of the displaced persons. This policy does apply to the MPA sub-projects.
- ***Indigenous Peoples (OP 4.10).*** This directive provides guidance to ensure that indigenous peoples benefit from development projects, and to avoid or mitigate negative effects of Bank-financed development projects on indigenous peoples. Measures to address issues pertaining to indigenous peoples must be based on the informed participation of the indigenous people themselves. Sub-projects that would have negative impacts on indigenous people will not be funded under MPA.
- ***Forests (OP 4.36).*** This policy applies to the following types of Bank-financed investment projects: (a) projects that have or may have impacts on the health and quality of forests; (b) projects that affect the rights and welfare of people and their level of dependence upon or interaction with forests; and (c) projects that aim to bring about changes in the management, protection, or utilization of natural forests or plantations, whether they are publicly, privately, or communally owned. The Bank does not finance projects that, in its opinion, would involve significant conversion or degradation of critical forest areas or related critical habitats. If a project involves the significant conversion or degradation of natural forests or related natural habitats that the Bank determines are not critical, and the Bank determines that there are no feasible alternatives to the project and its siting, and comprehensive analysis demonstrates that overall benefits from the project substantially outweigh the environmental costs, the Bank may finance the project provided that it incorporates appropriate mitigation measures. Sub-projects that are likely to have negative impacts on forests will not be funded under MPA.
- ***Physical Cultural Resources (OP 4.11).*** The term "cultural property" includes sites having archaeological (prehistoric), paleontological, historical, religious, and unique natural values. The Bank's general policy regarding cultural property is to assist in their preservation, and to seek to avoid their elimination. Specifically, the Bank (i) normally declines to finance projects that will significantly damage non-replicable cultural property, and will assist only those projects that are sited or designed so as to prevent such damage; and (ii) will assist in the protection and enhancement of cultural properties encountered in Bank-financed projects, rather than leaving that protection to chance. The management of cultural property of a country is the responsibility of the government. The government's attention should be drawn specifically to what is known about the cultural property aspects of the proposed project site and appropriate agencies, NGOs, or university departments should be consulted; if there are any questions concerning cultural property in the area, a brief reconnaissance survey should be undertaken in the field by a specialist. The MPA will not fund sub-projects that will have negative impacts on cultural property.

- ***Safety of Dams (OP 4.37).*** For the life of any dam, the owner is responsible for ensuring that appropriate measures are taken and sufficient resources provided for the safety to the dam, irrespective of its funding sources or construction status. The Bank distinguishes between small and large dams. Small dams are normally less than 15 m 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 usually adequate. This policy does apply to MPA since the policy is triggered under the project.
- ***Projects on International Waterways (OP 7.50).*** The Bank recognizes that the cooperation and good will of riparians is essential for the efficient utilization and protection of international waterways and attaches great importance to riparian's making appropriate agreements or arrangement for the entire waterway or any part thereof. Projects that trigger this policy include hydroelectric, irrigation, flood control, navigation, drainage, water and sewerage, industrial, and similar projects that involve the use or potential pollution of international waterways. This policy will not apply to MPA.
- ***Disputed Areas (OP/BP/GP 7.60)***. Project in disputed areas may occur the Bank and its member countries as well as between the borrower and one or more neighboring countries. Any dispute over an area in which a proposed project is located requires formal procedures at the earliest possible stage. The Bank attempts to acquire assurance that it may proceed with a project in a disputed area if the governments concerned agree that, pending the settlement of the dispute, the project proposed can go forward without prejudice to the claims of the country having a dispute. This policy is not triggered by sub-projects activities therefore will not be funded by the MPA.

ANNEX 3A: Stakeholders Attendance Sheet

List of Attendees During Stakeholders Consultation Held on 28th April 2021 via Zoom

S/N	NAME	STATE / DESIGNATION	EMAIL	PHONE
1	Dr M.S. Oguntoye	Kwara SPHCDA	msoguntoye2013@gmail.com	09092061574
2	Emmanuel Wilson Chidama	PM IMPACT NPHCDA	Emmanuel.chidama@nphcda. gov.ng	08033562925
3	Fatima Umar Rahis	M&E Borno	fatimarahis@gmail.com	08039723428
4	Tamuno-Adoki, Tonye	M&E Specialist Rivers State	corrchemist@yahoo.com	08036735470
5	Pharm Bello Abdulkadir	NPHCDA	Abdulkadir.bello@nphcda.gov.ng	08033817305
6	Salamatu Abdullahi	NPHCDA Procurement	salamatuabdullahi31@gmail.com	08136361010
7	Mrs Christiana Chidinma Ogbu	Impact Social Safeguard, Ebonyi State	christy123ogbu@gmail.com	
8	Pharm.Ibrahim Sani	BSPHCDA (Bauchi)	ibrahimsaniktg@gmail.com	
9	Dr. Bakunawa Garba Bello	National Immunization Case Manager IMPACT	garba.bakunawa@nphcda.gov.ng	08030667095
10	Dr Ochai Ene Ada	Benue State IMPACT PM	ochaiene@yahoo.com	08034456645
11	Garba Mustapha Umar	Bauchi State, M&E Officer		
12	Usman Ogaji Usha	IMPACT Internal Auditor Nasarawa State	ushao1973@gmail.com	08035999411
13	Aminu Shehu Achida	Rivers		

14	Pharm Madaki Aisha Shuaib	IMPACT LSCMS from Nasarawa state		
15	Dr. Ango UM	CM RI. Sokoto		
16	Oluchi E Dappa	Project Accountant, Rivers State		
17	Dr Daniel Ishaya	CM RMNCH Adamawa		
18	Dr Sani Labaran			
19	Mohammed Ibrahim Kumo	ZTO - NPHCDA-Bauchi	miqumo82@gmail.com	08060587609
20	Garba Mustapha Umar	M&E Officer Bauchi State	gmustapha20@gmail.com	08035942886
21	Ojochide L. Yusufu	Accountant, NPHCDA	skychide@gmail.com	7055658022
22	Usman Bako Alhaji FCNA	Project Accountant Bauchi State	usmanbalhaji@yahoo.com	08034367618
23	Dr Hamza Abubakar,	ES-SPHCB KADUNA	hamza.i.abubakar@kdsg.gov.ng	08177770195
24	Dr. Ahmad Muhammad Sambo	Social Safeguard Officer, Bauchi State IMPACT PIU	ahmadmuhammadsb@gmail.com	08034455822
25	Olorunmaiye Ade Theophilus	IMPACT PM Kogi	maiye1@yahoo.com	08039135990
26	Miracle Harrison	Project Internal Auditor Rivers State IMPACT	miracle. dharrison@yahoo.com	08033420994
27	Obajemu Alice	Kogi State (KSPHCDA) Logistics Officer	obajemu.alice@gmail.com	08064748314
28	Mainasara Bello	Sokoto State M&E Specialist	bellomaina@yahoo.co.uk	
29	Maria Uduma Orji	Orji, RMNCAH+N Case Manager, Ebonyi State IMPACT	mariaorji2013@yahoo.com	08035495466
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31	Fidelis Babep	Case Manager, Rivers State Impact PIU	fsbabep@yahoo.com	08033230404
32	Chigbundu Ogonna Juliet	Abia State IMPACT PIU Case manager	ogonnachigbu@gmail.com	09031795994
33	Elezuo Okorie Elezuo	Monitoring and Evaluation Officer Abia IMPACT	eoelezuo@yahoo.com	08030960031
34	SUNDAY AMOS KPANJA	(M&EO) IMPACT PLUS NASARAWA STATE		
35	Mala A Waziri	PC SMEP Borno State		
36	Abo Amodu	Case Manager Immunization, Kogi State	aaboh1864@gmail.com	08036204975
37	Onwuchekwa Oriaku Chigozie	Logistics OfficerAbia IMPACT	chigozie.oriaku@yahoo.com	08066063955
38	Usman Ogaji Usha	IMPACT Internal Auditor Nasarawa State	ushao1973@gmail.com.	08035999411
39	Pharm Bilyaminu Bello Gobirawa	Sokoto State		
40	Joseph Natsah Jokshan	IMPACT PROJECT kaduna state.	josephnatsah09@gmail.com	07034566929
41	Dr Adamu Mohammed	PM IMPACT Bauchi	adambauchi@yahoo.com	08037606886 08151690186

42	Kenneth Nwokonta	Abia PO		
43	Christopher Bewa	Plateau PC		
44	Mrs Barry-Oko	ES Ebonyi		
45	Njoku Ogbodo	PM Ebonyi State		

ANNEX 3B: Stakeholders Attendance Sheet for Benue State Visit

NIGERIA CUTTING UNDER 5 MORTALITY RATE IN HALF IN A DECADE

DATE: 13/09/2018

STAKEHOLDERS CONSULTATION ATTENDANCE SHEET

S/N	NAME	MALE/ FEMALE	DESIGNATION/ORGANIZATION	PHONE NUMBER	EMAIL	SIGN
13	DR NAKIENTE D. OMUBO	M	BAYELSA MOH DIRECTOR PUBLIC HEALTH	08036725761	omubowakiente @gmail.com	
14	Dr Kesiye Leghemo	M	PM, SMEP, Bayelsa	08166899864	Kesiyeleghemo @yahoo.com	
	DR MINA JAJA	F	PM, RSMEP RIVERS	08033136537	minayinjaja @yahoo.com	
16	Ngozi Etolue	F	PSMLO	08058142262	naetolue@ gmail.com	
17	Nnenna Ofoulefo	F	prog. officer Case mgt.	07039823118	nnenaonoo @yahoo.com	
18	ADO Madu Amu	M	Pm (IMPACT)	08060003618	modiuano @yahoo.co	
19	ELINA PRADHAN	F	CO-TTL (MPA/IMPACT, WBG)	+1202 873 5656	epradhan @worldbank .org	
20	Noel Chisaka	M	WB	+1202 247 8895	nchisaka@worldbank.org	
21	Ritgak Tilley Afodo Dimka	F	WB	+234 816 872 7062	rasd2000@hotmail.com	
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24	Jms Kashim	F	IsDB	08073598080	ikashim@isdb	

NIGERIA CUTTING UNDER 5 MORTALITY RATE IN HALF IN A DECADE

DATE: 13/09/2018

STAKEHOLDERS CONSULTATION ATTENDANCE SHEET

S/N	NAME	MALE/ FEMALE	DESIGNATION/ORGANIZATION	PHONE NUMBER	EMAIL	SIGN
1	DR ABIMBOLA OSINOWO	F	MALARIA MANAGER/ LAGOS STATE MIN OF HEALTH	08021381350	bimboshin @yahoo.com	
2	Mala Waziri	M	PM, SMEP, SMOH BORNO STATE	08036603997	waziri mala @gmail.com	
3	Pharm (Dr) Iyekekpolor S. M	M	PM SMEP SMOH EDO STATE	07032429017	eso.abrese gmail.com	
4	Omo-Eboh Mamudu	M	ACSO/IVM/SMEP	07088835866	eragbaiomo eboh @gmail.com	
5	DR OKENWA, UCHE J	M	PM – SMEP SMOH, ENUGU	08037431577	okextra@ yahoo.com	
6	Pharm Bivan Ayuba	M	FCT–MEP	08165455544	ayubivan @gmail.com	
7	Dr. Humphrey N. OKOROUKWU	M	DPH, HHSS, FCTA	08032108602	hokoroukwu @gmail.com	
8	Alu Chuks	M	IVMO FCTMEP, HHSS	07032151959	aluchooks @yahoo.com	
9	MUSA ALHASSAN MOH'D	M	PM FCTMEP	08076072416	zodaa2000@yahoo.com	
10	OSUBOR GREGORY	M	AFDB	07040277802	g.subor@afdb.org	
11	SULEIMAN EBUN R.	F	PM KOGI SMOH	07032791889	resuleiman4 @gmail.com	
12	DR ONYEDIMBE, UCHECHUKWU NELSON	M	DPH/DC, SMOH ANAMBRA STATE	08030610303	onyedimbeuche chukwu@ gmail.com	

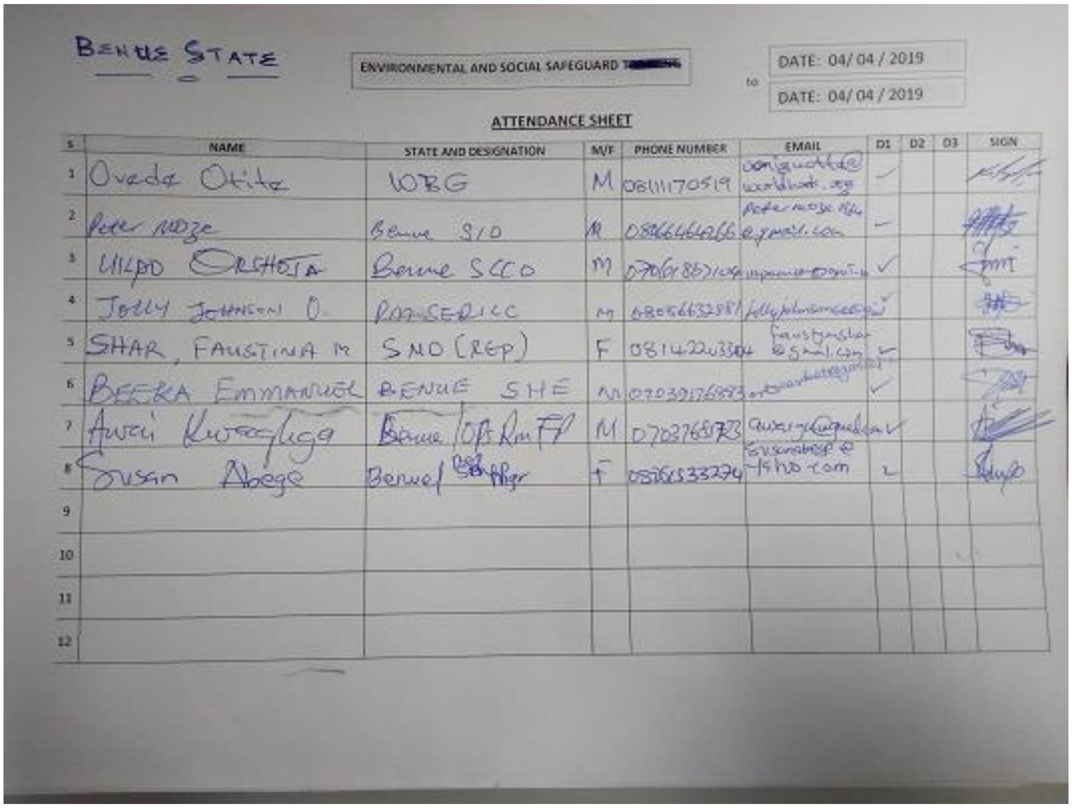
NIGERIA CUTTING UNDER 5 MORTALITY RATE IN HALF IN A DECADE

DATE: 13/09/2018

STAKEHOLDERS CONSULTATION ATTENDANCE SHEET

S/N	NAME	MALE/ FEMALE	DESIGNATION/ORGANIZATION	PHONE NUMBER	EMAIL	SIGN
	Ossai Paulinus	M	DPHS SMOH Enugu	0803356 7035	ossaitulu @yahoo.com	
	BENJAMIN LOEVINSOHN	M	CHIEF, HNP, WBG	0706757 8979	BLOEVINSOH @WORLDBANK	
	ELIJAH SIAKPERE	M	SOCIAL DEVELOPMENT	08034875671	esiakpere@ worldbank.org	
	DR. LAWI AUTA MSHELIA	M	DPH/ BORNO SMOH	08036356204	lawima@yahoo.com	

ANNEX 3C: Stakeholders Attendance Sheet for Benue State Visit



BENUE STATE

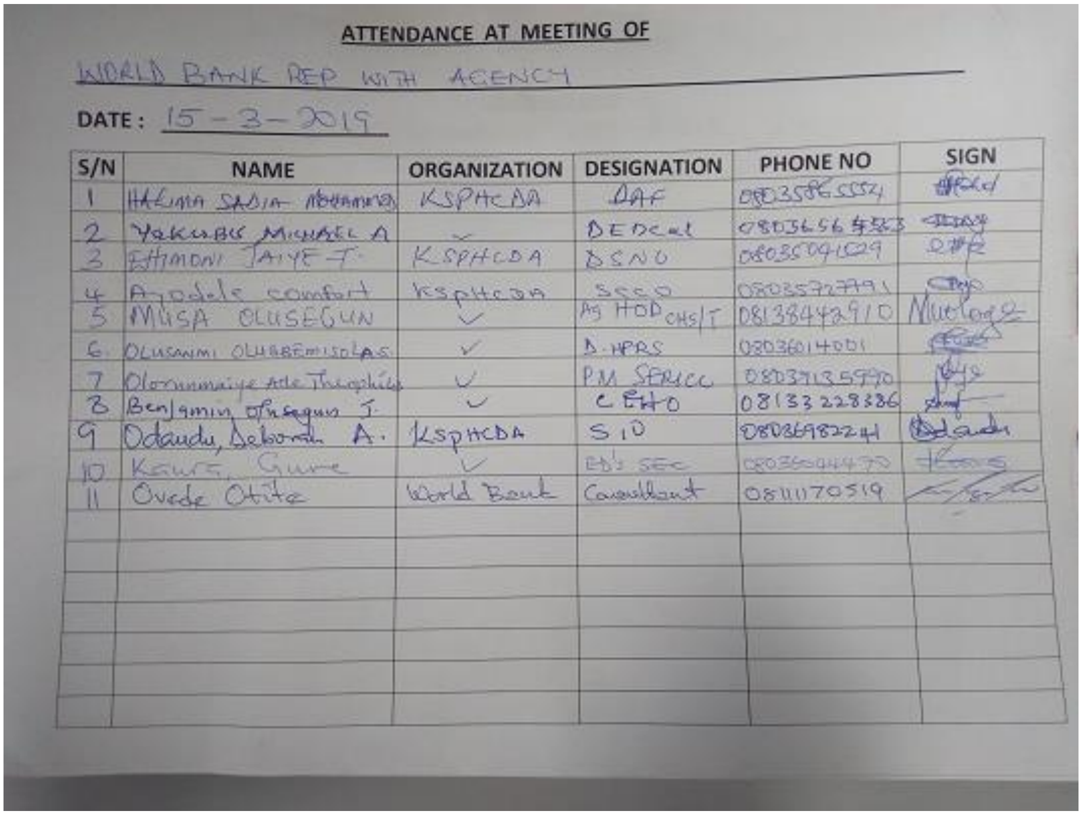
ENVIRONMENTAL AND SOCIAL SAFEGUARD [redacted]

DATE: 04/ 04 / 2019 to DATE: 04/ 04 / 2019

ATTENDANCE SHEET

S	NAME	STATE AND DESIGNATION	M/F	PHONE NUMBER	EMAIL	D1	D2	D3	SIGN
1	Oveda Otite	WBG	M	08111170519	[illegible]@worldbank.org	✓			[signature]
2	Peter Moze	Benue S/O	M	0806646[illegible]	[illegible]@gmail.com	✓			[signature]
3	Ukpo Orshoja	Benue SCCO	M	[illegible]	[illegible]	✓			[signature]
4	Jolly Johnson O.	[illegible]	M	[illegible]	[illegible]	✓			[signature]
5	SHAR, FAUSTINA M	SMO (REP)	F	0814[illegible]	faustinashar@gmail.com	✓			[signature]
6	BEEKA Emmanuel	BENUE SHE	M	07039[illegible]	[illegible]	✓			[signature]
7	Awai Kwaghga	Benue [illegible]	M	0703768[illegible]	[illegible]	✓			[signature]
8	Susan Abege	Benue/[illegible]	F	[illegible]	susanabege@yahoo.com	✓			[signature]
9									
10									
11									
12									

ANNEX 3D: Stakeholders Attendance Sheet for Kogi State Visit



ATTENDANCE AT MEETING OF

WORLD BANK REP WITH AGENCY

DATE : 15 – 3 – 2019

S/N	NAME	ORGANIZATION	DESIGNATION	PHONE NO	SIGN
1	HALIMA SADIA MOHAMMED	KSPHCDA	DAF	08035865554	[illegible]
2	YAKUBU MICHAEL A	✓	DEDCal	08036564563	[illegible]
3	EHIMONI JAIYE J.	KSPHCDA	DSNO	08035094029	[illegible]
4	Ayodele comfort	KSPHCDA	SCCO	08035727791	[illegible]
5	MUSA OLUSEGUN	✓	Ag HOD CHS/T	08138442910	Mutlog
6.	OLUSANMI OLUBBEMISOLA S.	✓	D. HPRS	08036014001	[illegible]
7	Olorunmaiye Ade Theophilus	✓	PM SERICC	08037135990	[illegible]
8	Benjamin Ofusegun J.	✓	C EHO	08133228386	[illegible]
9	Odaudu, Deborah A.	KSPHCDA	S.IO	08036982241	Odaudu
10	Kawe, Gure	✓	ED's SEC	08036044470	[illegible]
11	Ovede Otite	World Bank	Consultant	0811170519	[illegible]

ANNEX 4A: Screening Report for Standard Format

1. GENERAL DESCRIPTION

- 1.1. Overview of State /Local Governments
- 1.2. List of relevant existing MDAs

2. PROJECT-SPECIFIC SCREENING:

- 2.1. Existing alignment
- 2.2. Proposed Works
- 2.3. Estimated Cost
- 2.4. Summary of Environment and Social Issues
  - 2.4.1. Land Resources
  - 2.4.2. Hydrology and Water Resources
  - 2.4.3. Air and Noise
  - 2.4.4. Biological Resources
  - 2.4.5. Socio-Economic and Cultural
    - 2.4.5.1. Population
    - 2.4.5.2. Employment and Other Benefits
    - 2.4.5.3. Other site-specific issues
- 2.5. Environment Screening Category
- 2.6. Applicable Safeguard Policies

3. STATE/LOCAL GOVERNMENT ESMP

4. ATTACHMENTS

- 4.1. Construction Maps/ Drawings
- 4.2. Photos
- 4.3. Location and Administrative Maps
- 4.4 Environment and Social Screening Checklist

ANNEX 4B: Screening Checklist

PART A: GENERAL INFORMATION

1. Name of Sup-Project: _____

2. Name of the Community: _____

3. Name of HCF _____

4. Name of Local Government Area _____

5. Name of Executing Agency _____

6. Name, job title, and contract details of the person facilitating the filling of this form:

a) Name: _____

b) Job title: _____

c) Telephone Number: _____

d) E-mail Address: _____

e) Date: _____

f) Signature: _____

PART B: BRIEF DESCRIPTION OF THE ENVIRONMENTAL SITUATION AND IDENTIFICTION OF ENVIRONMENTAL AND SOCIAL IMPACTS

Describe the sub-project location, sitting, surroundings (include a map, even a sketch map)

Describe the land formation, topography, and vegetation in/adjacent to the project area.

PART C: IDENTIFICTION OF ENVIRONMENTAL AND SOCIAL IMPACTS

S/N	DESCRIPTION	YES	NO	UNKNOWN
1	**Environmental sensitive areas**			
1.1	Are there surface water courses, natural springs in the project area			
1.2	Are there Wetlands (lakes, rivers, swamp seasonally inundated areas) in the project area			
1.3	Area of high biodiversity			
1.4	Is the habitat home to endangered/threatened species which are protected by Nigerian Law			
2	**Contamination and Pollution Hazards**			
2.1	Is there any possibility that the project will be at pose risks of contamination and pollution hazards from and latrines, dump sites etc.			
3	**Soil Erosion**			
3.1	Will project help to prevent soil loss or erosion			
3.2	Will project directly cause or worsen soil loss or Erosion			
3.3	Could project indirectly lead to practices that could cause soil loss or erosion			
3.4	Based on inspection, is there any possibility of the area being prone to floods, poorly drained, low-lying, depression or block run-off – water?			
4	**Surface Water Quantity**			
4.1	Do surface water resources exist in project area?			
4.2	Available on present land future demands on water resources as a result of the project			
4.3	Will project help to increase or preserve available surface water supplies			
4.4	Will project increase demand or cause loss of available surface water			
4.5	Is it necessary to consult a hydrologist			
4.6	Could project cause deterioration of surface water quality			
5	**Ground Water Quality**			
5.1	Could project cause deterioration of ground water quality			
5.2	Will project help to improve or protect ground water quality			

5.3	Will project increase demand or cause loss of available ground water?			
6	**Air Quality**			
6.1	Will project produce any significant air emission directly?			
6.2	Will project help to reduce existing air pollution sources?			
6.3	Could project lead to practices that worsen air quality			
7	**Noise**			
7.1	Will project cause increases in noise generating conditions?			
7.2	Could project cause movements of people to high noise level locations			
8	**Aquatic Ecosystems**			
8.1	Are there water bodies such as rivers, streams or ponds in the within the project area			
8.2	Will project affect the condition and use of these systems for human consumptions?			
9	**Wetlands**			
9.1	Are there any wetlands such as marsh, swamp within the project area			
9.2	Will project affect the use or condition of such wetlands?			
10	**Natural Resources**			
10.1	Will the project involve considerable use of natural resources (construction materials, water spillage, land energy/ that may lead to depletion or degradation at point source			
11	**Culture and Religion**			
11.1	Will project adversely affect religious and /or cultural attitudes of area residents?			
11.2	Are there special superstitions or taboos that will affect acceptance of the project?			
12	**Social Equity and Equality**			
12.1	Would project have environmental and social impacts that could affect vulnerable groups?			
12.2	Is the project likely to significantly impact gender equality and women's empowerment?			
12.3	Will the project have variable impacts on women/men, different ethnicities, social classes?			

CONCLUSION

SAFEGUARD REQUIREMENTS
If the above answers are "No", there is no need for further action.
If there is at least one "Yes", there is no need for further action.
If there are at least two "Yes' ", then Simple Environmental Review (ER), Limited Environmental Review (LEA), or Full Environmental Impact Assessment (EIA) may be required.

Which courses (s) of action do you recommend?

- ☐ No further action if micro-project has no impacts on environment
- ☐ Simple Environmental Review (ER) if micro-project may create a few minor and easily mitigatable environmental problems.
- ☐ Limited Environmental Review (LER) if micro-project may create minor environmental problems that requires site visit or construction modifications to minimize or eliminate impact
- ☐ Full Environmental and Social Management Plan (ESMP) if the micro-project will result into potentially significant direct or indirect adverse impact as per FMEnv guidelines
- ☐ Resettlement Action Plan (RAP), if the micro-project will result in resettlement of affected people.
- ☐ Any other recommendation (Explain)

This form has been completed by:

Name: _____

Title: _____

Date: _____

Signature: _____

ANNEX 5: Generic ESMP Terms of Reference

Introduction and context

This part will be completed in time and will include necessary information related to the context and methodology to carry out the study.

Objectives of study

This section will indicate (i) the objectives and the project activities; (ii) the activities that may cause environmental and social negative impacts and needing adequate mitigation measures

Tasks

The consultant should realize the following:

1. Assess the potential environmental and social impacts related to project activities and recommend adequate mitigation measures, including costs estimation.
2. Review institutional assessment and framework for environmental management.
3. Identify responsibilities and actors for the implementation of proposed mitigation measures
4. Assess the capacity available to implement the proposed mitigation measures, and suggest recommendation in terms of training and capacity building, and estimate their costs.
5. Develop an Environmental and Social Management Plan (ESMP) for the project. The ESMP should underline(i) the potential environmental and social impacts resulting from project activities (ii) the proposed mitigation measures; (iii) the institutional responsibilities for implementation; (iv) the monitoring indicators; (v) the institutional responsibilities for monitoring and implementation of mitigation measures; (v)The costs of activities; and (vii) the calendar of implementation.
6. Public consultations. The ESMP results and the proposed mitigation measures will be discussed with relevant stakeholders, NGOs, local administration and other organizations mainly involved by the project activities. Recommendations from this public consultation will be include in the final ESMP report.

Plan of the ESMP report

(i) Cover page
(ii) Table of contents
(iii) List of acronyms
(iv) Executive summary
(v) Introduction
(vi) Description of sub-project sites
(vii) Description of environmental and social impacts and mitigation measures for project activities
(viii) Institutional Assessment and framework for Environmental Management
(ix) Environmental and Social Management Plan (ESMP) for the project
- Including the proposed mitigation measures;
- Institutional Responsibilities for Implementation;
- Monitoring indicators;
- Institutional responsibilities for monitoring and implementation of mitigation; Summarized table for ESMP including costs
- Training requirements

(x) Public Consultation
(xi) Conclusion and Recommendations
(xii) Annexes: List of persons / institutions meet

Duration of study

The duration of study will be determined according to the type of activity

Production of final report

The consultant will produce the final report one (1) week after receiving comments from the World Bank, and the NSC which will serve as the PMU. The report will include all the comments.

Supervision of study

The consultancy will be supervised by the Environmental and Social Development Specialist at the PIU

ANNEX 6: Environmental and Social Management Plan (ESMP) Framework

ENVIRONMENTAL PARAMETER	DESCRIPTIONS	PROPOSED MITIGATION MEASURES	COST OF MITIGATION PER HCF ($)	PARAMETERS TO MEASURE	METHOD OF MEASURING	RESPONSIBILITY	LOCATION OF SAMPLING	MONITORING RESPONSIBILITY
POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATIONS								
AIR POLLUTION AND QUALITY	▪ Air pollution may arise from indiscriminate open air burning of HCW such as sharps, syringes, used and expired vaccines, general HCW generated during MPA operations. ▪ Also, waste stored for too long on site could release offensive smells into the atmosphere ▪ Air pollution may also occur from burning of construction waste during renovation. This is rated **Low** ▪ Ambient Air deterioration from release of dusts and gaseous emissions from construction and expansion of the Lagos Hub ▪ Increase in dust/PM levels as a result of demolition works	Indiscriminate burning of wastes at site should be avoided to reduce air pollution.	Behavioral Mitigation (N/A)	Gaseous pollutants such as SO2, NO2, CO2, CO, VOCs, H2S, TSP	Visual observation, Public complaints and health related sicknesses	Contractor	PHC / HCF	NMEP-PIU, FMEnv/ SMEnv,
		Waste should be evacuated at least once a week	See HCWMP for this MPA					
		All HCW should be directed to approved storage and dumpsites	See HCWMP for this MPA					
GROUNDWATER AND SURFACE WATER CONTAMINATION	▪ Improper waste management could lead to leachate produced flowing into surface waters and infiltrating into ground water leading to contamination ▪ Infiltration of wastes such as contaminated swabs, expired vaccines, can find their way into surface water bodies causing contamination. ▪ There is a possibility of construction wastes (such as paint buckets, creosote etc) being disposed of in water channels/bodies and drainages	Provision of appropriate bags/containers for storing HCW	See HCWMP for this MPA	COD BOD_5	Visual observation, Public complaints and health related sicknesses	Contractor	PHC / HCF	NMEP-PIU, FMEnv/ SMEnv,
		Waste must be stored in appropriate bags/containers	Behavioral Mitigation (N/A)					
		Reduce HCW generation to barest minimum	Behavioral Mitigation (N/A)					
		Waste must be segregated and collected at each point of generation	Behavioral Mitigation (N/A)					
		Waste should be evacuated at least once a week	See HCWMP for this MPA					
NOISE	▪ Increase in noise levels as a result of demolition works	▪ All demolition works should be carried out during normal working hours	Behavioral Mitigation (N/A)		Visual observation, Public complaints and	Contractor	PHC / HCF	NMEP-PIU, FMEnv/ SMEnv,

		▪ Operations should be carried out with minimal noise and vibration disturbance ▪ Several noisy activities should be carried out simultaneously to avoid continuous noise disturbance			health related sicknesses			
VEGETATION	▪ Vegetation loss from land clearing and preparation activities	▪ Avoid removal of vegetation where possible ▪ Protect all vegetation not required to be removed	Behavioral Mitigation (N/A)	Area of soil exposed	Visual observation	Contractor		NMEP-PIU, FMEnv/ SMEnv
SOIL CONTAMINATION & EROSION, BLOCKED DRAINS AND WATERLOGGING	▪ Disposal of HCW along surface water channels/drainages could impede water flow which over time can lead to small scale flooding or waterlogged roads/paths. Over time this can lead to small scale erosion particularly in the south eastern states (Abia, Anambra, Enugu & Imo etc) where water erosion is an environmental challenge. See Baseline ▪ When waste is stored for a long time, leachates may form, and this could in turn percolate into the soil beneath thereby contaminating it. The impact of this would be more in the more densely populated areas of Lagos, Anambra, Enugu and Imo. See Baseline ▪ Soil erosion due to over exposure of top soil particularly in regions with active erosion agents ▪ Loss of soil quality from de-vegetation ▪ Soil contamination from oil spillage particularly on the Lagos Hub sub project	All HCW should be directed to approved storage and dumpsites.	See HCWMP for this MPA		Visual observation, Public complaints and health related sicknesses	Contractor	PHC / HCF	NMEP-PIU, FMEnv/ SMEnv
		Waste must be stored in appropriate bags/containers	Behavioral Mitigation (N/A)					
		Reduce HCW generation to barest minimum	Behavioral Mitigation (N/A)					
		Waste should be evacuated at least once a week	See HCWMP for this MPA	◦ WMP reports Sighting	Visual observation, Public complaints and health related sicknesses	Contractor	PHC / HCF	NMEP-PIU, FMEnv/ SMEnv
POTENTIAL SOCIAL ASPECTS IMPACTS AND MITIGATIONS								

PUBLIC HEALTH HAZARDS	▪ Increase in generation wastes such as expired vaccines and hazardous health waste generated by HCF if not managed properly could accumulate, produce foul smells, and attract insects and rodents which inevitably would have health implications on the general public. Particularly, this could also turn into a fertile breeding habitat for insects like mosquitoes particularly during the rainy season which can cause the spread of malaria which U5MR is trying to reduce ▪ HCW inappropriately managed and kept away from the public poses risks from inhalation of foul odors and fumes during burning ▪ Patients visiting medical facilities are at risk of gaining Hospital Acquired Infections (HAI), nosocomial infections during their stay/visits	Waste generated on-site should be evacuated at least once a week	See HCWMP for this MPA	° WMP reports Sighting	Visual observation, Public complaints and health related sicknesses	Contractor / HCF	PHC / HCF	NMEP-PIU, FMEnv/ SMEnv,
		Waste should be stored inside appropriate impermeable bags/containers	Behavioral Mitigation (N/A)	° WMP reports Sighting				
PUBLIC SAFETY	▪ Indiscriminate dumping of HCW could hamper public safety as this exposes the public to HCW such as sharps, needles and other sharp objects some of which may be infected. ▪ Risk of debris falling off vehicles enroute disposal particularly on the Lagos Hub sup project	▪ Prohibition of access to the wastes storage site by unauthorized persons. Proposed HCW storage and disposal sites should be clearly marked and cordoned off any access by the public ▪ For Renovation Works, areas where work is ongoing must be clearly marked and cordoned of	See HCWMP for this MPA	° WMP reports Sighting	Visual observation, Public complaints and health related sicknesses	Contractor / HCF	PHC / HCF	NMEP-PIU, FMEnv/ SMEnv,
OCCUPATIONAL HEALTH & SAFETY	▪ Staff handling of HCW such as sharps and inhaling fumes will expose the workers to occupational health risks. ▪ Medical personnel and waste handlers are exposed to dangerous and infectious HCW (such as sharps) during collection and transportation of HCW ▪ Waste handlers and HCF staff are also exposed to Occupationally-Acquired Infections such as tuberculosis, blood-borne	Workers should be equipped with appropriate Protective Personal Equipment (PPE) such as latex gloves including sanitizers.	See HCWMP for this MPA	N/A	Visual observation such as availability and use of PPE, Public complaints and health related sicknesses	HCF and HCW firms if outsourced	HCF	NMEP-PIU, FMEnv/ SMEnv,
		All temporary waste storage and disposal sites should be adequately	See HCWMP for this MPA	N/A				

	infections such as hepatitis B, C and HIV from needle-sticks ▪ There are possibilities of injuries arising from construction wastes such as nails if left carelessly around	condoned off from the public						
		For Renovation Works, workers should be equipped with appropriate Protective Personal Equipment (PPE) such as boots, nose masks						
		Indiscriminate burning of HCW should be prohibited	Behavioral Mitigation (N/A)					
SOCIAL & COMMERCIAL ACTIVITIES	▪ Labor influx, GBV, SEA ▪ Conflicts and grievances among stakeholders	▪ Use of local labour; ▪ Introduction and enforcement of sanctions (e.g., dismissal) for workers involved in criminal activities; ▪ All gender-based violence should be reported; ▪ Ensure minors are not employed directly or indirectly on the project;	Behavioral Mitigation (N/A)	Public complaints	Nos. Public complaints	Contractor / HCF	PHC / HCF	NMEP-PIU, FMEnv/ SMEnv,
	▪ There could be increase in the demand for basic services due to increase in HCF patronage ▪ There is a potential for petty crime to increase in proposed sub project areas as influx of people increases ▪ Indiscriminate dumping and prolonged inappropriate storage of waste could lead to unpleasant odors and sights and this could hamper commercial activities around HCF	There should be designated and approved areas for basic services such as canteens	Behavioral Mitigation (N/A)	N/A	Visual observation, Public complaints and health related sicknesses	Contractor / HCF	HCF	NMEP-PIU, FMEnv/ SMEnv,
		Such marked areas should have appropriate waste bags/containers	See HCWMP for this MPA	N/A	Visual observation, Public complaints and health related sicknesses	Contractor / HCF	HCF	NMEP-PIU, FMEnv/ SMEnv,
		Waste generated on-site should be evacuated at least once a week	See HCWMP for this MPA					

		Waste should be stored inside appropriate impermeable bags/containers	Behavioral Mitigation (N/A)					
HEALTHCARE WASTE MANAGEMENT	▪ There is an expected increase in HCW generated from both public and private health centres. If not managed properly, could be harmful to the public and in extreme cases hazardous HCW could lead to disease outbreak ▪ Waste generated on site if not managed properly could accumulate and become unpleasant sights to the area. ▪ Waste dumped besides roads may intrude onto the roads causing vehicular hold ups and accidents.	Ensure proper handling, and disposal of HCW	Behavioral Mitigation (N/A)	N/A	Visual observation, Public complaints and health related sicknesses	Contractor / HCF	HCF	NMEP-PIU, FMEnv/ SMEnv,
		Waste must be stored temporarily in designated areas daily	Behavioral Mitigation (N/A)					
		HCW should be evacuated at least once weekly	See HCWMP for this MPA					
		On site waste collection and storage points should be located in areas easily accessible to approved waste collection personnel without hindrance to vehicle and human movement.	Behavioral Mitigation (N/A)					
		▪ A well detailed HCWMP should be put in place and should be prepared in accordance with the o National Healthcare Waste Management Policy 2013 o National Healthcare Waste Management Guidelines (NHCWMG) 2013 o National Healthcare Waste Management Plan (NHCWMP) 2013	See HCWMP for this MPA					

CONSTRUCTION WASTE FROM RENOVATION WORKS	▪ Construction waste if not managed properly could accumulate and become unpleasant sights to the area. ▪ There are possibilities of injuries arising from construction wastes such as nails if left carelessly around. ▪ Waste dumped besides roads may intrude onto the roads causing vehicular hold ups and accidents.	▪ Construction waste will be collected and disposed properly in accordance a detailed approved WMP ▪ Temporary onsite storage areas must be clearly marked and cordoned from unauthorized access ▪ The records of waste disposal will be maintained as proof for proper management as designed. ▪ Reuse and recycling of materials should be encouraged as a way of reducing waste ▪ Toxic and hazardous wastes including empty paint cans will be disposed of in accordance a detailed approved WMP ▪ Open burning of construction wastes will not be allowed ▪ Dumping of wastes in water courses and in other environmentally sensitive areas such as swamps/wetlands will not be allowed	See HCWMP a for this MPA	N/A	Visual observation, Public complaints and health related sicknesses	Contractor / HCF	HCF	NMEP-PIU, FMEnv/ SMEnv,

ANNEX 7A: Generic Waste Management Plan

This waste management plan is to address waste that could be generated during the civil works and the healthcare waste that will be generated during the operation and maintenance phase of this project. Annex 6 addresses the potential environmental concerns around the handing of Health care waste resulting from project related activities such as Vaccination and Routine Immunization that generate healthcare waste such as expired vaccines and sharps.

It entails appropriate, cost effective and environment-friendly options for reduction, collection, handling, treatment and safe disposal of the waste streams in line with best practices.

Objective of Waste Management Plan

The objectives of this WMP are:

- To assess the current waste management situation;
- To assess local handling, treatment and disposal options;
- Capacity- building Requirements for Staff;
- Waste Categorization Stream (types of waste);
- Waste Collection and Treatment; and
- Implementation Timetable.

The Table below shows the summary of a generic Waste Plan

PROJECT PHASE	DESCRIPTION	WASTE TREATMENT	RESPONSIBILITY
CONSTRUCTION *(Should there be any subproject requiring civil works)*	Waste generated here will typically be cement blocks, nails, wood residues and chippings and saw dust, metals, glass, electrical & plumbing fixtures, debris, gravel, sand, cardboard	▪ Ensure proper handling, and disposal of wastes Rehabilitation/Construction waste should be disposed weekly ▪ Waste must be stored temporarily in designated areas daily ▪ Waste should be evacuated weekly ▪ On site waste collection and storage points should be located in areas that can easily be accessed by waste collection trucks without hindrance to traffic on the main road.	Contractor
OPERATION AND MAINTENANCE	Waste generated in this phase will typically be health waste such as hazardous waste, materials potentially infected blood, Internal body organs, drugs, and vaccines, syringes, surgical blades, expired vaccines and drugs	▪ A well detailed HCWMP should be put in place and should be prepared in accordance with the ○ National Healthcare Waste Management Policy ○ National Healthcare Waste Management Guidelines (NHCWMG) ○ National Healthcare Waste Management Plan (NHCWMP)	HCF

ANNEX 7B: Healthcare Waste Classification According To the NHCWMP

Table A. Waste Classification and Examples According to the NHCWM Guidelines 2013

S/N	CATEGORY OF WASTE	SUB CATEGORY OF WASTE TYPE	DESCRIPTION AND EXMAPLES	EXAMPLES OF WASTE	CLASS
A	Non-hazardous and general wastes		Waste that has not been contaminated with infectious materials or other hazardous materials.	Paper, cardboard, plastic, kitchen waste, ash, sawdust, pieces of wood segregated from hazardous waste	1
B	Hazardous Healthcare Waste	Infectious waste	Generated by both inpatients/out-patients or animals. It's likely to contain pathogenic micro-organisms and can be dangerous or infectious to both patients, health care workers and the public.	Laboratory waste, materials potentially infected blood, swabs, materials that have been in used in surgery or been in contact with patients	2
		Pathological/ Anatomical Waste	Includes amputations and other body tissues resulting from surgical operations, autopsy (post-mortem), or delivery. Requires special treatment for ethical and aesthetic reasons.	Internal body organs, amputated limbs, placentas, foetus. Also includes urine and blood products	4
		Chemical waste	Wastes, including expired products, generated from the pharmacy, and from chemotherapy	Vials, connecting tubing, drugs, vaccines, pharmaceutical products, disinfection solutions, medicines, expired drugs, drugs, and vaccines	5
		Pharmaceutical			
		Genotoxic			
C	Highly Hazardous Healthcare Waste	Sharps	These are sharp-edged wastes that can cause cuts or puncture wounds. They are highly hazardous whether or not they are contaminated with blood	Needles, syringes, surgical blades, scalpels, test tubes, ampoules, glass instruments, pipettes,	3
		Highly Infectious Waste	These highly infectious wastes required immediate treatment by chemical disinfectants or autoclaving before joining the hazardous HCW stream.	Sputum cultures of TB laboratories, contaminated blood clots and glassware, highly concentrated microbiological cultures carried out in medical analysis laboratories	6
		Radioactive Waste	Any solid, liquid, or pathological waste contaminated with radioactive isotopes of any kind	Radioactive papers, gloves, liquid patient excretion, spent radiation sources radium needles	7
		Mercury Waste	Any mercury containing device	Batteries, dental amalgam, thermometers, blood-pressure gauges and, fluorescent tubes	8

ANNEX 7C: LLIN Waste Management and Treatment

1. RECOMMENDATIONS FOR THE MANAGEMENT OF LLIN PACKAGING MATERIAL

Options for the management of LLIN bags and baling material must be evaluated on a case by case basis. “Reuse” is currently not an option since no manufacturer produces reusable LLIN bags and baling material and it is unsafe to use them for any other purpose as such. The following recommendations apply only to the safe disposal and recycling of LLIN waste packaging (bags and baling material) and do not cover the LLINs themselves.

Recommendations proposed in this document are based on the following:

LLIN individual bags of all kinds are exposed to the insecticide present in the net. The baling material is also exposed to the insecticide present in the net if the LLINs are baled without individual bags, and if they are baled with individual bags, then it is still possible that the baling material may have absorbed some insecticide. Therefore, as a precaution and until more is known on the issue, all these packaging material should be handled the same way, in accordance with the above-mentioned guidelines.

2. PRACTICES TO BE STRICTLY AVOIDED INCLUDE

- Re-use of LLIN bags for any purpose;
- Burning LLIN bags and baling material in open air as there is a risk of emission of harmful substances that mainly pollute local air, surface water, soil and food;
- Disposing of LLIN bags and contaminated baling material as ordinary waste or in improper sanitary landfills. II.

3. BEST PRACTICES

a. For LLIN Manufacturers

- Provide detailed information on the exact composition of materials used in the manufacture of LLIN packaging. This can be a label recommendation on the bag itself;
- Provide guidance on the disposal and/or recycling of LLINs packaging following Best Available Techniques (BAT) and Best Environmental Practices (BEP);

b. For LLIN distribution projects

- Where possible, and with no reduction in the public health benefit, distribute LLINs without leaving any packaging with the intended LLIN user;
- Recycle LLIN packaging: recyclers processing used LLIN bags and baling material should apply proper controls of their materials and processes to ensure the bags are only recycled into appropriate products which have "limited potential for human contact and are not likely to be recycled again;”
- Ensure proper personal protective equipment (PPE) are used and measures strictly followed by workers involved in all stages of operations for collection, sorting, recycling and disposal of LLIN bags and baling material;
- Incinerate LLIN bags and baling material ONLY if specified high temperature incineration conditions for pesticide-tainted plastic can be assured9 following Basel Convention Technical Guidelines and in accordance with national regulations and requirements;
- Store used LLIN packaging awaiting future safe recycling, disposal or other processing in dry, well ventilated and secure facilities;
- Should recycling or incineration is not possible, and if LLIN producers provide directions on methods for safe disposal, follow the manufacturer’s recommendations. Alternatively, landfilling of bags and baling material in a properly engineered landfill is an option, as detailed in the FAO/WHO Guidelines on Management Options for Empty Pesticide Containers;
- Assure that disposal of LLIN packaging is included as a condition in the procurement of LLINs;
- Develop national LLIN packaging management protocols for these wastes and assure that all stakeholders are aware of proper packaging disposal procedures that is aligned with national regulations and requirements;
- Integrate good practice recommendations on the sound management of LLIN packaging into the existing national malaria strategy and related frameworks; and ensure that recommendations are aligned with national regulations concerning the safe handling and disposal of chemical waste (or pesticide-tainted waste).

c. Temporarily acceptable practices for LLIN distribution projects

Considering the above could be difficult to meet under the MPA, the following options should also be considered as temporarily acceptable while the capacity for the sound management of LLIN packaging is being built in Nigeria:

- Empty LLIN packages should be made impossible to reuse, i.e. by cutting, puncturing or the equivalent;
- At the moment, there is no consensus about the exact conditions for burial and this point needs to be further assessed. For now, the following is recommended: bury in soils with low permeability, away from any residences, at least 100 metres away from any wells or surface water source and at least 1.5 metres above the water table. Sloped or domed compacted soil should cover the buried plastic to a depth of one metre or more.

ANNEX 8: Environmental & Social Management Ratings

ASPECT	SUB ENVIRONMENTAL ASPECT	SIGNIFICANCE OF ENVIRONMENTAL ASPECT	MAGNITUDE OF IMPACT	SPATIAL EXTENT OF IMPACT	DURATION OF IMPACT	SIGNIFICANCE OF IMPACT	RATING PER ASPECT	OVERALL RATING
VEGETATION	Fauna	4	1	1	1	1	1.6	1.6
	Flora	4	1	1	1	1	1.6	
SOIL	Pollution	1	1	1	1	1	1.0	0.48
	Erosion	2	1	2	1	1	1.4	
AIR	Pollution/ Air Quality	4	2	3	4	3	1.8	3.2
WATER	Groundwater Pollution	1	1	1	1	1	1.0	0.68
	Surface water Pollution	2	1	1	1	1	1.2	
	Flooding	2	1	1	1	1	1.2	
WASTE	Generation	4	4	1	4	4	3.4	3.4
	Management	4	4	1	4	4	3.4	

Rating Code

TING	CLASSIFICATION
1.0 to 2.0	**Low**
2.1 to 4.0	**Medium**
4.1 to 5.0	**High**

ANNEX 9: TERMS OF REFERENCE FOR THE ENGAGEMENT OF AN ENVIRONMENTAL SAFEGUARD CONSULTANT

BACKGROUND AND PROJECT DESCRIPTION

The Federal Government of Nigeria (FGON) in collaboration with the World Bank has prepared projects following the multi-phased approach (MPA) to reduce under-five mortality in Nigeria.

The IMPACT Project (Phase I) under the MPA is being restructured to uptake outstanding activities under the Nigeria Polio Eradication Support Project – Additional Financing Three, specifically the construction and expansion of the National Primary Health Care Development Agency (NPHCDA) South West Zonal Cold and Dry Stores, located in Oshodi, Lagos State.

The components for IMPACT are:

Component 1: Malaria Control (US$ 188.0 million)

This component seeks to improve utilization and quality of malaria prevention and treatment activities in Abia, Borno, Ekiti, Imo, Lagos, and Rivers states in addition to support at the federal level.

Subcomponent 1.1: Strengthening Service Delivery (US$170.9 million)

This subcomponent will finance performance-based contracts with NGOs in participating states. Participating NGOs will be national, regional, and local NGOs that currently provide malaria service delivery in Nigeria. The NGOs will also take active steps to ensure that interventions are climate resilient and adapt to the changing vector ranges. The interventions are to:

(g) Strengthen the capacity of public and private sectors in management of sick children, including those with malaria.

(h) Provide LLINs to households and ensure nets are hung and used.

(i) Distribute SP to pregnant women (known as intermittent presumptive therapy [IPT]) during antenatal care through both the public and private providers.

(j) Provide SMC to under-five children in Borno (Sahelian State).

(k) Conduct interpersonal behavior change communication to improve behavior and knowledge in malaria prevention, care seeking, and treatment in communities; and

(l) Procure commodities starting in the third year of the projects and manage the supply chain in collaborations with the State Ministry of Health (SMoH).[9]

Procurement of malaria commodities. The subcomponent will also finance procurement of preventative and curative medicines and commodities for malaria including LLINs, ACTs, RDTs, SP, SPAQ- SMC[10] for Borno (Sahelian state), and so on. The NMEP will procure LLINs for the duration of the project and other malaria commodities for the first two years of the project.
Finally, the subcomponent will develop a policy for the Low Carbon Public Procurement of vehicles, bed nets, malaria chemoprophylaxis, and vaccines.

Subcomponent 1.2: Health Systems Strengthening and Technical Assistance (US$17.1 million)

The project will support the health system and provide TA at federal and state levels through:

(d) **Training and technical support to SMEPs** on (i) NGO contract management and supervision; (ii) data analysis and performance evaluation of the NGOs; (iii) organizing of annual or semiannual results conferences that bring together

[9] The NMEP will procure malaria commodities in the first two years for rapid procurement in the initial implementation stage.
[10] SPAQ (sulfadoxine-pyrimethamine + amodiaquine) for Seasonal Malaria Chemoprevention (SMC).

all states to learn from their implementation experience, and (iv) goods and operating costs to support day-to-day project management.

(e) **Training and technical support to the NMEP** on (i) contract management and supervision for national-level contracts (see Component 3); (ii) large-scale procurement of LLINs and other antimalarial commodities; (iii) TA for private sector engagement to support local manufacturers toward attaining pre-qualification for malaria commodities; (iv) TA to support policy engagement and advocacy efforts to address identified policy constraints for local manufacturing, and (v) goods and operating costs to support day-to-day project management; and

(f) **Performance frameworks** to foster accountability of SMEPs and the NMEP for results and critical project activities with a view to improve project management practices within state and federal entities, for completion of critical management processes such as proper FM, conducting of supportive supervision, mobilizing of domestic resources, data analysis and utilization, and effective contract management.

Component 2: Immunization Plus (US$ 409.3 million)

This component will support strengthening service delivery and health systems for immunization, maternal, child and neonatal services at the Federal level, and for select participating states, and will also finance vaccines and cold chain strengthening.

Subcomponent 2.1: Strengthening Service Delivery (US$150.2 million)

This subcomponent will finance interventions that will strengthen routine immunization, maternal, child, and neonatal service delivery in the context of strengthening PHC in 12 states (Adamawa, Benue, Ebonyi, Kogi, Kwara, Nasarawa, Oyo, Plateau, Bauchi, Kaduna, Kano, and Sokoto).

Decentralized funding with performance-based allocation for quality improvement directly to PHC facilities. Building on the successful experience of NSHIP, the project will provide operating budgets directly to PHC facilities, an innovative approach known as DFF. DFF will strengthen provision of immunization services; curative care for under-five children; outreach activities in reproductive, maternal, and child health services; skilled delivery; postnatal care; and maintenance and minor repair of existing PHC infrastructure.

viii) The project will also finance initial investments to improve the facility quality standards and provide TA to the states to ensure that facilities, LGAs, and states themselves are trained in DFF implementation.

ix) All DFF facilities will also be trained on standard operating procedures for referral services to improve the link between primary health facilities and secondary hospitals. About 40 percent of the financing received under DFF will be based on the performance of the health facilities in improving quality of care as measured by structural and clinical quality of care including competency tests.

Data-driven health facility supervision. The project will finance the development and implementation of an advanced health facility supervisory system that will reinforce immunization and other RMNCH service delivery.

Improving quality and access of care. The subcomponent will finance TA to design interventions to improve quality of care, such as mentoring, peer review, continuous quality improvement techniques, and so on. The TA will draw on successful pilots within the country and elsewhere and support the implementation of these interventions. The focus of the quality improvement will include, but not be limited to, Basic Emergency Obstetric and Newborn Care, essential newborn care, and postnatal care including postpartum family planning. Because much of the curative care is provided by the private sector, the quality-strengthening interventions will involve private sector engagement. Additionally, a voucher program for improving transportation of women and under-five children from their communities to the nearest PHCs will be launched to reduce any transportation barriers to seeking care.

Subcomponent 2.2: Health Systems Strengthening and Technical Assistance (US$75.3 million)

This subcomponent will be implemented at the national and state levels and will support the following activities:

(c) **Project operations and TA.** The subcomponent will also provide TA to national- and state-level PIUs and to LGA PHC Departments in the areas of management, supervision, and data analysis. The project will also help meet the operational costs of the PIUs and the Local Government Health Authorities (LGHAs). The operational expenses at the state and LGHA level will be financed through performance contracts. This subcomponent will also finance TA for introducing and implementing DFF in project states including training and monitoring support to state, LGHA, and PHC facilities and spot-checks of facilities to ensure independent verification of DFF funds utilization. DFF introduction and implementation will also include an HR listing exercise for human resources for health (HRH) gap analysis at the state level.

(d) **Performance frameworks.** The project will finance performance frameworks for key national, state, and LGA-level officials engaged in immunization plus activities in areas such as providing proper FM, conducting supportive supervision, mobilizing domestic resources, and conducting data analysis and utilization.

Subcomponent 2.3: Vaccines, Cold Chain and Logistics (US$183.8 million)

Through this subcomponent, the project will support financing of the procurement of vaccines with an emphasis on new or recently introduced vaccines and strengthening of the cold chain and logistics.
Vaccines. The subcomponent will support the Government in financing vaccine procurement through United Nations Children's Fund (UNICEF) with an emphasis on PCV, rotavirus vaccine, and meningococcal vaccine.
Cold chain and polio operations and logistics. The subcomponent will also strengthen the cold chain by financing (a) the gap in the planned procurement of the Cold Chain Equipment Optimization Plan for service delivery points; (b) installation of cold rooms and accessories, generating set, and solar power system (Equipping the Lagos hub)—all through an MoU with UNICEF; (c) distribution of vaccines from national to state level through contracts with six vendors; (d) preventive maintenance and as-needed repairs of walk-in cold rooms and national and zonal levels through long-term agreements with the private sector; (e) polio eradication support; and (f) vaccine logistics systems strengthening. Additionally, the subcomponent will employ innovative and high-impact activities for polio eradication support through provision of funds for surveillance operations and supplementary immunization activities managed by the World Health Organization (WHO), as well as for social mobilization and logistics support activities delivered through UNICEF. Finally, with the new restructuring, this subcomponent will also finance rehabilitation of the Lagos hub.

Component 3: Knowledge for Change (US$52.7 million equivalent IDA credit)

Subcomponent 3.1: Strengthening Monitoring and Evaluation Systems (US$23.2 million)

The project will further support strengthening of M&E systems as discussed in the following paragraphs.
Quarterly performance evaluations through LQAS. The project will support the conduct of LQAS surveys to help assess performance at LGA and state levels for four years and also fund an external assessment of the LQAS methodology to draw lessons for implementation in other countries, especially in low coverage settings.
Robust household and health facility surveys for utilization, quality, and mortality estimates. The project will support the annual household and health facility surveys (SMART and NHFS) for the years that there is a funding gap.
Improvements in routine data quality. The project will strengthen routine data used for planning and monitoring by supporting (a) DQA[11] on a sampling basis to improve routine District Health Information System-2 (DHIS-2) reporting accuracy and reliability of supervision scores, (b) resource mapping at the state level, and (c) microplanning activities to derive household-level population estimates of under-five children using GIS data and satellite imagery.
Climate and Health Vulnerability Assessment (CHVA). The project will finance a CHVA to identify the specific health threats faced by the Nigerian population and to ensure most efficient targeting of resources to deal with the risks faced now and into the future.
Subcomponent 3.2: Integrating Social Behavior Change Communications (SBCC) Activities (US$15.1 million)
Comprehensive SBCC campaigns are important to address demand-side barriers to child health in Nigeria. The project will finance the contracting of a firm to carry out formative research, development, and implementation of a comprehensive SBCC strategy for under-five health using mass media and social media. Another firm will be recruited to support SBCC provision through religious and traditional leaders. The household surveys will measure the performance of the SBCC firms and allow for the firms to adjust their SBCC strategies. The project will also fund training of community mobilizers (community health influencers, promoters, and services [CHIPS]) and PHC health workers in interpersonal communication to encourage care-seeking behavior.
Beneficiary feedback and grievance redress mechanism (GRM). The project will also finance regular workshops and focus groups with beneficiaries to understand community perceptions about services. It will also strengthen the Government's GRM ('Servicom') to ensure prompt and transparent feedback of the project performance, including a comprehensive mechanism for tracking and responding to grievances related to service quality and utilization at the health facility and community level.
Climate and health behavior change interventions. The subcomponent will support the dissemination of health promotion messages focused on social acceptability of preventive behaviors for children to households. Alongside this, the subcomponent will also develop and disseminate climate and health-related health promotion information.

[11] *Note:* IMPACT will support a robust DQA which would entail verification of a sample of the DHIS-2 entries through household visits, ideally conducted by an independent verifier.

Subcomponent 3.3: Learning Agenda (US$14.4 million)

Operations research to support the learning agenda. This subcomponent will finance operations research including process and IEs using both qualitative and quantitative methodologies to understand the impact of innovations financed by the project, and how they can be tailored to the country context and implemented in subsequent phases. The subcomponent will also finance warehouses and cold-store capacity assessment at the state level, and based on findings from this assessment, Phase II may include provisions for any rehabilitation and construction of these buildings. Finally, the sub-component will also provide TA to support the design and learning for the Emergency Medical Services (EMS) as part of the implementation of the emergency gateway of the BHCPF.

Randomized Controlled Trial to test innovative approaches in improving health services. Given the need to quickly and dramatically improve immunization plus coverage among the poor and underserved, the project will finance testing of innovations in poorly performing LGAs as defined by both low Routine Immunization coverage and low levels of SBA.

Component 4: Contingent Emergency Response Component (CERC) (US$0 million)

The CERC should be able to respond quickly health emergency with the potential to cause major adverse economic and/or social impacts. The CERC will serve as a first-line financing option for emergency response. Unused IDA financing will be allocated to this component in an emergency. These measures will ensure a swift mobilization and deployment of resources thereby limiting the financial and operational burden on the Nigerian health system.

OBJECTIVE OF THE CONSULTANCY

The main objective of the consultancy services is to enhance the knowledge of the PIU in the area of environmental safeguards planning, implementation and monitoring in line with the ESMF and HCWMP. This is to ensure a systemic process as against adhoc in managing anticipated environmental impacts associated with the MPA and also to engaged participation of relevant institutions and other stakeholders in project activities.

SCOPE OF WORK

The Environmental Safeguards Consultant will lead the implementation, monitoring and reporting of environmental safeguards compliance, and ensure all the sub projects are implemented in line with the prepared and disclosed ESMF and HCWMP, World Bank Environmental Safeguards policies and relevant national laws at federal and state levels. The Consultant will work closely with the relevant staff for the attainment of the MPA's objectives. The scope covers the whole project's environmental oversight responsibilities including those implemented by benefitting communities across the participating states in Nigeria. The consultant's main duties and responsibilities are as follow.

DUTIES AND RESPONSIBILITIES OF THE CONSULTANT

1) Organize local-level capacity building and interaction programs on environmental screening and environmental awareness as well as organize national level consultations with major stakeholders and academia, if necessary;
2) Prepare national guidelines, tools and notes for use in the project based on relevant environmental policies, acts and regulations/ directives of the Government of Nigeria and relevant safeguard policies of World Bank Group and the ESMF and RPF;
3) Provide leadership / build capacity of SAs staff to carry out environmental screening of subprojects' activities as provided by the ESMF / HCWMP.
4) Coordinate and guide consultant engaged to prepare specific subproject Environmental and instruments (ESIA/ESMPs/ RAPs/ARAPs) for subproject.
5) Visit and assess various sites under the project to monitor the progress of environmental improvement activities and compliance with safeguard policies;
6) Assess the adequacy of implementation of safeguards mitigation measures and the capacity of the institutions and agencies responsible for environmental safeguards issues, as they relate to the project. Provide technical and problem-solving support and selective training to individuals and stakeholders responsible for implementation of safeguard processes and mitigation measures particularly in regards to HCWM;

7) Evaluate environmental risks associated with project activities;
8) Train SA staff on how to identify necessary environmental requirements for the projects;
9) Produce monthly, quarterly and annual reports in a manner understood by non-technical people for effective dissemination purpose;
10) Prepare internal environmental guidelines for the preparation, implementation, monitoring and reporting of various safeguards concerns;
11) Review from an environmental safeguard point of view- ESMF/ESMP/ESIA and other environmental safeguards documents prepared by the project to ensure compliance with relevant policies of the Government of Nigeria and the World Bank safeguards policies;
12) Responsible for the evaluation processes (environmental aspects) for consultant(s) and contractor(s) for the sub project;
13) Develop a system for continuous stakeholders' consultation with consideration for women and children and other vulnerables in decision regarding project activities.

REQUIRED QUALIFICATIONS

The consultant must have a minimum of Master's degree or higher in environmental sciences, environmental engineering, environmental studies, Social Sciences or Land Management with at least at least 8 years' experience in environmental safeguard assessment and management, project implementation and capacity building out of which 5 years should be in a similar position. Other key requirements include:

a. Proficiency in the usage of computers and office software packages (word processing, spreadsheet etc.) and experience in handling of web-based data and information management systems;
b. Work experience in NGO's, CBO'S, etc. Donor funded projects and other relevant institutions will be an added advantage; work experience as environmental specialist/consultant in a World Bank and other donor funded activities will be an asset, and
c. Fluency in both oral and written English language.

CORE COMPETENCES

- Must be able to work with multiple people of different background and be a good team member;
- Strong interpersonal and communication skills, commitment to team work and to work across disciplines;
- Consistently approaches work with energy and a positive, constructive attitude;
- Demonstrates good oral and written communication skills in substantive and technical areas;
- Demonstrates openness to change and ability to manage complexities;
- Excellent writing, editing, analytical skills and capability of working independently;
- Ability to work effectively, take initiative and deliver results, even under pressure, and willing to visit sites in remote areas.
- Experience in safeguards assessment, planning and implementation and safeguards capacity development WB-funded projects.
- Ability to dissect a situation/issue and be able to identify treatment options founded on a logical argument.
- Complete assignments and work activities with a concern for accuracy, demonstrating attention to detail and thoroughness of performance.
- Being proactive and taking action before it is required in order to create opportunities or avoid problems.
- The ability to plan and set individual goals and targets to achieve an objective.
- The ability to work together in a team with the comfortable sharing of ideas to reach a decision.
- The ability to regularly review or check work to reduce errors and to improve

DURATION OF SERVICE

The consultant will be assigned initially for X years and possibilities of further extension, in case of satisfactory performance. The consultant is expected to work full time office hours.

SELECTION CRITERIA

The consultant shall be selected based on the Consultant Qualification Selection Method of the World Bank's consultant selection guidelines. Main criteria for the selection will be relevant work experience and qualifications.

PAYMENT SCHEDULE

The consultant shall be paid a remuneration monthly based on the inputs of the consultant in the month. He/she shall be responsible for all taxes and duties including income tax applicable as per rules and regulations. In case of travel requirement involving out of station activities, the consultant shall be paid travel expenses, subsistence allowance and hotel expenses on actual basis to cover the duration of any assignment undertaken.

ANNEX 10: TERMS OF REFERENCE FOR THE ENGAGEMENT OF A SOCIAL SAFEGUARD CONSULTANT

BACKGROUND AND PROJECT DESCRIPTION

The Federal Government of Nigeria (FGON) in collaboration with the World Bank has prepared projects following the multi-phased approach (MPA) to reduce under-five mortality in Nigeria.

The IMPACT Project (Phase I) under the MPA is being restructured to uptake outstanding activities under the Nigeria Polio Eradication Support Project – Additional Financing Three, specifically the construction and expansion of the National Primary Health Care Development Agency (NPHCDA) South West Zonal Cold and Dry Stores, located in Oshodi, Lagos State.

The components for IMPACT are:

Component 1: Malaria Control (US$ 188.0 million)

This component seeks to improve utilization and quality of malaria prevention and treatment activities in Abia, Borno, Ekiti, Imo, Lagos, and Rivers states in addition to support at the federal level.

Subcomponent 1.1: Strengthening Service Delivery (US$170.9 million)

This subcomponent will finance performance-based contracts with NGOs in participating states. Participating NGOs will be national, regional, and local NGOs that currently provide malaria service delivery in Nigeria. The NGOs will also take active steps to ensure that interventions are climate resilient and adapt to the changing vector ranges. The interventions are to:

(m) Strengthen the capacity of public and private sectors in management of sick children, including those with malaria.

(n) Provide LLINs to households and ensure nets are hung and used.

(o) Distribute SP to pregnant women (known as intermittent presumptive therapy [IPT]) during antenatal care through both the public and private providers.

(p) Provide SMC to under-five children in Borno (Sahelian State).

(q) Conduct interpersonal behavior change communication to improve behavior and knowledge in malaria prevention, care seeking, and treatment in communities; and

(r) Procure commodities starting in the third year of the projects and manage the supply chain in collaborations with the State Ministry of Health (SMoH).[12]

Procurement of malaria commodities. The subcomponent will also finance procurement of preventative and curative medicines and commodities for malaria including LLINs, ACTs, RDTs, SP, SPAQ- SMC[13] for Borno (Sahelian state), and so on. The NMEP will procure LLINs for the duration of the project and other malaria commodities for the first two years of the project.
Finally, the subcomponent will develop a policy for the Low Carbon Public Procurement of vehicles, bed nets, malaria chemoprophylaxis, and vaccines.

Subcomponent 1.2: Health Systems Strengthening and Technical Assistance (US$17.1 million)

The project will support the health system and provide TA at federal and state levels through:

(g) **Training and technical support to SMEPs** on (i) NGO contract management and supervision; (ii) data analysis and performance evaluation of the NGOs; (iii) organizing of annual or semiannual results conferences that bring together all states to learn from their implementation experience, and (iv) goods and operating costs to support day-to-day project management.

[12] The NMEP will procure malaria commodities in the first two years for rapid procurement in the initial implementation stage.
[13] SPAQ (sulfadoxine-pyrimethamine + amodiaquine) for Seasonal Malaria Chemoprevention (SMC).

(h) **Training and technical support to the NMEP** on (i) contract management and supervision for national-level contracts (see Component 3); (ii) large-scale procurement of LLINs and other antimalarial commodities; (iii) TA for private sector engagement to support local manufacturers toward attaining pre-qualification for malaria commodities; (iv) TA to support policy engagement and advocacy efforts to address identified policy constraints for local manufacturing, and (v) goods and operating costs to support day-to-day project management; and

(i) **Performance frameworks** to foster accountability of SMEPs and the NMEP for results and critical project activities with a view to improve project management practices within state and federal entities, for completion of critical management processes such as proper FM, conducting of supportive supervision, mobilizing of domestic resources, data analysis and utilization, and effective contract management.

Component 2: Immunization Plus (US$ 409.3 million)

This component will support strengthening service delivery and health systems for immunization, maternal, child and neonatal services at the Federal level, and for select participating states, and will also finance vaccines and cold chain strengthening.

Subcomponent 2.1: Strengthening Service Delivery (US$150.2 million)

This subcomponent will finance interventions that will strengthen routine immunization, maternal, child, and neonatal service delivery in the context of strengthening PHC in 12 states (Adamawa, Benue, Ebonyi, Kogi, Kwara, Nasarawa, Oyo, Plateau, Bauchi, Kaduna, Kano, and Sokoto).

Decentralized funding with performance-based allocation for quality improvement directly to PHC facilities. Building on the successful experience of NSHIP, the project will provide operating budgets directly to PHC facilities, an innovative approach known as DFF. DFF will strengthen provision of immunization services; curative care for under-five children; outreach activities in reproductive, maternal, and child health services; skilled delivery; postnatal care; and maintenance and minor repair of existing PHC infrastructure.

x) The project will also finance initial investments to improve the facility quality standards and provide TA to the states to ensure that facilities, LGAs, and states themselves are trained in DFF implementation.

xi) All DFF facilities will also be trained on standard operating procedures for referral services to improve the link between primary health facilities and secondary hospitals. About 40 percent of the financing received under DFF will be based on the performance of the health facilities in improving quality of care as measured by structural and clinical quality of care including competency tests.

Data-driven health facility supervision. The project will finance the development and implementation of an advanced health facility supervisory system that will reinforce immunization and other RMNCH service delivery.

Improving quality and access of care. The subcomponent will finance TA to design interventions to improve quality of care, such as mentoring, peer review, continuous quality improvement techniques, and so on. The TA will draw on successful pilots within the country and elsewhere and support the implementation of these interventions. The focus of the quality improvement will include, but not be limited to, Basic Emergency Obstetric and Newborn Care, essential newborn care, and postnatal care including postpartum family planning. Because much of the curative care is provided by the private sector, the quality-strengthening interventions will involve private sector engagement. Additionally, a voucher program for improving transportation of women and under-five children from their communities to the nearest PHCs will be launched to reduce any transportation barriers to seeking care.

Subcomponent 2.2: Health Systems Strengthening and Technical Assistance (US$75.3 million)

This subcomponent will be implemented at the national and state levels and will support the following activities:

(e) **Project operations and TA.** The subcomponent will also provide TA to national- and state-level PIUs and to LGA PHC Departments in the areas of management, supervision, and data analysis. The project will also help meet the operational costs of the PIUs and the Local Government Health Authorities (LGHAs). The operational expenses at the state and LGHA level will be financed through performance contracts. This subcomponent will also finance TA for introducing and implementing DFF in project states including training and monitoring support to state, LGHA, and PHC facilities and spot-checks of facilities to ensure independent verification of DFF funds utilization. DFF introduction and implementation will also include an HR listing exercise for human resources for health (HRH) gap analysis at the state level.

(f) **Performance frameworks.** The project will finance performance frameworks for key national, state, and LGA-level officials engaged in immunization plus activities in areas such as providing proper FM, conducting supportive supervision, mobilizing domestic resources, and conducting data analysis and utilization.

Subcomponent 2.3: Vaccines, Cold Chain and Logistics (US$183.8 million)

Through this subcomponent, the project will support financing of the procurement of vaccines with an emphasis on new or recently introduced vaccines and strengthening of the cold chain and logistics.

Vaccines. The subcomponent will support the Government in financing vaccine procurement through United Nations Children's Fund (UNICEF) with an emphasis on PCV, rotavirus vaccine, and meningococcal vaccine.

Cold chain and polio operations and logistics. The subcomponent will also strengthen the cold chain by financing (a) the gap in the planned procurement of the Cold Chain Equipment Optimization Plan for service delivery points; (b) installation of cold rooms and accessories, generating set, and solar power system (Equipping the Lagos hub)—all through an MoU with UNICEF; (c) distribution of vaccines from national to state level through contracts with six vendors; (d) preventive maintenance and as-needed repairs of walk-in cold rooms and national and zonal levels through long-term agreements with the private sector; (e) polio eradication support; and (f) vaccine logistics systems strengthening. Additionally, the subcomponent will employ innovative and high-impact activities for polio eradication support through provision of funds for surveillance operations and supplementary immunization activities managed by the World Health Organization (WHO), as well as for social mobilization and logistics support activities delivered through UNICEF. Finally, with the new restructuring, this subcomponent will also finance rehabilitation of the Lagos hub.

Component 3: Knowledge for Change (US$52.7 million equivalent IDA credit)

Subcomponent 3.1: Strengthening Monitoring and Evaluation Systems (US$23.2 million)

The project will further support strengthening of M&E systems as discussed in the following paragraphs.

Quarterly performance evaluations through LQAS. The project will support the conduct of LQAS surveys to help assess performance at LGA and state levels for four years and also fund an external assessment of the LQAS methodology to draw lessons for implementation in other countries, especially in low coverage settings.

Robust household and health facility surveys for utilization, quality, and mortality estimates. The project will support the annual household and health facility surveys (SMART and NHFS) for the years that there is a funding gap.

Improvements in routine data quality. The project will strengthen routine data used for planning and monitoring by supporting (a) DQA[14] on a sampling basis to improve routine District Health Information System-2 (DHIS-2) reporting accuracy and reliability of supervision scores, (b) resource mapping at the state level, and (c) microplanning activities to derive household-level population estimates of under-five children using GIS data and satellite imagery.

Climate and Health Vulnerability Assessment (CHVA). The project will finance a CHVA to identify the specific health threats faced by the Nigerian population and to ensure most efficient targeting of resources to deal with the risks faced now and into the future.

Subcomponent 3.2: Integrating Social Behavior Change Communications (SBCC) Activities (US$15.1 million)

Comprehensive SBCC campaigns are important to address demand-side barriers to child health in Nigeria. The project will finance the contracting of a firm to carry out formative research, development, and implementation of a comprehensive SBCC strategy for under-five health using mass media and social media. Another firm will be recruited to support SBCC provision through religious and traditional leaders. The household surveys will measure the performance of the SBCC firms and allow for the firms to adjust their SBCC strategies. The project will also fund training of community mobilizers (community health influencers, promoters, and services [CHIPS]) and PHC health workers in interpersonal communication to encourage care-seeking behavior.

Beneficiary feedback and grievance redress mechanism (GRM). The project will also finance regular workshops and focus groups with beneficiaries to understand community perceptions about services. It will also strengthen the Government's GRM ('Servicom') to ensure prompt and transparent feedback of the project performance, including a comprehensive mechanism for tracking and responding to grievances related to service quality and utilization at the health facility and community level.

Climate and health behavior change interventions. The subcomponent will support the dissemination of health promotion messages focused on social acceptability of preventive behaviors for children to households. Alongside this, the subcomponent will also develop and disseminate climate and health-related health promotion information.

Subcomponent 3.3: Learning Agenda (US$14.4 million)

Operations research to support the learning agenda. This subcomponent will finance operations research including process and IEs using both qualitative and quantitative methodologies to understand the impact of innovations financed by the project, and how they can be tailored to the country context and implemented in subsequent phases. The subcomponent will also finance

[14] *Note:* IMPACT will support a robust DQA which would entail verification of a sample of the DHIS-2 entries through household visits, ideally conducted by an independent verifier.

warehouses and cold-store capacity assessment at the state level, and based on findings from this assessment, Phase II may include provisions for any rehabilitation and construction of these buildings. Finally, the sub-component will also provide TA to support the design and learning for the Emergency Medical Services (EMS) as part of the implementation of the emergency gateway of the BHCPF.

Randomized Controlled Trial to test innovative approaches in improving health services. Given the need to quickly and dramatically improve immunization plus coverage among the poor and underserved, the project will finance testing of innovations in poorly performing LGAs as defined by both low Routine Immunization coverage and low levels of SBA.

Component 4: Contingent Emergency Response Component (CERC) (US$0 million)

The CERC should be able to respond quickly health emergency with the potential to cause major adverse economic and/or social impacts. The CERC will serve as a first-line financing option for emergency response. Unused IDA financing will be allocated to this component in an emergency. These measures will ensure a swift mobilization and deployment of resources thereby limiting the financial and operational burden on the Nigerian health system.

OBJECTIVE OF THE CONSULTANCY

The main objective of the consultancy services is to enhance the knowledge of the PIU in the area of social safeguards planning, implementation and monitoring in line with the ESMF and HCWMP. This is to ensure a systemic process as against adhoc in managing anticipated environmental impacts associated with the MPA and also to engaged participation of relevant institutions and other stakeholders in project activities.

SCOPE OF WORK

The Environmental Safeguards Consultant will lead the implementation, monitoring and reporting of environmental safeguards compliance, and ensure all the sub projects are implemented in line with the prepared and disclosed ESMF and HCWMP, World Bank Environmental Safeguards policies and relevant national laws at federal and state levels. The Consultant will work closely with the relevant staff for the attainment of the MPA's objectives. The scope covers the whole project's environmental oversight responsibilities including those implemented by benefitting communities across the participating states in Nigeria. The consultant's main duties and responsibilities are as follow.

DUTIES AND RESPONSIBILITIES OF THE CONSULTANT

1) Organize local-level capacity building and interaction programs on recent events and new issues to be tracked by social safeguards, create social awareness as well as organize national level consultations with major stakeholders and academia, if necessary;
2) Prepare national guidelines, tools and notes for use in the project based on relevant social policies, acts and regulations/ directives of the Government of Nigeria and relevant safeguard policies of World Bank Group and the ESMF and RPF;
3) Provide leadership / build capacity of SAs staff to carry out social screening of subprojects activities as provided by the ESMF / HCWMP.
4) Coordinate and guide consultant engaged to prepare specific Social safeguards instruments (ESMPs/GRM) for subproject.
5) Visit and assess various sites under the project to monitor the progress of social improvement activities and compliance with safeguard policies;
6) Assess the adequacy of implementation of safeguards mitigation measures and the capacity of the institutions and agencies responsible for social safeguards, as they relate to the project.
7) Provide technical and problem-solving support and selective training to individuals and stakeholders responsible for implementation of safeguard processes and mitigation measures;
8) Evaluate social risks associated with subproject activities;
9) Train SA staff on how to identify necessary social requirements for the projects;
10) Prepare internal social guidelines for the preparation, implementation, monitoring and reporting of various safeguards instruments;
11) Review from a social safeguard point of view- ESMF/ESMP/ESIAs/GBV,OHS and other social safeguards documents prepared by the project to ensure compliance with relevant policies of the Government of Nigeria and the World Bank safeguards policies;
12) Coordinate field visits to ascertain if the grievance redress mechanisms established for the project are functioning appropriately and the individual projects are implemented in a socially sustainable manner;
13) Facilitate the implementation of the project's Grievances Redress Mechanism (GRM) by monitoring the status of grievances, facilitating their resolution, maintaining documentation, and reporting the progress through monitoring reports;
14) Responsible for the evaluation processes (social aspects) for consultant(s) and contractor(s) for the Project;
15) Prepare and submit timely and regular progress reports indicating full compliance with relevant requirements;
16) Develop a system for continuous stakeholders consultation with consideration for women and other vulnerable in decision regarding project activities

REQUIRED QUALIFICATIONS

The consultant must have a minimum of Master's degree or higher in environmental sciences, environmental engineering, environmental studies, Social Sciences or Land Management with at least at least 8 years' experience in environmental safeguard assessment and management, project implementation and capacity building out of which 5 years should be in a similar position. Other key requirements include:

a. Proficiency in the usage of computers and office software packages (word processing, spreadsheet etc.) and experience in handling of web-based data and information management systems.

d. Work experience in NGO's, CBO'S, etc. Donor funded projects and other relevant institutions will be an added advantage; work experience as environmental specialist/consultant in a World Bank and other donor funded activities will be an asset, and

e. Fluency in both oral and written English language.

CORE COMPETENCES

- Must be able to work with multiple people of different background and be a good team member.
- Strong interpersonal and communication skills, commitment to teamwork and to work across disciplines.
- Consistently approaches work with energy and a positive, constructive attitude.
- Demonstrates good oral and written communication skills in substantive and technical areas.
- Demonstrates openness to change and ability to manage complexities.
- Excellent writing, editing, analytical skills and capability of working independently.
- Ability to work effectively, take initiative and deliver results, even under pressure, and willing to visit sites in remote areas.
- Experience in safeguards assessment, planning and implementation and safeguards capacity development WB-funded projects.
- Ability to dissect a situation/issue and be able to identify treatment options founded on a logical argument.
- Complete assignments and work activities with a concern for accuracy, demonstrating attention to detail and thoroughness of performance.
- Being proactive and taking action before it is required in order to create opportunities or avoid problems.
- The ability to plan and set individual goals and targets to achieve an objective.
- The ability to work together in a team with the comfortable sharing of ideas to reach a decision.
- The ability to regularly review or check work to reduce errors and to improve

DURATION OF SERVICE

The consultant will be assigned initially for X years and possibilities of further extension, in case of satisfactory performance. The consultant is expected to work full time office hours.

SELECTION CRITERIA

The consultant shall be selected based on the Consultant Qualification Selection Method of the World Bank's consultant selection guidelines. Main criteria for the selection will be relevant work experience and qualifications.

PAYMENT SCHEDULE

The consultant shall be paid a remuneration monthly based on the inputs of the consultant in the month. He/she shall be responsible for all taxes and duties including income tax applicable as per rules and regulations. In case of travel requirement involving out of station activities, the consultant shall be paid travel expenses, subsistence allowance and hotel expenses on actual basis to cover the duration of any assignment undertaken.

ANNEX 11: SAFEGUARD GUIDANCE ON COVID-19 CONSIDERATION IN CONSTRUCTION/CIVIL WORKS PROJECTS

This generic guidance provides a guide for this project on adequate precautions to prevent and/or minimize an outbreak of COVID 19, and actions to take in the event of such an outbreak.

Suggestions on how to do this are set out below:

- The PIU, either directly or through the Supervising Engineer, should request details in writing from the main Contractor of the measures being taken to manage covid-19 related risks.
- The PIU should require the Contractor to convene regular meetings with the project health and safety specialists and medical staff (and where appropriate the local health authorities), and to take their advice in designing and implementing any agreed measures.
- Where possible, a senior person should be identified as a focal point to deal with COVID-19 issues. This can be a work supervisor or a health and safety specialist. This person can be responsible for coordinating preparation of the site and making sure that the measures taken are communicated to the workers, those entering the site and the local community. It is also advisable to designate at least one back-up person; in case the focal point becomes ill; that person should be aware of the arrangements that are in place.
- Workers should be encouraged to use the existing project grievance mechanism to report concerns relating to COVID-19, preparations being made by the project to address COVID-19 related issues, how procedures are being implemented, and concerns about the health of their co-workers and other staff.
- The Contractor should prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations (e.g. 4 weeks on, 4 weeks off).
- This should include a breakdown of workers who reside at home (i.e. workers from the community), workers who lodge within the local community and workers in on-site accommodation. Where possible, it should also identify workers that may be more at risk from COVID-19, those with underlying health issues or who may be otherwise at risk.
- Consideration should be given to ways in which to minimize movement in and out of site. This could include lengthening the term of existing contracts, to avoid workers returning home to affected areas, or returning to site from affected areas.
- Workers accommodated on site should be required to minimize contact with people near the site, and in certain cases be prohibited from leaving the site for the duration of their contract, so that contact with local communities is avoided.
- Consideration should be given to requiring workers lodging in the local community to move to site accommodation (subject to availability) where they would be subject to the same restrictions.
- Workers from local communities, who return home daily, weekly or monthly, will be more difficult to manage. They should be subject to daily health checks at entry to the site (as set out above) and at some point, circumstances may make it necessary to require them to either use accommodation on site or not to come to work.
- Workers, contractors, and staff should be briefed that if COVID-19 starts spreading in the community anyone with even a mild cough or low-grade fever (37.3^{O}C or more) should be made to stay at home.
- Workers should be made to stay home (or work from home) if they have had to take simple medications, such as paracetamol/acetaminophen, ibuprofen or aspirin, which may mask symptoms of COVID-19 infection.
- Entry/exit to the work site should be controlled and documented for both workers and other parties, including support staff and suppliers. Possible measures may include:
    - Establishing a system for controlling entry/exit to the site, securing the boundaries of the site, and establishing designating entry/exit points (if they do not already exist). Entry/exit to the site should be documented.
    - Training security staff on the (enhanced) system that has been put in place for securing the site and controlling entry and exit, the behaviors required of them in enforcing such system and any COVID - 19 specific considerations.

- Training staff who will be monitoring entry to the site, providing them with the resources they need to document entry of workers, conducting temperature checks and recording details of any worker that is denied entry.
- Confirming that workers are fit for work before they enter the site or start work. While procedures should already be in place for this, special attention should be paid to workers with underlying health issues or who may be otherwise at risk. Consideration should be given to demobilization of staff with underlying health issues.
- During the daily briefings, reminding workers to self-monitor for possible symptoms (fever, cough) and to report to their supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell.
- Preventing a worker from an affected area or who has been in contact with an infected person from returning to the site for 14 days or (if that is not possible) isolating such worker for 14 days.
- Preventing a sick worker from entering the site, referring them to local health facilities and authorities including the Nigerian Centre for Disease Control (NCDC) if necessary or requiring them to isolate at home for 14 days.
- Checking and recording temperatures of workers and other people entering the site or requiring self-reporting prior to or on entering the site.
- Providing daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures, using demonstrations and participatory methods.
- A daily record of workers/ entering the site should be kept using the sample table below.

S/N	Name of Worker	Date	Temperature ($0^{O}C$)	Other Covid-19 Symptoms
1	Mr A	01 / January / 2020	36	No
2	Mrs B		39	Yes: Coughing

GENERAL HYGIENE

Requirements on general hygiene should be communicated and monitored, to include:

- Training workers and staff on site on the signs and symptoms of COVID-19, how it is spread, how to protect themselves (including regular handwashing and social distancing) and what to do if they or other people have symptoms (for further information see WHO COVID-19 advice for the public[15]).
- Placing posters and signs around the site, with images and text in local languages.
- Ensuring handwashing facilities supplied with soap, disposable paper towels and closed waste bins exist at key locations throughout site, including entrances/exits to work areas; toilets, canteen or food distribution areas, or provision of drinking water; in worker accommodation; at waste stations; at stores; and in common spaces. Where handwashing facilities do not exist or are not adequate, arrangements should be made to set them up. Alcohol based sanitizer (if available, 60-95% alcohol) can also be used.
- Ensure that face masks or paper tissues are available at your workplaces, for those who develop a runny nose or cough at work, along with closed bins for hygienically disposing of them.
- Review worker accommodations and assess them in light of the requirements set out in IFC/EBRD guidance on Workers' Accommodation[16] processes and standards, which provides valuable guidance as to good practice for accommodation.
- Setting aside part of worker accommodation for precautionary self-quarantine as well as more formal isolation of staff who may be infected.

[15] https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public

[16] https://www.ifc.org/wps/wcm/connect/60593977-91c6-4140-84d3-737d0e203475/workers_accomodation.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-60593977-91c6-4140-84d3-737d0e203475-jqetNIh