

COP26 – GLOBAL CLIMATE CHANGE CONFERENCE: THE NIGERIA’S PATH TO A SUSTAINABLE FUTURE

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ABSTRACT

Nigeria runs heavily on a carbon economy, with fossil fuels as the major sources of energy, to drive both industrial and residential activities. As a result, there has been a steady increase in her carbon emissions over the years. The Green House Gas (GHG) has increased from 247 million tons of CO₂ in 2010 to 347 million tons in 2018. The

GHG emissions have been projected to hit 453 million tons by 2030. Against this background, Nigeria's position in the COP26 climate change is an anticipated one. This paper explores Nigeria's position at the COP26 climate change conference, emphasizing the need for a net-zero carbon emissions goal by 2060. It delves into the pathways outlined by Nigeria to achieve this goal, such as through a smooth transition from fossil sources of energy to cleaner energy sources while addressing other contributors to the Nation's carbon footprints, like wastes. The paper also examines the inherent challenges and proposes practical solutions, highlighting the importance of international collaborations and innovative policies in mitigating climate change for the sustainable future. By investigating the strategies outlined in Nigeria's National Determined Contribution (NDC) and evaluating the current greenhouse gas emission trends, this research provides valuable insights into the complex journey toward a sustainable, low-carbon economy. The paper concludes that the move towards a zero-carbon emissions economy is laudable and should be supported by all relevant stakeholders as a clean environment can only be achieved through the collective contribution of all, since the present damages have been caused by all. Consequently, this paper recommends that residents should be provided with affordable and cleaner sources of electrical energy, and innovative zero-emission stoves for households, transportation, and other industries.

Keywords: *climate change, COP26, Carbon footprints, Greenhouse gas.*

Introduction/ Background to the Study

Current climate change trend is increasingly leading the planet earth towards a disaster with dire implications for man's continued existence. This has always pushed world leaders out of their comfort zone into an international conference in a bid to secure commitment for a sustainable environment. The 2021 United Nations (UN) Climate Change Conference (COP26) held in Glasgow UK, was one of such efforts bringing together many of the worlds' leaders to address the critical aspects of global warming. The conference aimed to gain commitment for sustained progress towards achievement of the Paris Agreement and UN framework convention on climate change, by limiting increased global temperatures to 1.5 °C above pre-industrial levels (COP26, 2021). The Intergovernmental Panel on Climate Change (IPCC) identified in its 2018 report that global emissions would need to be at net zero by at least 2050 to retain a "high confidence" level of limiting temperature increases to sustainable levels (Masson-Delmotte et al., 2018).

The goal of the Paris Agreement - limit global heating to well below 2 degrees Celsius and pursue efforts to limit temperature increase to 1.5 degrees - is arguably humanity's most important public health goal (Maibach E, et al, 2021). By COP26, governments are expected to submit ambitious new near-term climate plans in the form of Nationally Determined Contributions (NDCs), as well as net-zero emission commitments. A net-zero emission commitments should not be mere wishful thinking as the current momentum of emissions are enough to sustain the current global warming for a while. This has been termed as 'Climate penalty'. Assuming that miraculously the world achieves a net-zero emissions, the previous emissions with current climatic conditions will still interact to warm the planet earth approximately at an unsustainable level for a while before the benefit of the net-zero emissions will be seen. This enables us to put in perspective the magnitude of erroneous omission of a government not making an objective and firm commitment to a net-zero emission economy.

Against this background, the position of every government in the COP26 viz a viz how realistic the pathways adopted to achieve the net-zero carbon emissions is important. This is because it takes the commitment of everyone on the planet over a period of time to achieve a sustainable climate. The mindless exploitation that has brought the planet to this deleterious level has been done by all over a period of time as well. So, the commitment of all, both the developed and developing countries are required to secure a sustainable climate for all. This is the rationale that necessitates international conferences like the Glasgow COP26. This purpose of this paper is to present Nigeria's position in the COP26 climate change conference, the pathway of economic adjustments and redirection to achieve the submissions at the conference, and evidence of progress through an x-ray of the Nationally Determined Commitments (NDC) submitted after the COP26.

Nigeria's Position at the COP 26 Conference

The Nigeria's delegate in the UN climate change conference (COP 26) in Glasgow, UK, was led by his Excellency President Muhammadu Buhari. Nigeria presented at the day 2 of the conference on November 2, 2021. In the presentation, the President stated that some of the glaring evidence of climate change impact on the environment in Nigeria are desertification in the north, pollution and erosion on the coast, and the increasingly disappearing Lake Chad. The country targets to have net-zero carbon emissions by 2060. This implies that on or before the year 2060, all the country's energy sources and developmental activities at the private, industrial, and governmental levels will all be green, contributing no carbon footprint.

In the COP26 conference's submission, the nation in broad terms outlined key pathways to actualizing the net-zero carbon emissions' goal. It was outlined that there will be a transition from fossil fuel to renewable energy, hydro-dams, and solar as major sources of energy to drive the socio-economic activities of the nation. Effective water and waste management, as well as seeking clean cooking fuel for the populace, are some of the strategies highlighted to ensure a net-zero GHG emissions goal. Application of technology in virtually all sectors to drive efficiency and reduce emissions is one of the main thrusts on the quest to attaining the net-zero goal. Nigeria considers gas as part of the energy sustainable option until the year 2040. According to the president: "Nigeria is actually more of gas than oil producing country. Consequently, I am requesting for financing of project using transition fuel such as gas. Nigeria has developed a detailed transition energy plan and road map based on data and evidence...our transition plan also highlights the key role that gas must play in transmission and transition of our economy across sectors and the data and evidence shows that Nigeria can continue to use gas until 2040 without defecting from the goals of the Paris agreement" (United Nations, 2021).

Nigeria' Position in the Nationally Determined Contribution Report

The COP26 position is a follow-up of the Paris agreement where Nigeria joined the rest of the world to “Limit the increase in global average temperature to well below 2° C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5° C above pre-industrial” (United Nation, 2015). Article 4.2 of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) required countries to report their National Determined Contribution (NDC) in a bid to track their progress towards the set goals. Just before the COP26 in November 2021, in July Nigeria updated her first Nationally Determined Contribution which was done in 2015. In this updated NDC, Nigeria raised its ambition by including emissions reductions from the waste sector for the first time and increased its conditional contribution. The updated NDC increased its ambition of unconditional contribution to reduce GHGs emission to by 20% below business-as-usual by 2030 while the conditional contribution to reduce GHGs emissions is raised to by 47% depending on international support. It was noted in the update report that committing to this level of climate ambition in the face of lower-than-expected economic growth represents a significant enhancement, as it will result in substantially lower absolute GHG emissions in the 2015 (FGN, 2021). The report (FGN, 2021) also pointed out that the scale of the emissions reductions – a 47% conditional contribution of around 100 MtCO₂e below current (2018) levels – is consistent with a global 1.5°C pathway.

The current GHG Emission Trend in Nigeria

Nigeria runs heavily on a carbon economy with fossil fuels as the major sources of energy to drive both industrial and residential activities. As a result, there has been a steady increase in their carbon emissions over the years. The Green House Gas (GHG) has increased from 247 million tons of CO₂ in 2010 to 347 million tons in 2018 (see Figure 1). The GHG emissions have been projected to hit 453 million tons by 2030.

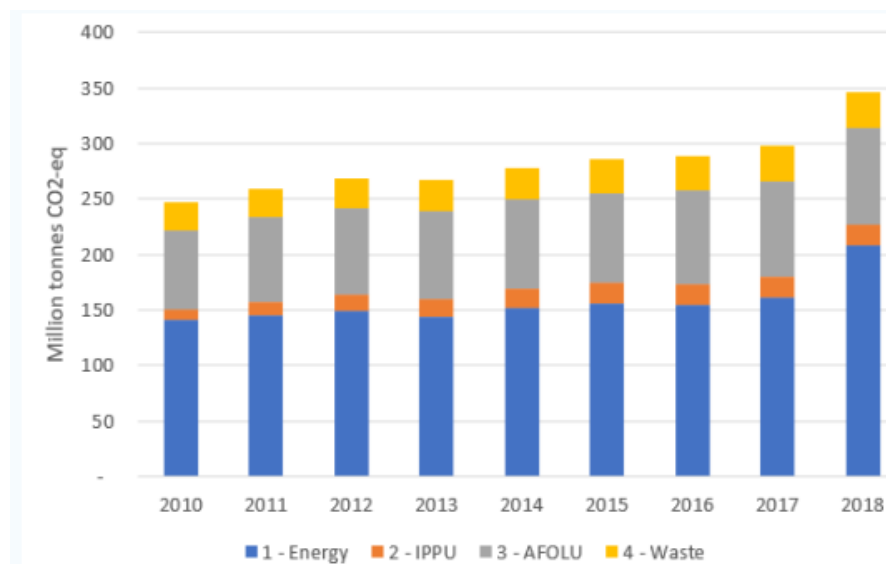


Figure 1: Total GHG emissions in Nigeria between 2010 and 2018 (units: million tons CO₂ equivalent emissions).

Source: FGN, 2021

From figure 1, it is evident that Nigeria’s current energy options and activities are not yet on track to a net-zero emissions. There have been steady increases of carbon emissions over the years. It is worthy to note the sharp increase in emissions between 2017 and 2018. The updated NDC report attributed this increase to the inclusion of other data sources which make the 2018 data to be more robust than for previous years. According to the report, the 2018 data “included an energy balance for Nigeria based on bottom-up methodology, where, for example, in the residential sector, national surveys were used to calculate energy consumption by fuel type. The use of this data for 2018 can be considered to be more robust than the UNSD Energy balance data used for previous years, and cover key sectors such as off-grid electricity generation” (FGN, 2021. Pp 7,8)

As expected, the 2018 GHG emissions analysis revealed that the energy sector was the largest source of GHG emissions with 209 MtCO₂e emitted in 2018 (60% of the national total emissions). Fugitive emissions from oil and gas are the largest contributor to overall energy sector emissions (36% of total energy sector emissions in 2018),

followed by transport, electricity generation (grid and off-grid), and residential and industrial energy consumption. Agriculture, forestry and other land use (AFOLU) was found to be the second largest contributor to the total GHG emissions, contributing approximately 25% of national total GHG emissions in 2018, followed by waste (9%), and Industrial Processes and Other Product Use (IPPU) (5%). The National Determined Contribution (NDC) aptly presents this distribution in figure 2.

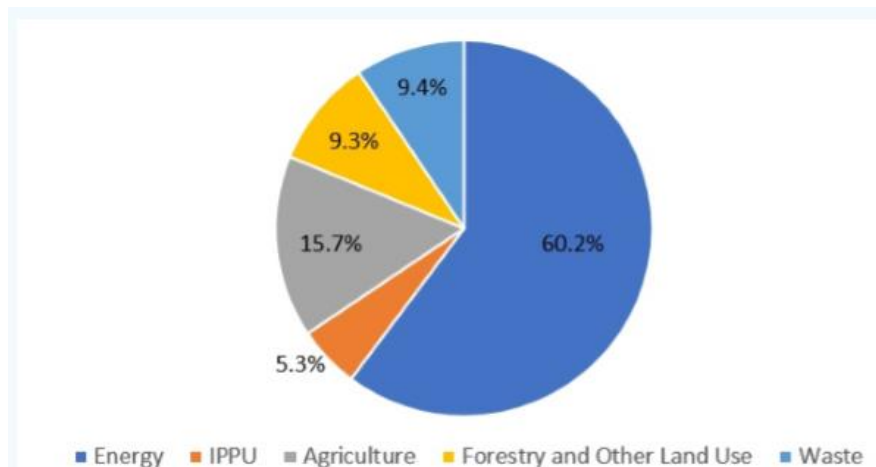


Figure 2: Contribution to national total GHG emissions in Nigeria in 2018 (347 MtCO₂e)

This provides a unique insight as to the challenge of the transition to a net-zero emissions. It will involve transition from fossil fuel to sustainable energy options which are not yet cost-effective at residential and at the industrial level. Agriculture, forestry and other land use and waste effective management would rely on technological intervention and a paradigm shift in land use which are not yet feasibly in sight in terms of availability of funds, machines, and the technical expertise required across all sectors of the economy. The Nigerian agricultural system is heavily a subsistence one, which relies on crude implements and methods like bush burning, use of fertilizer, and others. This process mindlessly destroys the already diminishing biodiversity.

The Challenges of Meeting Up with the Net-Zero-Goal by 2060

Enormous challenges exist on the quest to transiting from fossil fuel to sustainable renewable energy which is at the heart of having a net-zero emissions economy. No doubt this process is not going to be an easy one as fossil is the main thrust of the country's economy. Gupte and Ram (2021) pointed out that many financial institutions have come under pressure to reduce their funding for oil and gas businesses because of the large carbon footprint of such projects. These companies have already started to reduce their investments in oil and gas as part of their net-zero carbon targets. As pointed out earlier, the renewable energy sources are presently too expensive for local residents to embrace. Already, local residents are struggling hard to survive the current economy with little or no excess fund to handle any energy adjustment that will be more expensive than the methods that they are currently using.

Challenges and Recommended Solutions

The net-zero GHGs emissions goal is a laudable one although enormous challenges exist which have to be overcome in order to contribute our quota to human survival. Adequate planning and skillful policy direction for both residential and industrial operations as well as governmental activities to ensure a smooth transition from the status quo to greener socio-economic operations are to be in place consistently. Based on this the following are recommended solutions:

1. **Affordable and Cleaner Energy Sources:** The government and relevant stakeholders must prioritize providing affordable, cleaner energy sources like electricity and innovative zero-emission stoves for households, transportation, and industries.
2. **Cost-Effective Renewable Energy:** Investments and partnerships are essential to making renewable energy sources such as solar power cost-effective for both residential and industrial applications.
3. **Transition to Mechanized Farming:** Government should work with relevant developmental partners to ensure transition from subsistence farming to mechanized green farming to ensure food security and environmental sustainability.

4. Accessible Technology for Efficiency: Technology should be made accessible and affordable to all sectors of the economy to ensure efficient operations, avoid wastage, and protect the environment.

Conclusion:

In conclusion, Nigeria's commitment to achieving net-zero carbon emissions by 2060 is commendable. However, the journey ahead is challenging. By focusing on affordable clean energy, promoting renewable technologies, encouraging mechanized green farming, and ensuring technological accessibility, Nigeria can pave the way for a sustainable future. International collaborations, innovative policies, and collective efforts are paramount in tackling the global climate crisis.

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