Department of Climate Change
Federal Ministry of Environment

NIGERIA - ICAT PROJECT INCEPTION REPORT (Technical)

Initiative for Climate Action Transparency (ICAT) – Consultancy Project(s) Capacity Building on Application of Measure, Report and Verify (MRV) Greenhouse Gas (GHG) Emissions for Mitigating the Impact of Climate Change in Nigeria

April 2021

ICAT Initiative for Climate Action Transparency

CITEPA

ghg management institute

Department of Climate Change
Federal Ministry of Environment

DISCLAIMER

PREPARED UNDER

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Abbreviations

AD	Activity Data
AfDB	African Development Bank
AFOLU	Agriculture, Forestry and Other Land Use (AFOLU)
BUR	Biennial Update Reports
BUR1	First Biennial Update Report
CBN	Central Bank of Nigeria
CITEPA	International Technical Centre on Air Pollution and Climate Change
CO_2	Carbon Dioxide
CoMAT	Country Methane Abatement Tool
CTF	Common Tabular Formats
DCC	Department of Climate Change
DPR	Department of Petroleum Resources
EF	Emission Factor
ETF	Enhanced Transparency Framework
FMARD	Federal Ministry of Agriculture and Rural Development
FMoE	Federal Ministry of Environment
GACMO	Greenhouse Gas Abatement Cost Model
GHG	Greenhouse Gas
GHG-I	Greenhouse Gas Inventory
GHGMI	Greenhouse Gas Management Institute
IAR&T	Institute of Agricultural Research and Training
ICAT	Initiative for Climate Action Transparency
INDC	Nationally Determined Contribution
IPCC	Intergovernmental Panel on Climate Change
LEAP-IBC	Low Emissions Analysis Platform-Integrated Benefits Calculator
LNG	Liquefied Natural Gas
LULUCF	Land Use, Land Use Change and Forestry
MDAs	Ministries, Departments and Agencies
MPG	Modalities, Procedures and Guidelines
MRV	Measurement, Reporting and Verification
NCRI	National Cereal Research Institute
NDC	Nationally Determined Contribution
NEST	Nigerian Environmental Study Action Team
NGC	Nigeria Gas Company
NIHORT	National Institute for Horticultural Research

NNPC	Nigeria National Petroleum Corporation
NOG	Non-Governmental Organization's
O&G	Oil and Gas
OAU	Obafemi Awolowo University
P&M	Policies and Measures
QA	Quality Assurance
QC	Quality Control
SLCFs	Short- Lived Climate Forcers
TNC	Third National Communication
ToR	Terms of Reference

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Executive Summary

In the United Nations Framework Convention on Climate Change (UNFCCC), the 2007 Bali Action Plan, enables the full, effective, and sustained implementation of the Convention through long- term cooperative action, now, up to and beyond 2012, refers to “measurement, reporting and verification (MRV)” as an essential part of international processes. These include nationally appropriate mitigation actions (NAMAs) by developing country (non-Annex I) Parties. As we approach the full implementation of NDC, there is need to put up a system that tracks performance on GHG emission reduction. This is very relevant for measuring Nigeria’s climate action and GHG emissions as well as the progress the country is making towards reducing GHGs.

It is therefore important that Nigeria designs a national framework for Measurement, Reporting and Verification (MRV) of emissions and emissions reductions to ensure that Nigeria’s efforts to mitigate climate change is transparently implemented and in line with international practices. This therefore underscores the support received by Federal Ministry of Environment of Nigeria from Initiative for Climate Action Transparency (ICAT).

The Initiative for Climate Action Transparency (ICAT) aims to help countries better assess the impacts of their climate policies and actions and fulfil their transparency commitments. ICAT’s work is country-driven, efforts build upon existing MRV systems and knowledge in countries, and complement previous or on-going activities by other initiatives, where applicable. Support provided is tailored to fit the country’s context and priorities. ICAT´s work is aimed at engaging national expertise as much as possible, while encouraging peer-to-peer learning.

This document is thus the inception report which outlines the Consultants understanding of the scope of the assignment, approach, and methodology of implementing the project activities after engaging with stakeholders at the inception workshop. The approach and methodology to implement the assignment is based on the understanding of the assignment by the team of National Consultants and on-going engagements with the International Consultants from CITEPA in France, Green House Gas Management Institute (GHGMI) in USA as well as the sectoral stakeholders in Nigeria prior and during the inception workshop.

The implementation shall be based on international best practices and consultations with sector stakeholders over the period of the assignment (October 2020 – December 2021). The output of the work shall be undertaken in the context of the United Nations’ Framework Convention on Climate Change (UNFCCC) to which Nigeria is a signatory, with the Federal Ministry of Environment (FMEnv), Department of Climate Change (DCC) as the national focal point as well as consultations with relevant MDAs (ministries, departments and agencies), Private Sector Institutions, Academic and Research institutes using Nigeria’s country-specific circumstances, data and capabilities built into the concept and action plan.

The Inception workshop held on April 8, 2021 was a success with attendance from public, private and the academic institutions. The deliberation with the stakeholders further affirms support and readiness for cooperation with the team of Consultants to ensure successful output. The outcomes are expected to give a national-level climate MRV system, Institutional set-up and Procedural set-up guided by the United Nations.

1.0 Introduction

1.1 Background

It is a globally accepted reality that we cannot change what we cannot measure –particularly when we want to reduce greenhouse gas emissions. This is true for measuring Nigeria's climate action and GHG emissions as well as the progress the country is making towards reducing GHGs. This is critical for evaluating whether Nigeria is on track to meet the targets in her NDCs as part of global efforts to limit temperature rise to between 1.5 to 2^{o}C.

Designing a national framework for Measurement, Reporting and Verification (MRV) of emissions and emissions reductions is necessary to ensure that Nigeria's efforts to mitigate climate change are fit for purpose. The Paris Agreement took a major step forward when it established a universal system of transparency for MRV, with built-in flexibility considering countries' different capacities. Enthroning an effective MRV framework with clear indicators can help Nigeria understand emissions sources, sinks and trends as well as design mitigation strategies that enhance the credibility of climate policy actions.

Therefore, there is an urgent need to build capacities of Nigeria's Ministries, Departments and Agencies (MDAs) to better understand and apply tools for the Measurement, Reporting and Verification (MRV) of Greenhouse Gas (GHG) emissions in all sectors and the impact of mitigation actions, as well as to strengthen national institutional arrangements and processes for MRV policies and actions.

As part of Nigeria's continuous efforts to set up an MRV system for reporting GHG emissions in all sectors of the NDC, the Federal Ministry of Environment with support from the Initiative for Climate Action Transparency (ICAT) engaged all sector stakeholders to assess the impacts of Nigeria's climate action through institutionalizing MRV, and further help to enhance greater transparency, effectiveness, ambition, and trust in climate policies (NDC).

To this effect and to officially lunch and kick start the project, an inception workshop which brought together sector Consultants, all sector key experts and stakeholders was held at Sandralia Hotel Jabi, Abuja, Nigeria. The inception workshop was in two sessions. The ceremonial session which was the official launching of the project and the technical session which saw technical presentations from all the sector consultants and some stakeholders.

Figure 1: ICAT Nigeria MRV Systems Project Launching Workshop Participants and Stakeholders

Figure 2: Cross section of Participants at the Inception Workshop

1.2 Objectives

The project will focus on the implementation of sectoral MRV systems based on a robust sustainable data system aiming at updating existing exercises in the future and not always starting all over again from the scratch.
This project will focus on three priority sectors (representing five sub sectors) from the seven identified by Nigeria: Oil and Gas sector, Transport (including Road Transport and other transportation modes) and AFOLU (including Agriculture and LULUCF/Land Use, Land Use Change and Forestry) which are not covered by other projects.

For the sectors, the specific objectives are:

- *Carry out a review of the sectors in terms of GHG inventory and mitigation actions (actors involved, availability of data, QA/QC, Tools and achieving systems, MRV capacity in the country, etc.).*
- *Provide inputs to an internal Nigerian Reporting Scheme towards developing the national institutional setup. There is a major need to clarify how to get other stakeholders to share data.*
- *Develop an overarching institutional arrangement with recommendation for national reporting system. and design; and*
- *Assess Policies and Measures to develop NDC indicators/tools. ICAT methodologies available for Transport, Agriculture and Forestry will be applied if corresponding to national P&M.*

The project Inception/Kick-off meeting has three objectives:

- Increase awareness of Nigeria ICAT project among national stakeholders including government, NGO's, academia, private sector.
- Expected support, contributions and responsibilities and roles of key stakeholders of the project.
- Discussion and adoption the work plan of the project.

Expectation Results:

- Authorities and keys stakeholders are outreached and informed on the objective of Nigeria ICAT Project, including their readiness to support the process in the country.
- The contributions, responsibilities, and roles of each actors of the project are defined and barriers/solutions are identified.
- Knowledge on sectoral MRV systems is shared with a view to encourage active stakeholder participation and contribution towards delivering the project outcomes.
- The project work plan is adopted for implementation.

1.3 General Scope of the Assignment

This ICAT project will involve stakeholders from the different Ministries, Departments and Agencies (MDAs) at Federal and State levels, public and private organizations and enterprises, NGOs, etc. involved in the three priority sectors through an inception meeting to present the process to be carried out during the project and during a final seminar to present the outcomes of the work. Sectoral experts will then be involved during the core of the project through interviews and direct contacts with key experts and information/data sources carried out face-to-face or remotely.

International and national consultants will accompany the DCC to work on the following tasks for the three priority sectors:

1. Sectoral MRV System Review:

The sectoral MRV review will be carried out through the identification of stakeholders and document analysis. Meetings will be organized with the data providers and MRV experts involved in the GHG inventory compilation and mitigation actions, MRV system. This includes national MRV experts/consultants who provide local support in this field. During each meeting with key informants, the source of data will be examined, using QA/QC (quality assurance/quality control) applied to the data to gauge the reliability, the periodicity and completeness of the data and datasets provided by the key informants. This will lead to a mapping of stakeholders, data flows and tools which will be the basis to develop sectoral MRV systems.

2. Sectoral Institutional MRV System Development:

The needs and gap assessment will provide inputs to establish a sectoral institutional MRV framework. This sectoral approach will focus on the MRV scheme in terms of GHG inventory and mitigation aspects. A relevant and accurate sectoral GHG inventory is essential to project emissions and estimate accurately the impact of various mitigation actions. Different schemes can be applied according to the national organization. Answering the following questions will help to shape the system:

- Entity on charge of the general coordination of sectoral MRV (in terms of GHG inventory / mitigation).
- Who the data providers are, what the data flows and procedures are involved, etc.?
- Other entities or experts involved including non-State Institutions (private sector, NGOs, universities, etc.).
- QA/QC procedures.

3. Develop Overarching Institutional Arrangements and Recommendations for a National Reporting System and its Design:

Sectoral MRV systems will be included in an overarching national MRV system allowing Nigeria to report accordingly to international requirements on GHG-I and mitigation actions. Institutional strengthening across ministries, departments, and agencies (MDAs) towards achieving the NDC will be considered.

4. Policy assessment to Develop NDC Indicators/Tools:

According to the tasks carried out previously, the 5 sub-sectors will be studied, namely Oil and Gas sector, Road transport, Other transportation modes (including aviation, railways, maritime, inland waterways and other transportation), Agriculture and LULUCF. The project will provide a document summarizing data, methodologies, assumptions, results of the implementation of ICAT methodologies (for Transport, Agriculture and Forestry. when applicable). These will be provided in terms of the quantification of the emission reduction impacts and relevant recommendations for future assessments and gap filling. The GACMO model will be analyzed, if suitable. The link will be made with the work already carried out for SLCFs applying the LEAP-IBC model.
The sector documents will provide the background for the Federal Government of Nigeria to report progress towards achievement of targets set out in Nigeria's Nationally Determined Contributions (NDCs), accordingly to Modalities, Procedures and Guidelines (MPGs) adopted at COP24 of the UNFCCC in Katowice in 2018, define the set of rules for reporting and review of information submitted by Parties under the Enhanced Transparency Framework (ETF) of the Paris Agreement. Common Tabular Formats (CTFs) are under development.
The development of NDC indicators/tools will be carried out jointly with stakeholders involved in the data flow process. Completeness, Accuracy, Consistency and Confidentiality of data will be discussed.

1.4 Expected Results

The technical support provided to the country is expected to contribute to the following results:

- Nigeria's commitment to build adequate capacity to develop a apply a sectoral MRV system to measure the performance of the targeted climate policies and actions defined for three sectors (Oil and Gas, Transport and AFOLU) and to integrate sector MRV systems into an overarching MRV system under the Enhanced Transparency Framework (ETF) of the Paris Agreement.
- Nigeria's successful application of good practice and tools that integrate transparency on climate policies and actions is evidence-based policy making, accessing the impacts (in term of GHG emissions, and co-benefits on SLCFs emissions) of policies and measures.
- Create Stakeholders platforms for interaction and cross-fertilization of ideas on climate action transparency.

2.0 Work Plan: Approach and Methodology

2.1 Approach and Methodology

The following sections of the report present detailed work plan as identified by the sector consultants in achieving this project activity.

2.1.1 Agriculture Sector

Crop and Livestock

Approach and Methodology
Our proposed approach and methodology are designed to align with the scope and deliverables of the project and include taking the following steps below:

To implement the objectives of the project effectively and efficiently, a lot of activities will be carried out by the consultants which has been designed to align with the scope and deliverables of the project. They include:

- The consultants will hold a kickoff meeting with the DCC team, the Steering Committee and other consultants to update and adopt a Project Implementation Plan.

- Identification and meetings with the sector stakeholders will be organized to intimate them on the ICAT project, enlighten them on the current realities of the sector with respect to the scope of the project, highlight the importance of their cooperation throughout the period of the project and the various areas where their inputs and contributions will be needed.

- as well as obtain existing MVR data currently in use by the DCC, for use in determining the baseline and their future usefulness or otherwise in support of the delivery of the mandate of the Livestock and Crop component.

- Active engagement and interactions with the key Sector Stakeholders will commence, and an initial stock-taking, review and analysis of existing mechanisms and frameworks will be carried out to maximize synergies with other initiatives and to avoid duplication of activities while developing similar MRV and transparency initiatives.

- In consultation with key sector stakeholders an overarching institutional arrangement, will be developed, recommendation for national reporting system and design that will allow Nigeria to report accordingly to international requirements on GHG-I and mitigation actions and further strengthening institutions, ministries, departments, and agencies (MDAs) towards achieving the NDCs will be considered.

- All available Crop and Livestock policy documents will be assessed by the Consultants for the development of NDC indicators/tools which will be used in the development of Modeling Tools and Indicators for tracking the NDC implementation in the Crop and Livestock Sector. Through consultative approaches, MRV Framework and Recommendations for the Crop and Livestock Sector will be developed. For the development of and overall national fit-for-purpose MRV toolbox and protocol including:
    - process workflow in the development of a fit-for-purpose MRV toolbox, and
    - Corresponding user manual.

- The Consultants will consolidate on the lessons learnt from the project and facilitate knowledge sharing among participating stakeholders.

Scope of Crop and Livestock Project Component

Activity 0: Inception
The National Consultant and his team will familiarize with other project stakeholders, participate in the inception workshop, and develop the inception report under the Crop and Livestock Sector subcomponent of the MVR.

Output A: Inception Report from the Inception Workshop.
Output B: Detailed work plan for the ICAT Project.

Activity 1: Sectoral MRV System Review
An initial stock-taking, review, and analysis of existing mechanisms / frameworks will be conducted, to assist in the development of similar MRV/transparency initiatives in the country, to maximize synergies with other initiatives, avoid duplication of those activities, and mobilize appropriate support for identified needs and priorities. Meetings will be held with data providers and MRV experts involved in the GHG National Inventory compilation and mitigation actions MRV system.

Output C: Development of the MRV Review Report on Crop and Livestock Sector

Activity 2: Sectoral institutional MRV system development

Input from Activity 1 will be built on to establish a sectorial institutional MRV framework. This sectoral approach will focus on the MRV scheme in terms of national GHG inventory (GHG-I) and mitigation aspects in the Crop and Livestock Sector.

Output D: Presenting the new National Crop and Livestock MRV Scheme.

Activity 3: Overarching institutional arrangements development and recommendation for national reporting system and design.

Sectoral MRV systems will be included in an overarching national MRV system covering all GHG-emitting sectors (i.e., other industrial sectors, industries, Oil and Gas, agriculture, forestry, waste, etc.) allowing Nigeria to report accordingly to international requirements on GHG-I and mitigation actions. Institutional strengthening will take place across ministries, departments, and agencies (MDAs) towards achieving the NDC will be considered.

Output I: Preparation and delivery of Project Report presenting the overarching institutional arrangements and recommendation in Nigeria's Crop and Livestock Sector for incorporation in to an overall national GHG MRV reporting system and design document for Nigeria.

Activity 4: Assess Crop and Livestock policy to develop NDC (Nationally Determined Contributions) indicators/tools.

Development of Modeling Tools and Indicators for tracking the NDC Implementation in the Crop and Livestock sector.

Development of an MRV Framework and Recommendations for the Crop and Livestock Sector for the development of and overall national fit-for-purpose MRV toolbox and protocol including:

- Process workflow in the development of a fit-for-purpose MRV toolbox, and
- Its corresponding user manual.

Output J: Submission of *report assessing P&M (Policies and Measures/PAM)* to develop NDC indicators/tools for Crop and Livestock Sector

Activity 5: Sharing of knowledge and lessons learnt.

Output O: Final Workshop report

Output P: Report highlighting key achievements and lessons learned from the Crop and Livestock Sector.

2.1.2 Land Use, Land Use Change and Forestry (LULUCF) Sector

The technical approach described herein has been designed to respond to the critical need for improved transparency, accountability, and capacity building for evidence-based policymaking on climate change, particularly dimensioning and measuring LULUCF's contributions to Nigeria's GHGs emissions burden. The knowledge and insights from these will assist in designing mitigating measures that will help Nigeria achieve the targets set out in her Nationally Determined Contributions (NDCs).

Approach and Methodology

The methodological approach of the IPCC for GHG inventories when developing National MRV Systems has been adopted in alignment with the ICAT Nigeria MRV Systems Project objectives. This consists of combining information on the extent of human activities called 'activity data' (AD) with coefficients that quantify emissions or removals per unit activity called 'emission factors' (EFs), represented as *Emission Estimate = Activity Data × Emission Factor*

According to the IPCC's Good Practice Guidance for Land Use, Land Use Change and Forestry, GPG LULUCF (IPCC, 2003), AD is defined as data on the magnitude of human activity resulting in emissions or removals taking place during a given period. Land-Use Changes –for instance from Forestland-Cropland-Grasslands-Wetlands, etc -give rise to large carbon flows while meeting urbanization and extension of agricultural land due to population explosion. In the LULUCF sector, data on land area, land use change and management systems, harvested wood products (HWPs) are examples of AD.

As mentioned earlier, the most adaptable approach proposed by IPCC will be adopted in implementing this project. In consultation with the DCC, the national consultant responsible for LULUCF GHG inventories will proceed with the implementation of this approach according to Nigeria's prevailing national circumstances and climate change governance capabilities as highlighted below:

Approach 1: represents determination of land use area totals within a defined spatial unit, which is often defined by administrative borders, such as a country, a province or municipality. Only net changes in land use area can be tracked within the boundaries of the spatial unit through time following this approach.

Approach 2: provides an assessment of both the gross and net losses or gains of the surface area for the categories of specific land uses and allows the determination of areas where these changes take place. This approach includes information on the conversions between categories but tracks these changes without spatially explicit data (i.e., the location of specific land uses, and land-use conversions are not known).

Approach 3: is characterized by spatially explicit observations of land use categories and land use conversions, often through sampling at specific geographical points and/or complete ('wall-to-wall') mapping. We will leverage experience of design and development of Forest Governance Framework using the development of a National Report on three (3) Land Degradation Indicators (Land Cover, Land Productivity, Soil Organic Carbon) and SDG 15. This will be enriched with lessons learnt from the development of *Forest Reference Emission Levels (FRELs) for the Federal Republic of Nigeria: A Jurisdictional Approach focused on Cross River State* in response to the invitation of the Federal Republic of Nigeria to submit a Forest Reference Emission Levels (FREL) on a voluntary basis in the context of results-based payments for the implementation of reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+) under the United Nations Framework Convention on Climate Change (UNFCCC).

Scope of the LULUCF Project Component

- ✓ Activity 0: Inception Phase

The National Consultant and his team will familiarize with other project stakeholders, participate in the inception workshop, and develop the inception report under the LULUCF subcomponent of the MVR.

Outputs

Output A: Support the In-Country Project Facilitator/Coordinator during the Inception Workshop; assist with preparation of the Inception Report from the Inception Workshop
Output B: Participation in implementing the detailed work plan for the ICAT project.

- ✓ Activity 1: Sectoral MRV System Review

Conduct an initial stock-taking, review, and analysis of existing mechanisms / frameworks in the development of similar MRV/transparency initiatives in the country to maximize synergies with other initiatives, avoid duplication of those activities, and mobilize appropriate support for identified needs and priorities

Meetings will be held with data providers and MRV experts involved in the GHG National Inventory compilation and mitigation actions MRV system.

Output C: Development of the MRV Review Report on Land use, land-use change, and forestry (LULUCF)

- ✓ Activity 2: Sectoral institutional MRV system development

Input from Activity 1 will be built on to establish a sectoral institutional MRV framework. This sectoral approach will focus on the MRV scheme in terms of national GHG inventory (GHG-I) and mitigation aspects.

Output D: Presenting the New National LULUCF MRV Scheme

- ✓ Activity 3: Overarching institutional arrangements development and recommendation for national reporting system and design.

Sectoral MRV systems will be included in an overarching national MRV system covering all GHG-emitting sectors (i.e., other industrial sectors, industries, Oil and Gas, agriculture, forestry, waste, etc.) allowing Nigeria to report accordingly to international requirements on GHG-I and mitigation actions. Institutional strengthening will take place across ministries, departments, and agencies (MDAs) towards achieving the NDC will be considered.

Output E: Preparation and delivery of *Project Report* presenting the overarching institutional arrangements and recommendation in Nigeria's LULUCF sector for incorporation in to an overall national GHG MRV reporting system and design document for Nigeria.

- ✓ Activity 4: Assess LULUCF policy to develop NDC (Nationally Determined Contributions) indicators/tools.

Development of Modeling Tools and Indicators for tracking the NDC Implementation in the LULUCF sector Development of an MRV Framework and Recommendations for the Land use, land-use change, and forestry sector for the development of and overall national fit-for-purpose MRV toolbox and protocol including.

  - process workflow in the development of a fit-for-purpose MRV toolbox, and
  - its corresponding user manual.

Output F: Submission of report *assessing P&M (Policies and Measures/PAM)* to develop NDC indicators/tools for LULUCF Sector.

- ✓ Activity 5: Sharing of knowledge and lessons learnt.

Output G: Final Workshop report

Output I: *Report highlighting key achievements and lessons learned* from the LULUCF sector.

2.1.3 Oil and Gas Sector

Approach and Methodology

To achieve the objectives of the project, the following approach and methodologies shall be deployed by the consultant who also doubles as the project lead consultant.

- Active and constant engagement with the Department of Climate Change (DCC), Project Steering Committee and the ICAT Project Team to ensure effective response from the relevant stakeholders.
- Meetings with relevant stakeholders to sensitize, create awareness and discuss the scope of work and what is expected from them, it is possible that specific meetings might be held with these principal stakeholders if need be. Some meetings could be organized through virtual platform due to the current pandemic and where necessary it shall comply with state regulations.
- After the completion of the inception report, immediate engagement, and discussion with the key stakeholders in the sector will need to be carried out. This engagement will help to collate relevant information and enhance the understanding in the areas of gaps and information that are readily available and that can improve upon to avoid duplication of activities.
- Active collaboration with the other sector expert is key for the completion of the tasks.
- A final workshop should involve stakeholders that will present findings of the project and outline the impacts of institutionalizing the best practice approaches.

Scope of the O&G Project Component

Task I: Workshop and Report

The inception phase sets priorities and direction of the work. Upon project start, the Lead Project Consultant (O&G) will work with the In-Country Project Facilitator/Coordinator to mobilize the team to review existing

work done, identify necessary stakeholders, assess data availability, and develop plans on how to reach out and communicate data needs to stakeholders.

Output A: Inception Workshop and Report
Output B: Detailed work plan for the ICAT project

Task II-a: ***Sectoral MRV System Review.***

> *From ToR:* "Conduct an initial stock-taking, review, and analysis of development of similar MRV/transparency initiatives in the country to maximize synergies with other initiatives, avoid duplication of those activities, and mobilize appropriate support for identified needs and priorities."

The long-term goals for the Federal Ministry of Environment are to build capacity and be able to produce regular high quality GHG data and mitigation action aspect that is suitable for National Communication, Biennial Update Reports (BUR) and especially in the NDC implementation.

At present, Nigeria does not have a full GHG inventory and accompanying MRV system. Developing and establishing domestic MRV system is a challenge to most developing countries and Nigeria is not an exception. While there are some initiatives put together in the past especially drafting the First and Second National Communication, the INDC (NDC) the First Biennial Update Report (BUR1) and the second which is in the process, there are currently limited data on GHG emissions from some sectors indicated in the NDC in Nigeria. In energy sector for example, Tier 1 and 2 indicators are applied in the NDC, in addition to indicative Tier 3 indicators. While the energy sector; oil and gas as well as electricity have data records, other sectors like Agriculture may be having limited referenceable data. The existing data could therefore be worked on in building the MRV system especially for the oil and gas sector and another relevant sector.

Approach: For this task, the consultant will use the following steps.

- Carry out desk review of existing MRV framework reported in Country.
- Identify the relevant existing MRV framework at the national, state and local.
- Identify the key stakeholders responsible for provision of data.
- Liaise with MRV experts involve with the compilation of National GHG inventory and Mitigation actions.
- Identify focal points to participant in meeting to agree on data sharing and reporting arrangement format with stakeholders and among the project team.

The objective of this activity is to ensure that ongoing work in the country geared towards developing a comprehensive MRV system especially Oil and Gas sector is considered, to produce an enhanced MRV system and support GHG reporting and assessment of the impacts of mitigation actions especially as it relates to the NDC which requires transparency from all respective countries. Based on this, a report on the review of Oil and gas sector MRV system will be developed and submitted.

Output C: A Sectoral MRV Review Report

Task II-b: Report on MRV for Oil and Gas

Based on the findings from the desk review and engagement with the relevant stakeholders, The Task 2 will therefore on reporting MRV for the Oil and Gas sector.

The critical path to success will be getting the stakeholders to own the project by internalizing and accepting the process. Therefore, effective communication and stakeholder involvement/commitment from the inception of the project is very important.

Output D: A Report presenting MRV for Oil & Gas

Task III: Final report presenting the overarching institutional arrangements and recommendation for national reporting system.

The consultant, based on the earlier work carried out in the Task I and II, will work effectively to develop a final ICAT Project Report with principal focus on establishing institutional arrangements for the MRV system for the oil and gas sector and provide further recommendation on enhancing the actualization and consistency in implementing the MRV system in Nigeria's oil and gas sector. The consultant been the Lead Project Consultant will also ensure that the MRV Report from other sectors is incorporated in the final report.

Hence, for the purpose of effective delivery of the task, the report to be developed will be a single report that will incorporate the sectoral MRV for all the relevant sectors in view, which are Oil and Gas, Transport, Agriculture (Livestock and Crops) and LULUCF. This is expected to form the basis for the various options in developing a robust National MRV system that comprises of all the relevant sectors and will further aid Nigeria to report in line with international best practices on GHG inventory and mitigation action tracking towards actualization of the countries NDC and further institutionalize the MRV framework across Ministries, Departments and Agencies.

Output I: Delivery of the Final ICAT Project Report presenting the overarching institutional arrangements and recommendation in Nigeria's oil and gas sector as well as incorporate the reports from other sectors, for overall national GHG MRV reporting system and design document for Nigeria.

Task IV: Develop Indicator to track Policies and Measures Impacts (Priority Oil and Gas)

The Consultant based on its experience in the Oil and Gas sector will work on assessing existing policy and measure already in place in the sector to aid in the development of NDC indicators. The indicator enhances transparency and will ease tracking of NDC implementation in the Oil and Gas sector. Such indicators include but not limited to,

- Time frame
- Assumptions
- Targets: Example could be a percentage reduction of GHG emissions below a specified base year or Baseline Scenario
- Actions: Example of such could be mitigation actions considered relevant

To further accomplish this task; the current country policy as regards oil and gas operations in the country, the NDC and the Oil and Gas NDC implementation plan will be assessed.

Output J: Prepare report assessing Policies and Measures required to develop NDC indicators/tools for Oil & Gas as well as incorporate the other sectors' reports on the P&M assessment

Task V: Final Report

Workshop preparation and arrangements

Following the completion of major tasks, the Consultant with close working relationship with the project facilitator/coordinator will invite the most relevant stakeholders and actors in the oil and gas sector to a final workshop to obtain their input and facilitate dialogue between the Ministry and relevant stakeholders as specified in the ToR.

A list of potential participants will be forwarded to Ministry of Environment. Once the list has been approved, invitations will be sent out and the invitees will be actively followed-up with. In addition to the invitation to the relevant Government Agency should also be invited to the event. This will ensure "local" ownership of the event and will act as a further incentive for stakeholders to attend.

The Consultant will prepare detailed presentations from the key findings in the Final Report. Emphasis will be placed on audience feedback and participation.

Final workshop:

The final workshop will be attended by the Consultant, who will give presentations related to the performance of the project especially as it relates to the Oil and Gas MRV.

Upon completion of the final workshop, the Consultant working with the Project facilitator/Coordinator will prepare a short workshop report which will take minutes of discussions including achievements, lessons learnt from the oil and gas sector as well as incorporate reports from Road, LULUCF, Agriculture (Livestock and Crops) with recommendations and conclusion. The report will also contain all contact details for the participants.

Final Report

Following the final workshop, the Consultant will finalize the Final Report considering comments from reviewers of the Draft Final Report.

Output O: Participate in the Final Workshop and preparation of the oil and gas components for the Final Workshop report as well as integrating the reports from other sectors under consideration in this assignment.

Output P: Report highlighting key achievements and lessons learnt from the oil and gas sector as well as incorporate reports from other relevant sectors.

2.1.4 Road Transport

It should be noted that the tasks on transport sector (both road and other transport) are closely related with several cross-cutting and data sharing alignments and overlaps, the sub-sectoral activities of road and other transport shall be carried out as a single team hence the outline for the delivery of this project shall be similar.

The expected activities and outputs shall be implemented in line with the project objective and terms of reference as outlined below.

Approach and Methodology

To achieve the objective of the project in this sector will require effective communication and proper data collation. This will be achieved through active consultation so as obtain this strategic information both from the client and most importantly project-related national sources, interested and affected and/or impacting stakeholders. This process will involve a detailed stakeholder analysis, identification, mapping, engagement, recruitment, onboarding, and (ongoing – throughout project lifecycle, management, and feedback – to retain continuing interest and ownership at respective stakeholder level.

It is important to note that since issues on climate change, GHG emissions and mitigation action is not well known in the sector, our approach will be such that enable strategic stakeholders to be identified and effectively engaged in discussions in other to create awareness that will enable the stakeholder to understand the impact of their activities to climate change and focus on ensuring they have a proper MRV in place to address the scenario in their focus programmes.

The work shall be carried out in collaboration with the sector expert from '*Other transport*' to ensure that reporting in the transport sector factors in possible linkages. This will apply to other sectors as well especially in terms of information sharing to maximize accruable data and information cross-benefit value to the project.

The work shall be carried out in the following steps as detailed below:

Scope of the O&G Project Component

Activity 0: Inception phase:

The activities to be carried out at the inception phase include:

- Establishment project framework, dependencies.
- Background (Desktop) literature review
- Stakeholder identification, analysis, and reporting (for engagement facilitation)
- ICAT project work plan detailing and going forward implementation.
- Define project guiding principles.

For the activity on Inception report and workshop the output shall be the following:

Output A: Support the In-Country Project Facilitator/Coordinator during the Inception Workshop; assist with preparation of the Inception Report from the Inception Workshop

Output B: Participation in implementing the detailed work plan for the ICAT project.

Activity 1: Sectoral MRV system review

The activities to be carried out at the Sectoral MRV system review include:
Initial stock-taking, review, and analysis of existing mechanisms / frameworks in the development of similar MRV/transparency initiatives in the country to maximize synergies with other initiatives to avoid duplication of those activities and mobilize appropriate support for identified needs and priorities.

Meetings will be held with data providers and MRV experts involved in the GHG National Inventory compilation and mitigation actions MRV system. Some of the steps that shall be carried out include:

- Research and discussion-based analysis of Challenges & Opportunities
- Focused group discussions to define MRV Status Quo and increase awareness among identified stakeholders.
- Define baseline draft report structure.

The output of activity 1 shall be:

Output C: Sectoral MRV Review (Baseline) Report on Road Transport

Activity 2: Sectoral institutional MRV system development

The activity 1 will provide inputs to establish a sectoral institutional MRV framework. This sectoral approach will focus on the MRV scheme in terms of national GHG inventory (GHG-I) and mitigation aspects. The following steps shall be taken while carrying out this activity:

- Framework gaps - Policy; Prioritization; Resource & Implementation; Performance Monitoring & Evaluation, etc. as applicable
- Data gathering/survey.
- Set up basic, updatable data Repository.
- Define data gaps (available versus desired)
- Define strategic parameters and drivers of change.

The output on the activity 2 shall be:

Output E: Report presenting the new national Road Transport MRV scheme

Activity 3: Overarching institutional arrangements development and recommendation for national reporting system and design.

Sectoral MRV systems will be included in an overarching national MRV system covering all GHG-emitting sectors (i.e., other industrial sectors, industries, Oil and Gas, agriculture, forestry, waste, etc.) allowing Nigeria to report accordingly to international requirements on GHG-I and mitigation actions. Institutional strengthening will take place across ministries, departments, and agencies (MDAs) towards achieving the NDC will be considered as it relates to the transport sector. The following shall be focused on while look at the relevant institutions in transport sector:

- Ongoing review of the establish current institutional arrangements with possible gaps identified.
- Recommendation for an appropriate institutional arrangement.

The output on the activity 3 shall be:

> Output I: Participate in the preparation and responsible for the delivery of the Project Report presenting the overarching institutional arrangements and recommendation in Nigeria's Road Transport sector for incorporation into an overall national GHG MRV reporting system and design document for Nigeria.

Activity 4: Assess Road Transport policy to develop NDC (Nationally Determined Contributions) indicators/tools.

Development of Modeling Tools and Indicators for tracking the NDC Implementation in the Road Transport sector is very critical and will require high level of engagement with the relevant stakeholders.

Some of the relevant steps that shall be taken include:

- Defining key indicators for tracking the NDC Implementation in the Road Transport sector
- Developing MRV framework and Recommendations for the Road Transport sector for the development of an overall national fit-for-purpose MRV toolbox and protocol including (a) process workflow in the development of a fit-for-purpose MRV toolbox, and (b) its corresponding user manual.
- Develop modeling tools.

The output of the Activity 4 shall be:

> Output K: A report assessing P&M (Policies and Measures/P&M) to develop NDC indicators/tools for Road Transport Sector

Activity 5: Sharing of knowledge and lessons learnt.

The steps to be taken under this activity shall include:

- Draft initial draft of the final report to allow for review.
- Documentation of project lessons based on experience and learning outcomes.
- Drafting of Final Report

The output of the Activity 5 shall be:

> Output O: Participation in the preparation of the Road Transport components for the Final Workshop report
>
> Output P: Report highlighting key achievements and lessons learned from the Road Transport sector.

2.1.5 Other Transport Sector

Approach and Methodology
Other transport as defined for the scope of this assignment shall entail the railroad system, maritime and aviation.

Scope of the O&G Project Component

Activity 0: Inception phase

The approach to this task breakdown shall include the following steps:

- Carry out background literature review.
- Identification of the relevant stakeholders
- Detailing of ICAT project work plan
- Participate in the Inception workshop and drafting of the inception report.

The output from activity 0 shall be:

Output A: Support the In-Country Project Facilitator/Coordinator during the Inception Workshop; assist with preparation of the Inception Report from the Inception Workshop
Output B: Participation in implementing the detailed work plan for the ICAT project.

Activity 1: Sectoral MRV system review
The activities to be carried out at the Sectoral MRV system review include:

General overview of the sector, analysis of existing mechanisms and frameworks in the sector or at the very most in the development of similar MRV/transparency initiatives in the country to align it with other initiatives and avoid duplication of similar activities and mobilize appropriate support for identified needs and priorities.

Currently, there is hardly anything in place on MRV but for the purpose of this assignment, stakeholders from all these sub-sectors shall be contacted and key parameters required for the purpose of the tasks involved in this assignment shall be checked to understand how they are currently reported.

During this assignment, meetings shall be held with data providers and MRV experts involved in the GHG National Inventory compilation and mitigation actions MRV system. Some of the steps identified that will be carried out include:

- Desk and field research such as discussion-based analysis of challenges and opportunities
- Focused group discussions to define MRV Status Quo.
- Define baseline draft report structure.

The output on the activity 1 shall be:

Output C: Responsible for the sectoral MRV Review (Baseline) Report on Other Transport.

Activity 2: Sectoral institutional MRV system development

The activity 1 shall provide inputs that will establish a sectoral institutional MRV framework in activity 2. This sectoral approach will focus on the MRV scheme in terms of national GHG inventory (GHG-I) and mitigation aspects. The following steps shall be carried out during this activity:

- Review of framework gaps - Policy; Prioritization; Resource & Implementation; Performance Monitoring & Evaluation, etc. as applicable
- Data gathering/survey.
- Set up basic, updatable data sources.
- Define data gaps (available versus desired)
- Define strategic parameters and drivers of change.

The output on the activity 2 shall be:

Output E: Report presenting the other Transport MRV scheme.

Activity 3: Overarching institutional arrangements development and recommendation for national reporting system and design.

The output in activity 2, the sectoral MRV systems shall be incorporated in an overarching national MRV system covering all GHG-emitting sectors (i.e., other industrial sectors, industries, Oil and Gas, agriculture, forestry, waste, etc.) allowing Nigeria to report accordingly to international requirements on GHG-I and mitigation actions. Institutional strengthening will take place across ministries, departments, and agencies (MDAs) towards achieving the NDC will be considered as it relates to the transport sector. The following shall be focused on while looking at the relevant institutions in other transport sector:

- Review the established current institutional arrangements in other transport and identify gaps as appropriate.
- Recommend appropriate institutional arrangements for other transport.

Our focus shall be to combine the institutional arrangements for the road transport and other transport to have a robust institutional arrangement for the transport sector.

The outcome of the activity 3 shall be:

Output I: Participate in the preparation and responsible for the delivery of the Project Report presenting the overarching institutional arrangements and recommendation in Nigeria's other Transport sector for incorporation into an overall national GHG MRV reporting system and design document for Nigeria.

Activity 4: Assess Other Transport policy to develop NDC (Nationally Determined Contributions) indicators/tools.

To implement this activity, the NDC for the country as focused on transportation shall be reviewed and the key indicators for tracking transport sector shall be identified with emphasis on the other transport outside road transportation.

MRV framework and recommendations for other Transport sector for the development of an overall national fit-for-purpose MRV toolbox and protocol including (a) process workflow in the development of a fit-for-purpose MRV toolbox, and (b) its corresponding user manual will be developed.

The outcome of the activity 4 shall be:

Output L: A report assessing P&M (Policies and Measures/P&M) to develop NDC indicators/tools for Other Transport Sector.

Activity 5: Sharing of knowledge and lessons learnt.

In carrying out activity 5 the following steps shall be taken:

- Draft initial draft of the final report to allow for review.
- Documentation of project lessons based on experience and learning outcomes.
  Drafting of Final Report

The output of the Activity 5 shall be:

Output O: Participation in the preparation of the Other Transport components for the Final Workshop report.

Output P: A report highlighting key achievements and lessons learned from Other Transport sector.

3.0 Execution Plan

The project activity commenced last year October with activity 1.0, specifically focusing on activities 1.1 and 1.2. The National team of consultants worked on; carrying out interviews with some stakeholders and commenced the review of existing national documents and tools.

The inception workshop took place on 8th of April 2021 and a robust engagement with stakeholders. All other activities will therefore follow the other as stated in the figure 2 above. The activities and dates of delivery are indicated in the work plan chart above. Should there be deviation in date of delivery as scheduled above. The team of Consultants through the coordinator will reach out to ICAT Management.

The deliverables, reports and workshops are planned to meet the terms of references.

Figure 3: Adjusted Execution Schedule for the Project Activity

Set up of sectoral MRV systems																		
Proposed Adjustment to the Project Timeline			2020				2021											
Activity	**Output**	**Description**	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
		National experts recruitments																
0.1		Inception workshop																
	A	**Report from the inception workshop**																
0.2		Develop a detailed work plan for the ICAT project																
	B	**Detailed work plan for the ICAT project**																
1.0	C	**Sectoral MRV review report**																
1.1		Carry out interviews with stakeholders																
1.2		Review existing national documents and tools																
2		**Sectoral MRV report**																
2.1		Contribution to set-up the sectoral MRV framework for GHG-I																
2.2		Contribution to set-up the sectoral MRV framework for mitigation actions																
2.3		Workshops for exchanging at sectoral level																
	D	**Report on MRV for Oil & Gas**																
	E	**Report on MRV for Road Transport**																
	F	**Report on MRV for Other Transportation**																
	G	**Report on MRV for Agriculture**																
	H	**Report on MRV for LULUCF**																
3.0	**Overarching institutional arrangements development**																	
3.1		**Propose different options to establish a national system**																
	I	**Report presenting the overarching institutional arrangements and recommendation for national reporting system and design**																
4.0	**NDC (Nationally Determined Contributions) indicators/tools**																	
4.1		**Development of indicators to track P&M impacts (priority: Oil & Gas)**																
	J	**Report assessing P&M to develop NDC indicators/tools for Oil&Gas**																
	K	**Report assessing P&M to develop NDC indicators/tools for Road Transport**																
	L	**Report assessing P&M to develop NDC indicators/tools for Other Transport**																
	M	**Report assessing P&M to develop NDC indicators/tools for Agriculture**																
	N	**Report assessing P&M to develop NDC indicators/tools for LULUCF**																
5.0	**Knowledge Sharing and Lessons Learnt**																	
5.1		Organization of a final Workshop with stakeholders																
	O	**Report of the final Workshop**																
5.2		Summarize key achievements																
	P	**Report highlighting key achievements and lessons learned**																
5.3		Communication																
	Q	**Particpation to an international Workshop– COP26, Glasgow, UK (timing to be refined)**																

4.0 Data Collection Plan

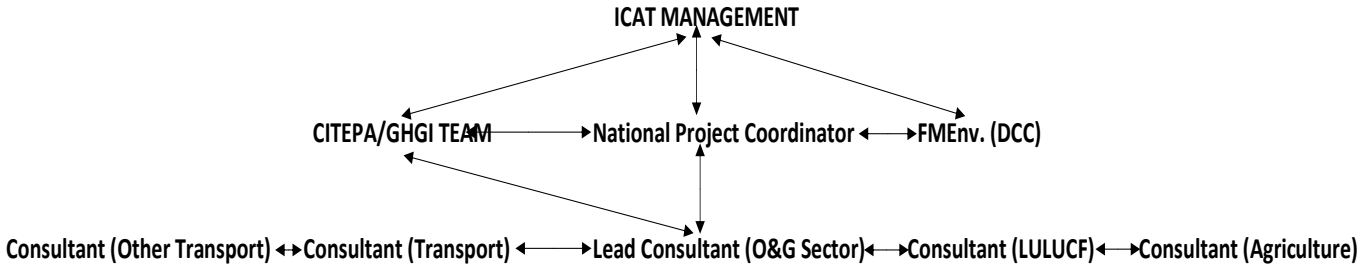
All data and information requests from the public and private sector in the country are requested through DCC who issues letter of request to the respective institutions. The consultants with support from the national consultant will subsequently follow up with the institutions to ensure the required information is received.

5.0 Project Coordination Plan

For effective coordination of the project activity, the Project Coordinator and the National Consultants are guided by the terms of reference and workplan. A monthly meeting commenced from the start of the project activity in October which comprise of the National Coordinator, National Consultants, International Consultants from CITEPA, Experts from GHGMI and the Department of Climate Change (DCC) of the Federal Ministry of Environment.

The reporting structure starts from the national consultants through the lead consultant to the National Coordinator who interphases directly with DCC as well as the International Consultants. The national consultants also have the opportunity of directly communicating with their counterparts (the International Consultants with CITEPA and GHGI).

Figure 4: Project Reporting Structure



6.0 Annexes

Annex I: Minutes of Inception Workshop

The workshop which engaged the presence of all sector stakeholders both physically and virtually presented the ceremonial lunch of the ICAT project which was carried out by the Honorable Minister of the Federal Ministry of Environment (FMoE) ably represented by the Acting Director of Climate Change (DCC), Federal Ministry of Environment Mrs. Halima Bawa-Bwari, and a Technical session where presentations were made by the various sector consultants.

Ahead of the message from the Honorable Minister, the DCC Ag. Director in her message which was delivered by Ms. Asmau Jibril from the FMoE; DCC who is the ICAT Focal Point emphasized that ICAT is aimed at building Nigeria's capacity in implementing the NDC commitment as the numerous impacts of climate change has necessitated urgent steps.

The ICAT project will also help Nigeria set up an overarching institutional arrangement for national reporting; set up sectoral MRV system across three priority sectors (Oil and Gas (O&G), Road Transport & Other Transport and AFOLU). She further mentioned that the project will be implemented by both national and international experts. She emphasized that support from sector stakeholders and consultants is needed to have an effective running of the project.

Dr Henning Wuster, Director, ICAT Bonn, Germany in his remark appreciated the Minister and all stakeholders and consultants for making the project lunch successful. He however emphasized that the project will only succeed through collaborative efforts from all the sectors. He stated that ICAT supports countries in building frameworks for national MRV. He stressed the roles of climate transparency to include:

- Transparency plays a key role in climate issues.
- Helps to keep the overall objective of the Paris Agreement.

He stated that the importance of Transparency include:

- Enables evidence-based policies.
- Facilitates stakeholder's engagement.
- Creates accountability (monitoring and reporting).
- It is essential for the Nigeria NDC targets.
- Support Nigeria in setting up framework for collecting data.
- Develop data sets that will encourage bilateral engagements.
- It will enable transitioning (Energy)

Dr Henning Wuster, stated that the project will be quick and flexible, and adjustments will be made were needed as project progresses. He also mentioned that this project will give rise to several other projects across the nation.
Highlights of the Nigeria ICAT Project and the Implementation Strategy

This section of the workshop was handled by Dr. Bala Bappa, the Coordinating Consultant.
He mentioned that the project will involve various presentations that will present the following:

- General overview and background of the ICAT Project.
- Overview of the work plan.
- The project Terms of Reference (ToR) which was signed in September 2020.

- Consultative meetings with international consultants and managements.
- Develop Need and Gap Analysis and present reports and develop Policies and Measures (P&M)

The project duration is scheduled for 12months and the project scope will cover the Oil &Gas, Agriculture (AFOLU), Road Transport and other Transport sectors.

Other workshops aside from the Inception workshop will include:

- Validation and Peer Review which will entail the collation of all sector reports and will be distributed to all Stakeholders for comments and review.

Deliverables:
The project deliverables as mentioned shall include:

- Inception workshop report.
- Detailed work plan for the entire project.
- Report on MRV Review/Need and Gap Analysis.
- Sectoral MRV reports
- NDC Indicators and P&M
- Final Report to reflect all the sectors.

Reactions/Comments and Questions

The ceremonial session ended with reactions, comments, and questions from participants.
Mr. Innocent Onah from African Development Bank (AfDB) suggested that high level discussion such as this meeting and deliberations should include financial institution at least the Central Bank of Nigeria (CBN); so that they will be fully carried along. He however congratulated Nigeria on the ICAT project lunch.

Another participant, Mr. Francis Binuyo requested to know how much projects triggers national development. He was answered that a lot of projects trigger national development.

Ms. Asmau Jubril gave the vote of thanks to round up the ceremonial session which was immediately followed by the photo session and tea break.

TECHNICAL SESSION

In this session of the Inception workshop, stakeholders and consultants from the various sectors delivered presentations on that covers the sectors they represent.

Presentation 1: Development of National MRV System Institutional Setup: Overview
Presenter: Mrs. Chioma; NDC Desk Officer FMoE, DCC.

The presentation presented an overview of the institutional setup of national MRV systems. Key highlights from the presentation include:

- Gap analysis done by the DCC in 2018 after the NDC submission in 2015; through the gap analysis, it was realized that MRV is very important.
- The 2015 NDC is focused on 5 sectors.
- Highlighted MRV set up and the major MRV drivers which include GHG emissions, Mitigation, and Support.
- Institutional set up approach (top down and Bottom-up approach) used in the seven MRV sectors.

The presentation also highlighted the roles of the DCC which includes:

- Planning.
- Identifying all institutions involved in the MRV setup.
- Allocate responsibilities.
- Develop schedules; etc.

Mrs. Chioma mentioned that QA/QC must be included in the MRV process to have a robust MRV. Also, all stages of sustainable institutional setup must be put in place to have a robust MRV.
According to her, the 2016 capacity building came up with the National MRV institutional setup. There is also a proposed official setup going forward. The essence of the setup is for easy coordination.

On ambitious NDC for Nigeria, she stated the following:

- NDC need to be communicated/ updated.
- Timeline is 2030. Nigeria is obligated to update her NDC in 5 years cycle.
- Five sectors were in the 2015 NDC. However, the new NDC will integrate new elements like the green energy, circular economy among others in alignment with sustainability and international goals.
- National green bond was launched in 2 sectors.
- The process of updating NDC (sectors with more emissions) will be based on progress trajectory.
- Nigeria NDC is based on BAU scenarios.
- 63 mitigation measures are identified in the new NDC; however, this can be expanded.

She concluded her presentation by stating that presentations will be made on key priority areas of the project work plan including the implementation strategy, stakeholder consultations, report analysis among others.

Reactions/Comments and Questions

Reactions after the presentation are highlighted as follows:

- Question 1: On-going NDC review now captures water and waste sectors. Going by our structures in Nigeria, how do we intend to capture these sectors in the new NDC?

- Question 2: What about pocket solar installations, what is the DCC doing to capture them?

- Question 3: from Mr. L D Taiwo (OAU, Ibadan): How does the DCC influence other institutions in terms of data gathering?

- Question 4: Between 2015 and now, what impacts has mitigation actions made in the country?

Reacting to the questions, Mrs. Chioma Edeh stated that much has not been done on the issue of data for waste/water sectors however, this is still a work in progress.
Assessment of mitigation actions on water reserves in the country is also a work in progress. On Solar pocket installations by the private sector, she stated that private sector will not be left out.

Presentation 2: Presentation on key Priority Areas of the Project Work Plan
Presenter: Dr Julien Vincent from CITEPA

Dr Julien started his presentation by highlighting on the importance of the Enhanced Transparency Framework (ETF) Article 4 (mitigation) and Article 13 (Transparency (MPGS)) of the Paris Agreement. He highlighted that the Annex contains eight chapters (introduction, National Inventory report etc)
He mentioned that timelines are indicative for moving towards ETF. He further said ''flexibility does not mean that efforts will not be made towards closing gaps.

After his presentation on the international Framework, he moved on to talk about the project activities.

- Activity 1: Sectoral MRV system review: This activity will carry out gap analysis to know what must be put in place.
- Activity 2: Sectoral institutional MRV system Development: the need and gap assessment will provide inputs to establish a central institutional MRV Framework.
- Activity 3: Overarching Institutional Arrangement development/ recommendation for National MRV.
- Activity 4: Policies and Measures Assessment to develop NDC indicators/ tools. Dr Julien mentioned that ICAT has a lot of technologies for Agriculture sector; these tools can be used if they apply to the Nigeria NDC.
- Activity 5: Sharing knowledge/ Lessons learnt during the project activity.

He concluded by saying the ICAT project will end 2021.

Annex II: Minutes of Syndicate Meeting, List of Participants and Sectoral Stakeholders

Report of the Stakeholder Consultation and Syndicate Session for the Agriculture (Crop & Livestock) and LULUCF
The LULUCF, Crop and Livestock components of the project have the same stakeholder groups, and this led the lead consultants to engage the stakeholders simultaneously in one group meeting.

The session opened at 2:30 pm with introductory remarks from the LULUCF consultant Stanley Ijeoma, who gave a brief description of what the ICAT Nigeria sought to achieve which included setting up a robust sectoral MRV system and sustainable GHG data management system, sector-specific indicator tools, etc. Specific objectives of the project were disclosed by Chinonso Agbo, the Crop and Livestock consultant. These included:

- Carrying out a review of the LULUCF, Crop and Livestock sectors in terms of GHG inventory and mitigation actions (relevant actors involved, availability/credibility of data, QA/QC, tools, and archiving systems, MRV capacity in the country, etc.)

- Providing input into an internal Nigerian reporting scheme towards developing the national institutional setup, clarifying an urgent need to get relevant stakeholders in the field to share data and facilitate inter-ministerial/agency exchange.
- Developing an overarching institutional arrangement for the LULUCF, Crop and Livestock with recommendations for a robust national reporting system and design.
- Assessing policies and measures to develop NDC indicators/tools for the LULUCF, Crop and Livestock.

The consultants stressed the need for a clear road map to be created to ensure increased stakeholder participation and seamless inputs throughout the project implementation phase and beyond. The consultants emphasized that the syndicate session was the first level interaction that will create rooms and open windows for further engagements as the project progresses.

The meeting opened for interactive questions and feedback session from participating stakeholders after introductory remarks of LULUCF, Crop and Livestock consultants.

The first comment came from Mrs. Gloria Njor from the Nigerian Environmental Study Action Team (NEST) who wanted to know the current landscape of emission within the country, specifically asking: are there reference policy documents that can give such clarity?

The LULUCF consultant responded by giving clarity on the Third National Communication (TNC) which is the most recent document submitted to the UNFCCC that discussed the national circumstance within the AFOLU sector as part of Nigeria's fourth National GHG Inventory.

The representative of the Federal Ministry of Works and Housing Mr. Kufre Ukpong intervened by saying that his participation in the workshop has expanded his knowledge and perspectives about the impacts that land clearing for road transportation and housing infrastructure have on the GHG emissions stock of the country via the shrinking of the emission-sinking capacity of the country. He promised to make himself available for further engagements as the project implementation progresses.
Thereafter, Anjour Joseph from the Federal Ministry of Agriculture and Rural Development (FMARD) lamented the gap in data within the Department of Livestock and Animal Husbandry Services of FMARD which he tagged existing data as obsolete. He harped on the need to develop the needed tools for tracking emission within the livestock sector one of which is standard national livestock census as the main platform upon which all other data generating activity in the livestock sector rests. He harped on the urgent need for investments and resources to be channeled towards implementing a robust national livestock census as soon as possible to replace the last one that was done in 1992. Ideally, a national livestock census is an important activity that should be done every decade. For Nigeria, this critical activity is overdue by two decades and this needs to be urgently fixed.

Dr. Jude Nwafor Eze from the National Cereal Research Institute (NCRI) revealed the work his institute is currently doing in GHG emission reduction like the introduction of agroforestry in cereal crop production even though the impact of such activity is difficult to track as there exists a knowledge gap in this area. Other changes in cultural practices like manure management system, transition from inorganic fertilizer to organic fertilizer sources, and other farming systems designed to reduce emission from the sector. He concluded by lamenting setback lack of investment in designing tools to track these changes.

Prof. L.B Taiwo from the Institute of Agricultural Research and Training (IAR&T) appreciated the ICAT Nigeria MRV Systems initiative as coming at the right time for the Agriculture sector. He further emphasized the need for capacity building and training, engaging research students to help gather some of these technical data in the

field or adoption of NGO's working in the field of climate change in driving some of these activities which can help in data collection and archiving. He further stated that the robust participation of the institutes of animal and soil science that sets standard of operation in the sector will also play a key role in the project.

Dr. E. I Nwanguma from the National Institute for Horticultural Research (NIHORT) emphasized the need for investments in generation of credible database rather than estimations which is the current practice in the country. He said the agencies and ministries that work directly with the farmers (data sources) should be empowered through a legal framework and capacity building at national and subnational levels to help in sustaining the institutional framework that will be designed at the end of the project. This will help in bringing clarity of role and responsibilities, reporting structure and time for each phase. Expected data, and quality assurance at the lowest levels of interaction.

Due to time constraints, the session ended after 25 minutes even as more participants were eager to contribute to the session, but the consultants assured them of a continuation of the engagement via virtual and face to face engagements as relevant and possible.

At closing, the session came up with some key recommendations from the stakeholders identifying:

- Urgent need for further training and capacity building within the sector to understand the specific types of data needed during data collection, processing, reporting, and archiving.
- Necessity for a robust legal framework to be built into the sectoral MRV system to help define roles and responsibilities among the participating MDA's and reporting structure.
- Need for development of sector-specific tools for tracking, recording emission data in the field.
- Need for the facilitation of seamless inter-agency collaboration to ensure easy flow of information among the participating MDAs.

The meeting was adjourned by 3 pm local time and the participants moved into plenary to continue with the rest of the workshop program where the LULUCF consultant Stanley Ijeoma made a presentation of the summary of the LULUCF, Crop and Livestock syndicate session to the plenary.

Figure *5:* LULUCF Crop and Livestock Stakeholders Syndicate Session jointly anchored by LULUCF Consultant Stanley Ijeoma and Chinonso Agbo for Crop and Livestock Consultant.

Pages 39 – 42 have been removed from this version as they contained personal information.

Oil and Gas Sector

The need for the syndicate meeting is for the sector's consultant and stakeholders to rub minds on issues of concern across the sector and to proffer solutions and the way forward. The syndicate meeting started with the Sector's consultant Engr. James Ogunleye presenting very critical questions that made the subject for the discussion.

Key questions raised for discussion are:

- How is data collated with the O&G sector?
- How does data get to DPR?
- How does DPR do QA/QC of the data?
- How is downstream data collated?
- How is segregation done for offshore and onshore production data?
- How does the sector play in such a way that DPR is not overstretched?
- How does country/sector go forward on the issue of EFs? Need to determine EF for the country/Sector.

Reactions:

Mr. Muhammad Ibrahim Ilo from the DPR mentioned that they are the custodian of data. Data reconciliation (Measurement at well ends) is usually carried out with companies and calibrations are properly carried out by third party verifiers.

Also, annual reconciliation of volume and tracking of oil spill volumes is done with all parties involved during reconciliation. He furthered mentioned that records of gas production, flare gas, routine / operational flare volumes are also reconciled. This includes the downstream records as well.

On EF, DPR requires companies to send inventory of CO2 and other combustion emissions but for now, there is no harmonized EF. He mentioned that work is on-going on the CoMAT. There is an internal inventory, but operators are also required to send in their information. Data will be inputted into the CoMAT model. He mentioned that process just started last month; DPR is still waiting for input from all the Stakeholders.

Question: Engr. James Ogunleye requested to know how Marginal/independent producers report their data.

Mr. Muhammad responded that marginal/independent producers report their data (flaring/ internal combustion/ leakages) on a quarterly basis.

Engr. Agube stated that there is need to convey workshop among all sector players to brainstorm on data management and to reconcile on some certain issues such as nomenclature. He stated that the use of different nomenclature between the NNPC and the DPR need to be addressed. He also stated that DPR data covers a wider range of data while the NNPC focuses only on data of concern.

The staff from Ministry of Petroleum Resources requested to know if emission data of power gas plants are counted for the power plants or the NGC.

Mr. Muhammad replied that the emissions are not counted for the NGC as the Power industries are the ones expected to report emissions from Power Sector. He was seconded by his colleague who is also from the DPR Mr. Sule Kabir Abubakar.

Question: Engr. James Ogunleye requested to know who is responsible to checks emissions from LNG. He was replied that DPR is responsible for checking emissions from LNG.

Next Steps:

- Have a local meeting with all stakeholders and industry players to agree on nomenclature and other basic issues.
- Have a workshop that will involve international experts to discuss the MRV work in details.
- Compile list of stakeholders that are also relevant to O&G work who are not at the meeting.

Mr. Muhammad Ibrahim Ilo presented the summary of the discussions from the syndicate meeting to all the workshop participants.

Figure 6: O&G Stakeholders Syndicate Session anchored by Engr. James Ogunleye

Pages 45 – 46 have been removed from this version as they contained personal information.

Road Transport and Other Transport Sector

Transport (road and Others) Stakeholders' Syndicate Discussion

During the syndicate discussion, transport subsector acknowledged that it is the biggest and the broadest of all the sectors. The highlight of the project was given in the context of transport sector stakeholders' responsibilities in the implementation of the project.

The stakeholders highlighted the need for the coordinators of the project to understand the importance of the maritime subsector in terms of GHG emission. There is a need to zero-in maritime as it is done in road transport subsector. During discussion, a serious disconnect between the relevant institutions and the FMEnv. has been noted by some participants which affects the flow of information. Another issue noted was the need to have all data reported through FMEnv. to avoid double counting of datasets.

The key recommendations are as follows:

- All data on the sector should be reported through the FMEnv to avoid duplication of datasets.
- There is need for more interactions by the various stakeholders at different levels of the project.
- Maritime and rail subsectors are very critical and should be zeroed in the project as sectors (not subsumed into 'others' category).

Figure 7: Transport Stakeholders Syndicate Session anchored by Mr. Kazeem Sanusi

Table 5: Attendance list: Transport Sector Syndicate Session ICAT Inception Workshop

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