



**FACILITATIVE
SHARING
OF VIEWS
(Second BUR)**

NIGERIA

**6 JUNE 2023, BONN
GERMANY**

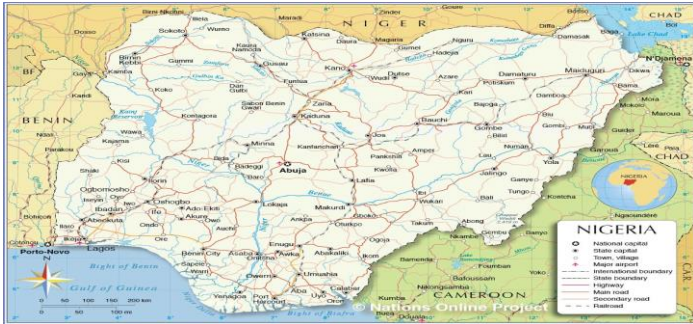


OUTLINE

- **National Context**
- **GHG Inventory**
- **Mitigation Actions and Effect**
- **Barriers and support needed and received**
- **ETF transition and implementation**



National Context



Location Coordinates:

- Extreme of Gulf of Guinea
- West Coast of Africa
- Latitude: Between 3°15'to13°30'N
- Longitude: Between 2°59'to15°00'E

Landmass and Population:

- 923,768 square km – 14th Largest in Africa
- 218.5 million population

Climate:

- Low-land Humid Tropics
- High Temperature – year round
- From Wet Coastal Area – rainfall >3,500 mm
- To Northwest and Northeast Sahel Region – annual rainfall < 600m

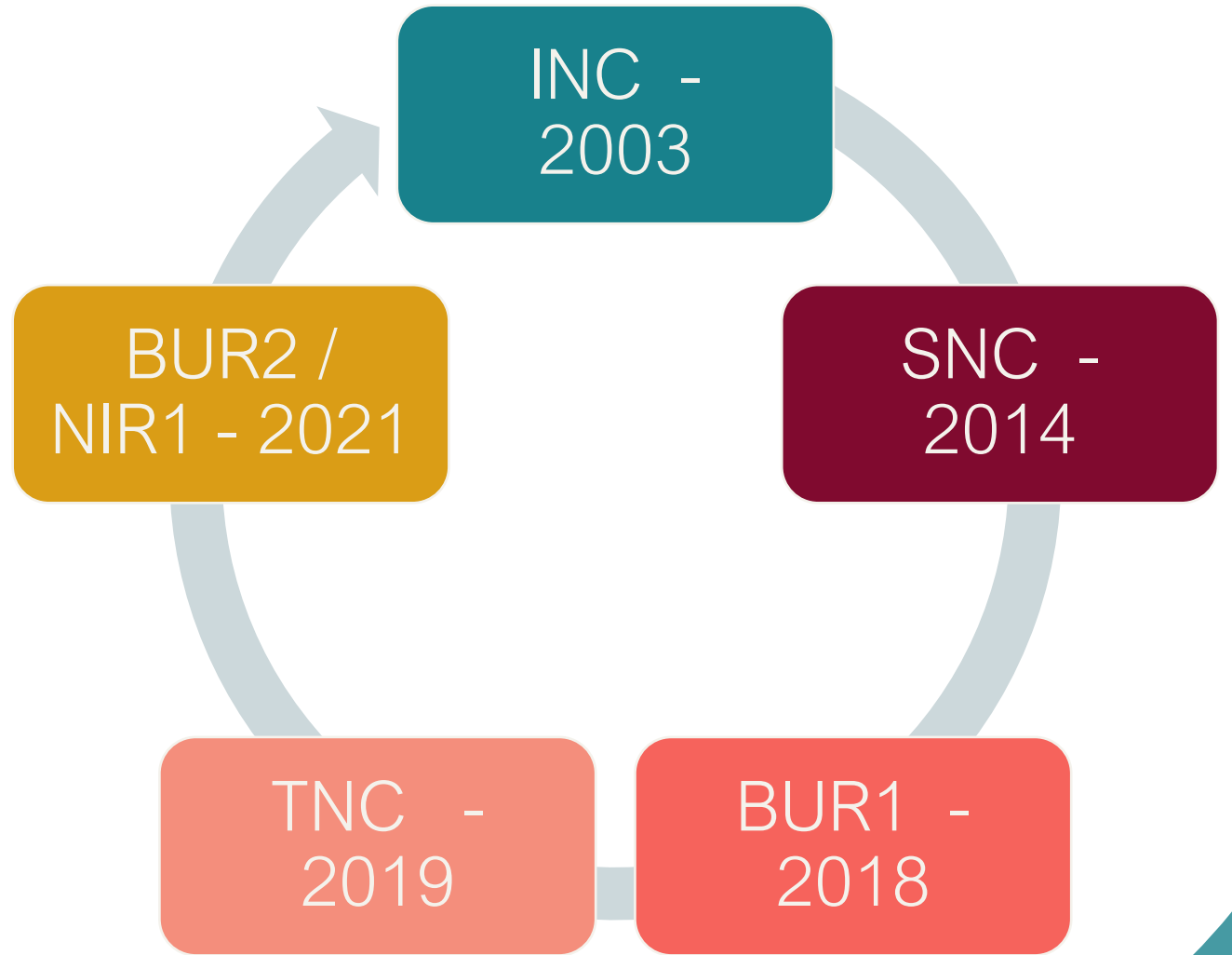
Economy:

- Heavily Dependent on Oil & Gas
- 90% Export on Oil & Gas



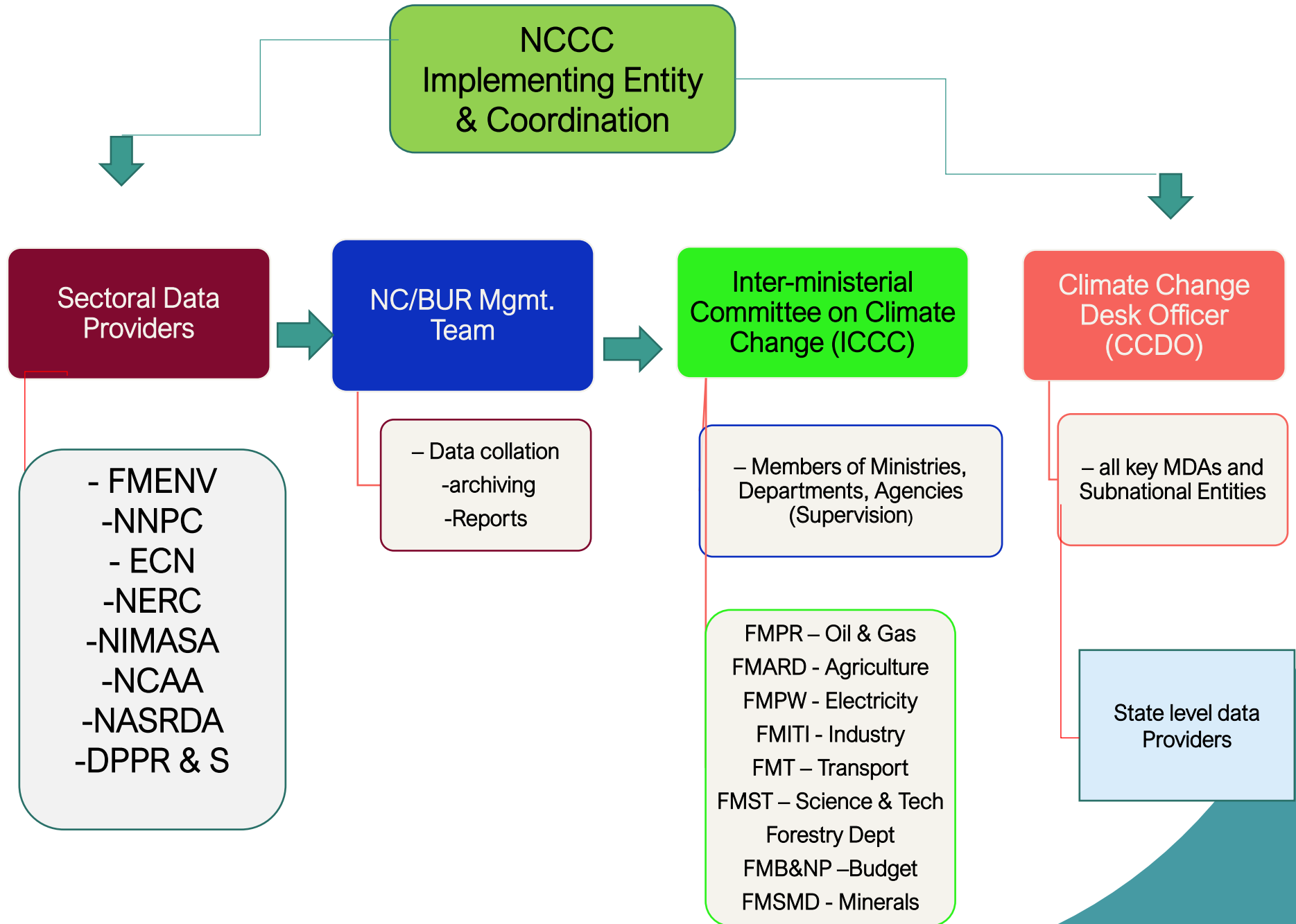


Reporting Under the Convention



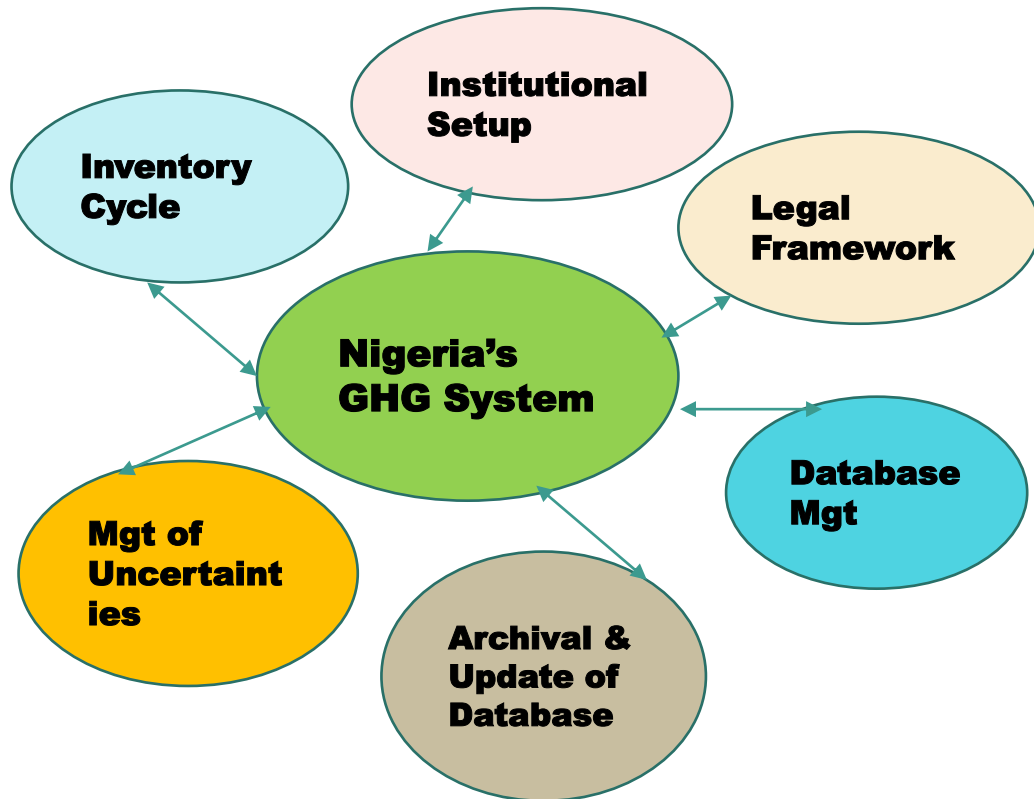


Institutional Arrangement





GHG Inventory



- **Nigeria GHG Trend**

- **Estimates from 2000-2017**

- **From 4, IPCC sectors:**

- **Energy * IPPU * AFOLU * Waste**

- **Emission Compilation**

- **2006 & 2007 IPCC Guidelines, IPCC Good Practice Guidelines (GPG), Uncertainty Mgmt.**

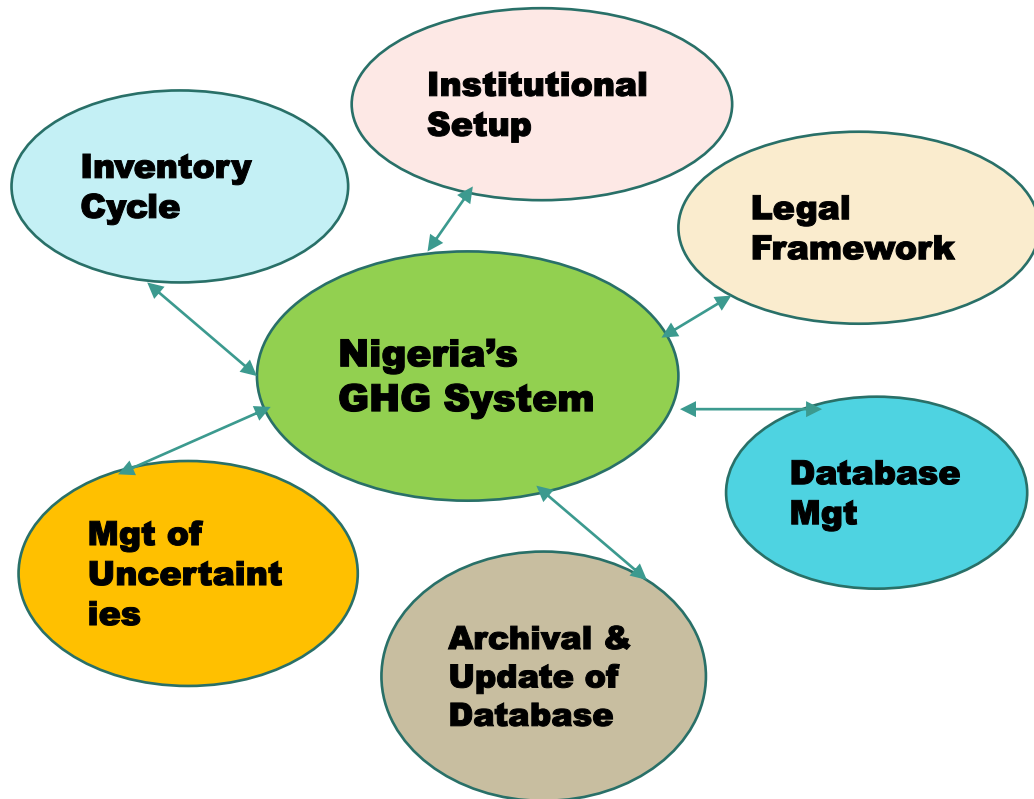
- **TACCC Assurances**

- **Tier 1: Using IPCC default emission factors (EFs)**

- **Data Source: National and Int'l Institutions / High priority for In-country generated data**



GHG Emission Result

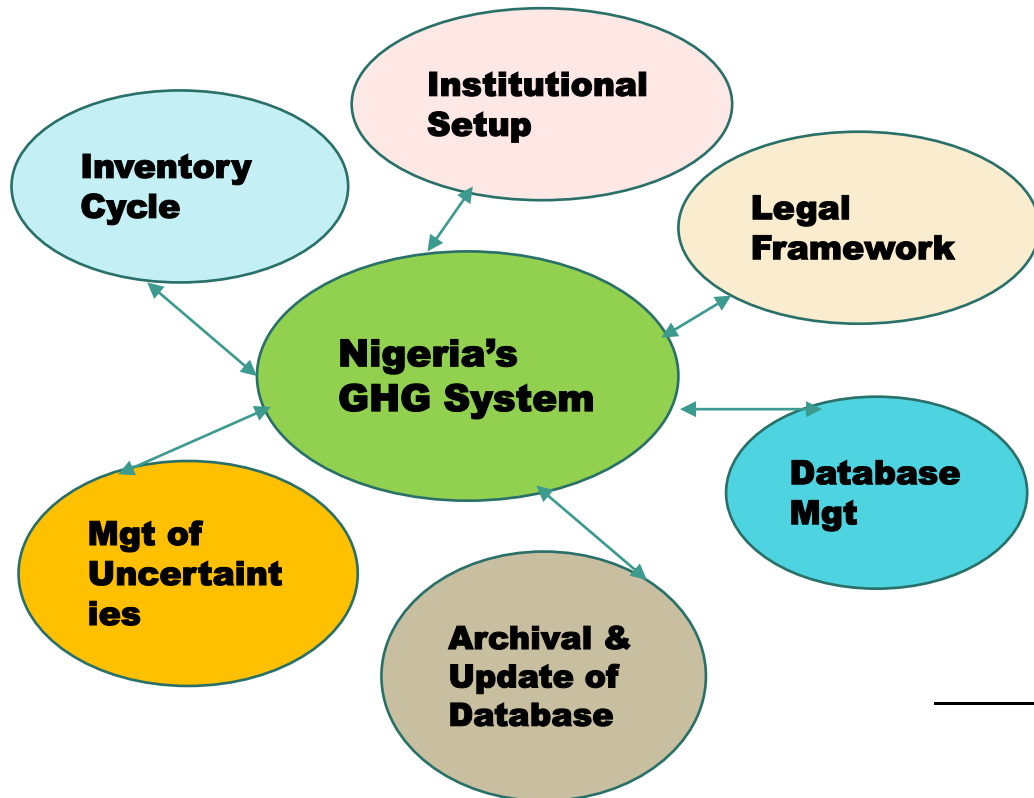


Nigeria GHG Estimate from 2000 - 2017

Sector	Emission (Gg CO ₂ -eq)	%
AFOLU	389,790	57
ENERGY	245,918	36
IPPU	11,618	1.7
WASTE	30,857	4.5
TOTAL	678,183	99.2



GHG Emission Result



Nigeria GHG Gas Estimate for 2017

<i>Gas</i>	<i>GHG emissions (Gg CO₂ eq) including land and HWPⁱ</i>	<i>% change 2000–2017</i>	<i>GHG emissions (Gg CO₂ eq) excluding land and HWP^{Error! Bookmark not defined.}</i>	<i>% change 2000–2017</i>
CO ₂	458 341	57.7	142 913	258.8
CH ₄	182 686	23.4	182 686	23.4
N ₂ O	32 614	64.5	32 614	64.5
HFCs	NA	NA	NA	NA
PFCs	NA	NA	NA	NA
SF ₆	NA	NA	NA	NA
Total	673 641	46.0	358 213	72.4

ⁱ 2006 IPCC Guidelines AFOLU category 3.B (land) and, if reported, 3.D (HWP (3.D.1) and other emissions (3.D.2)).



Nigeria Mitigation Action Priority Sectors



Sectoral Mitigation Measures

Sectors	Measures
Energy (Energy Industries)	Penetration of Renewable Energy to the electricity Grid
Energy (Oil and Gas production)	Elimination of flaring of associated gas in the Nigerian oil and gas sectors
Energy (Industry and residential)	Energy Efficiency Measures <ul style="list-style-type: none"> • Combined Heat and Power (CHP) Program • Penetration of Rooftop Solar PVs for Off-grid power generation • Cooking fuels switch • Efficient Fuelwood Cookstoves Program
Energy (Transport)	BRT Transport Program
AFOLU (Land)	<ul style="list-style-type: none"> - Major anthropogenic GHG contributor. - Forest management (Afforestation, reforestation)



Nigeria Mitigation Action Priority Sectors



Sectoral Mitigation Measures Cont'd

Sectors	Measures
Waste	<ul style="list-style-type: none"> • Integrated solid waste management systems • Efficient waste water recycling plants • Efficient and effective solid waste collection system • Controlled and engineered

Nigeria Mitigation Actions – Policies and Projects

S / N	Name of Action	Objective	Sector/Type	Gas	Status/Outcome	GHG reductions (Gg)
1	National Climate Change Policy (NCCP)	Foster low-carbon high economic growth and build a climate resilient society	Policy	CO₂, CH₄ N₂O	Revised 2021 Implemented	N/A
2	National Renewable Energy and Energy Efficiency Policy	Strengthen penetration of renewable energy and improve energy efficiency (EE) in the country	Policy-Energy Efficiency	CO₂	Implemented	N/A
3	Large Scale Hydro Power Project	Enhance hydropower development through the construction and rehabilitation of Six (6) dams for electricity generation	Project-Renewable Energy	CO₂	Ongoing	6 Projects;-12,237 Gg CO₂ -eq/yr
4	Adopt clean cook stoves	Reduce emissions via increased combustion efficiency of firewood using clean cook stoves	Project-Energy Efficiency (Residential)	CO₂, CH₄ N₂O	Ongoing	90,054 Gg CO₂-eq/yr as from 2025 when 30 million stoves distributed
5	Federal Ministry of Environment: Solid Waste Program Intervention	<ul style="list-style-type: none"> Implement integrated solid waste management including medical waste, promote recycling and Construction of Integrated Waste Management Facilities in 41 states 	Project-Solid waste management	CO₂, CH₄ N₂O	Ongoing – 11 states out of 13 identified	TBD

Nigeria Mitigation Actions – Policies and Projects – Cont'd

S / N	Name of Action	Objective	Sector/Type	Gas	Status/ Outcome	GHG reductions (Gg)
6	Recovery of associated gas that would otherwise be flared at Kwale oil-gas processing plant, Nigeria	The capture and utilization of majority of associated gas previously sent to flaring at the Kwali Plant (Kwali OGPP)	Energy – Reduce flaring (CDM Project)	CO₂	Successfully Completed & Extended	1497
7	Afam Combined Cycle Gas Turbine Power Project	Produce a 650MW grid - connected combined - cycle gas turbine CCGT fuelled by natural gas. Electricity generation.	CDM Project, Energy (renewable sources)	CO₂	Successfully Completed & Extended	550
8	Solar Mini-Grids for selected Federal Government Buildings	Installation of solar mini grids to supply 0.75 MW electricity to a number of federal government buildings	Energy – Institutional / Renewable Energy	CO₂, CH₄ N₂O	Planned	867.24
9	Trans Nigeria Gas Pipeline (TNGP)	Capture and utilize about 2.7 billion SCFPD (SCF per day) gas across southern Nigeria up to the Northern parts of the country (AjaokutaKaduna-Kano (AKK) & Calabar-Ajaokuta Pipe	Energy – Reduce flaring	CO₂	Planning Stage	TBD



Support received & needed (finance, technology, capacity-building)

- **Support Received**

- **Financial:-**

- **GEF provided USD 352,000**

- **UNDP – USD 50,000 – Complementary funding as GEF Implementing Agency for BUR2**

- **Capacity Building:-**

- **UNFCCC - training and workshops on the use of IPCC software**

- **International Consultant – Training and workshops on the development of GHG inventory for BUR2**



Support Needed (finance, technology, capacity-building)

S/N	Type of Support	Description of Support Needed	Purpose
1	Financial, Capacity Building	Improve capabilities for reporting to the Convention	Produce quality up to date NCs and BURs
2	Financial, Technical Assistance	Stop charcoal use	Reduce deforestation and emissions while increasing sinks
3	Financial, Technical Assistance, Capacity Building	<ul style="list-style-type: none"> - Climate Smart Agriculture - Develop a sustainable GHG Inventory Management System - Develop emission database 	<ul style="list-style-type: none"> - Avoid emissions, sustainable agriculture production and food security - Improve quality of GHG inventories and quantify emissions avoided - Produce baselines for developing mitigation actions
4	Technology Transfer Capacity Building, Financial, Technical Assistance	<ul style="list-style-type: none"> - Multi-cycle power stations and scalable power station 20-50 MW - Develop Gas-to-Power Plants at Gas Flare Sites (micro grid) - Improve electricity grid - Reforestation - Development of renewable energy technologies, power projects & Mgt 	<ul style="list-style-type: none"> - Improve access to electricity - Reduce emissions - Increase accessibility to electricity - Increase sink capacity through sequestration of CO2 - Increase the share of renewable energy, particularly decentralized systems
5	Technology Transfer Capacity Building, Financial, Technical Assistance	<ul style="list-style-type: none"> - Develop urban transit systems - Modal shift from air to high-speed rail - Moving freight to rail - Upgrade roads - Increase use of CNG and LPG for transport 	<ul style="list-style-type: none"> - Reduce fossil fuel consumption & emissions - Diversification of the economy



Support Needed (finance, technology, capacity-building) Cont'd

S/N	Type of Support	Description of Support Needed	Purpose
6	Technology Transfer Capacity Building, Financial, Technical Assistance	<ul style="list-style-type: none">- Develop National emission factor for various sectors- Develop a guide for net-zero carbon building in Nigeria	<ul style="list-style-type: none">- Reduce dependence on international generic figures and improve the accuracy of national inventory data- Improve energy efficiency in buildings and reduce use of fossil fuel
7	Technology Transfer Capacity Building, Financial, Technical Assistance	Gas flare capture and utilization technologies	Emissions reduction
8	Financial, Technical Assistance and Capacity Building	Establish a Landfill gas capture technology for existing and new sites	<ul style="list-style-type: none">- Construct methane capture systems on existing landfills and ensure that new sites will have this facility installed



ETF transition and implementation

- **Nigeria has transitioned to the ETF**
- **Strengthened Institutional Arrangement of relevant MDAs by assigning roles & responsibilities at national & sub-national level**
- **Enhanced capacity of data providing institutions, however more support is needed in terms of training.**
- **Received GEF approval to implement a BTR1 & combined BTR2/NC4**
- **Nigeria's BTR1 and NC4 is currently being implemented.**
- **Expected time of submission to UNFCCC is June, 2024**



Measures to Achieving Nigeria's Net-Zero Emission Target

- **Targets significant socio-economic transformation in Nigeria.**
- **Could result in emission reduction of about 174.01 million metric tons of CO2 equivalent by 2030.**




1. **A strong focus in generating renewable electricity both on- and off grid (minimum of 30% of on-grid electricity from renewables).**
2. **Elimination of diesel and gasoline generators for electricity generation by 2030. Expand access to off-grid and under-the-grid clean electricity.**
3. **Plant 300 million trees [this decade] and promote agro-forestry, reforestation, and afforestation, including community-based forest management and recovery.**
4. **End (associated) gas flaring by 2030**
5. **Reduce wood cooking from the currently 72% of population to 20% of population by 2030 / introducing clean cooking into 30 million households**
6. **Embark of the construction of 300,000 green homes in the next 12 months, and 1.5 million over the next 5 years.**





Measures to Achieving Nigeria's Net-Zero Emission Target - Cont'd

- **Targets significant socio-economic transformation in Nigeria.** 
- **Could result in emission reduction of about 174.01 million metric tons of CO2 equivalent by 2030.**

7. A modal shift in transport - a shift of passengers to Bus Rapid Transport (BRT); backed up by enforcement of emissions standards in vehicles.

8. End landfilling of untreated waste, transit into properly designed and managed landfills with state-of-the-art gas collection.

9. Increase the amount of irrigated land hectare (ha) using RE for pumping from 24.35% to 100% (and an associated increased use of off grid power in communities)

10. Consistent economy-wide Energy Efficiency improvements (-50% from 2015 baseline). Examples are reducing electricity transmission losses and replacing 4 million incandescent bulbs with Tubular Fluorescent Lamps (TFLs) or Light emitting Diode (LEDs), equipment standards.

11. Landscape-scale restoration and recharging of the Lake Chad basin



Written Questions and Answers

S/	QUESTION & Category	RESPONSE
1	<p>Question by European Union Category: Mitigation actions and their effects In its Second Biennial Update Report, Nigeria explains that information on mitigation actions and their effects is limited because there is no centralised system of reporting or data collections. Could you briefly elaborate possible enabling conditions which would help setting up such a data collection system?</p>	<p>Nigeria's system of data collation is the National Bureau of Statistics, where several data is stored and is required to be sorted and analysed to determine the relevant data needed. Acknowledging this challenge, a GHG Inventory Management system was established where relevant data is collated and stored by the established climate change desk officers at the various Ministries, Departments and Agencies (MDAs). Data/information received from these MDAs are sent to the GHG-IMS.</p>
2	<p>Question by European Union Category: Constraints/gaps, and related financial, technical and capacity building needs, including support needed and received Nigeria provides detailed information on support received, including details on financial support received at the project level. Which arrangements allowed Nigeria to systematically collect and report this information? Would you have any recommendations for other countries that have difficulties reporting this information?</p>	<p>Nigeria conducted an assessment on climate change financial flows received between 2012 and 2016 and still ongoing. They are categorized according to domestic and external contributions, the former which consist primarily of budgetary allocations by the Nigerian Government, and the latter, resources from external and or international sources that were received through multilateral and bilateral including the Global Environmental Facility(GEF) channels. Recommendation would include the need to ensure proper documentation and linkages with related fund receiving organisations to enable synergising tracking and reporting.</p>
3	<p>Question by European Union Category: National GHG inventories In chapter 5.2 of its Second Biennial Update Report, Nigeria elaborates on its constraints in the area of the GHG inventory. Nigeria explains that it has started the development of a robust greenhouse gas management system. Which are the main barriers which Nigeria currently faces in this area, and how could they be overcome?</p>	<p>Insufficient good quality activity data is one of the barriers and the available data are relatively inconsistent for all IPCC sectors. This constraint resulted on international data sources and generation of missing activity data to fill the gaps when estimating GHGs emissions and sinks within the country. Challenges for GHG-IMS include, financial; funding for required infrastructure, technical; poor internet bandwidths and power supply, manpower; poor technical capacity of personnel to manage the system.</p>

Written Questions and Answers

S/	QUESTION & Category	RESPONSE
4	<p>Question by Japan</p> <p>Category: Mitigation actions and their effects</p> <p>Nigeria has a national SLCP Plan, which promotes the use of modern fuels for cooking, replacement of traditional cookstoves, and replacement of kerosene lamps with solar lamps (Kerosene lighting replaced by solar lamps by 2022) to reduce SLCPs from the residential sector. These measures are significant because they contribute not only to climate change mitigation but also to the reduction of health hazards for residents. Could you share the progress of these measures?</p>	<p>Implementation of the various measures identified in the Nigerian Action Plan to reduce Short-Lived Climate Pollutant (SLCP) include:</p> <ul style="list-style-type: none">- continuous engagement with the different governmental bodies related with the different 22 mitigation measures such as Ministries for Transport and Petroleum. While also sharing annual reports with the Federal Ministry of Finance, Budget and National Planning alongside the Office of the Secretary to the Government of the Federation.- Nigeria joined the Global Methane Alliance in 2019. Countries who join the alliance commit to absolute methane reduction targets of at least 45% by 2025 and a 60-75% reduction by 2030.- Methane guidelines have been developed in collaboration with the National Upstream Petroleum Regulatory Commission (NUPRC)-Rapid sensitization activities continues on the use of efficient cookstoves which was distributed across the geo-political zones of the country by both government and NGOs/CSOs. Solar is used amongst several households and in urban buildings across the nation.- Through the Clean Energy Transport scheme, some individuals, companies and government have started to convert cars and urban bus mass transits to Energy efficient buses and vehicles.- a draft Clean cooking policy has been developed in collaboration with a coalition of NGOs.- The Energy Transition Plan indicates a shift to carbon neutral cooking

Written Questions and Answers

S/	QUESTION & Category	RESPONSE
5	<p>Question by Japan</p> <p>Category: Mitigation actions and their effects</p> <p>The Renewable Energy Master Plan (REMP), shown on page 52 of the BUR2, sets targets for power generation using biomass, solar, hydropower, and wind, and aims to increase the share of renewable energy from 13% in 2015 to 36% in 2030. Specifically, which types of renewable energy are planned to increase and by how much? Could you share them if there are more detailed targets?</p>	<p>REMP seeks to increase the supply of RE from 13% of total electricity generation in 2015 to 23% in 2025 and 36% by 2030.</p> <p>The purpose is to develop new generation plants using RE instead of natural gas, that is 45% generation efficiency for natural gas, 95% generation efficiency and 70% availability of hydro.</p> <p>The co-benefit of this mitigation action, stimulates economic growth and employment, raise standard of living in rural areas, prevent environment degradation and reduces health risks of vulnerable groups.</p>
6	<p>Question by New Zealand</p> <p>Category: Mitigation actions and their effects</p> <p>New Zealand acknowledges the extreme difficulties Nigeria faces due to the growing climatic issues, particularly flooding. Has Nigeria assessed the opportunity to enhance resilience through restoration/protection of wetlands in regions that are particularly challenged by flooding? If so, has Nigeria considered whether this would generate co-benefits, for example, benefits to communities or carbon mitigation?</p>	<p>The Nigerian government through ministry of environment and other related agencies (NIMET,NEMA) play major role in flood governance, risk reduction, monitoring and management. This includes raising general populace awareness, weather and flood forecasting, maintenance and protection of flood plains and fostering partnerships with environmental NGOs, MDAs, and private sector. A flood relief system and emergency flood management exist, at both national and sub-national level. These systems are established to evacuate and assist victims after a disaster occurs.</p> <p>Yes, as the government works towards abating floods, it also looks at measures build resilience and opportunities that may avail for communities and ecosystems especially in agriculture and emission reduction.</p>

Written Questions and Answers

S/	QUESTION & Category	RESPONSE
7	<p>Question by New Zealand</p> <p>Category: Constraints/gaps, and related financial, technical and capacity building needs</p> <p>New Zealand notes the developmental, capacity and technical expertise gaps outlined in Nigeria's BUR. What expertise and support does Nigeria consider most important for building the skills needed to obtain the required nationally specific data for producing high-quality GHG inventories and baselines?</p>	<p>Nigeria requires technical capacity support to develop National emission factor (EF) for various sectors in order to reduce dependence on international generic figures and improve the accuracy of national inventory data.</p>
8	<p>Question by United States of America</p> <p>Category: National GHG inventories</p> <p>Nigeria notes that there is a lack of Emission Factors (EFs) representing national circumstances generally, but that this is being addressed for some key categories. Can Nigeria provide some examples of efforts being made to develop country-specific emissions factors?</p>	<p>Efforts made include:</p> <ul style="list-style-type: none">- Conducted capacity training programmes for data providing institutions (Ministries Departments and Agencies) at national sub-national level, for effective data gathering in all sectors.- Updating Nigeria's Forest Reference Emissions Level (FREL) to include degradation and enhancement, in addition to deforestation.- Have Standard Operating Procedure under the National Forest Monitoring System (NFMS) to generate country Activity Data (AD) and Emission Factor (EF).- Initiated efforts to identify sectors the country have capacity to develop country specific emission factors for such as the Energy and AFOLU Sectors.

Written Questions and Answers

S/	QUESTION & Category	RESPONSE
9	<p>Question by United Kingdom of Great Britain and Northern Ireland</p> <p>Category: Mitigation actions and their effects</p> <p>Congratulations to Nigeria for the submission of your second biennial update report and thank you for the opportunity to comment on its contents. We welcome your BUR's focus on energy and agriculture, forestry and other land use (AFOLU) related mitigation actions. On the latter, we note the important work underway to reduce emissions from deforestation and forest degradation, including building institutional and technical capacity at federal and state levels. Would you be able to provide more information on the types of capacity-building that have taken place, as well as how you are tracking progress of such capacity-building measures?</p>	<p>Following the Capacity building workshop by the UNFCCC on GHG Inventory in November 2018 and subsequent training programmes on GHG Inventory Management, conducted by international and national consultants, Nigeria established a National Inventory Management System on the premise which the First National Inventory Report (NIR) was developed and submitted to the UNFCCC.</p> <p>However, further capacity is required to strengthen the GHG-IMS in order to enhance reporting under the Enhanced Transparency Framework(ETF)</p>
10	<p>Question by United States of America</p> <p>Category: General/ Desertification and Deforestation</p> <p>Nigeria faces twin challenges of both desertification and deforestation as described in the BUR - how do you hope to make progress on addressing these issues through an integrated approach or strategy?</p>	<p>In a view to implementing Nigeria's Long-Term Low Emission Development Strategy (LT-LEDS) submitted to the UNFCCC, which is one of the measures adopted towards achieving Net-Zero emission, plans are underway to Plant 300 million trees [this decade] and promote agro-forestry, reforestation, and afforestation, including community-based forest management and recovery.</p> <p>Nigeria being a Party to the United Nations Convention to Combat Desertification (UNCCD), is engaged in afforestation and livelihood projects through it National Agency for the Great Green Wall (NAGGW) of the Pan-Africa Great Green Wall (PAGGW).</p> <p>Also, there have been afforestation efforts by organs of the Ministry of Environment including afforestation projects supported by Nigeria's first and 2nd Sovereign Green Bonds issuances, among others.</p>

Written Questions and Answers

S/	QUESTION & Category	RESPONSE
10b		<p>Currently, the World Bank supported Agro-Climatic Resilience in Semi-Arid Landscapes (ACRESAL) project helps Nigeria address critical challenges of regional desertification control and land scape management in northern Nigeria. It aims to increase the adoption of climate resilience landscape management practices and enhance livelihood in targeted arid/semi-arid watershed in Nineteen (19) Northern States of the country.</p>
11	<p>Question by United States of America - 04 of May 2023</p> <p>Category: National circumstances and institutional arrangements</p> <p>How is the Department of Climate Change (DCC) at the Federal Environment Ministry working in conjunction with the National Climate Change Council (NCCC) to advance the strategic priorities as described in the BUR?</p>	<p>The Nigerian government decided on a more structured approach which is the establishment of “National Climate Change Council”(NCCC), in order to achieve a structured instructional arrangement as well as eradicate bureaucratic bottlenecks associated with delay in implementation of climate change activities in the country.</p> <p>The BUR Strategic Priorities are to be implemented and sustained by the NCCC. References and synergies will be made as required, with the DCC and any other partner, governmental, non-governmental, international or domestic.</p>



**Thanks for your
Attention**

NIGERIA